Atmospheric Sciences
Biogeosciences
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Solid Earth Sciences



15th Annual Meeting

AOGS 03-08 JUN 2018 Honolulu, Hawaii







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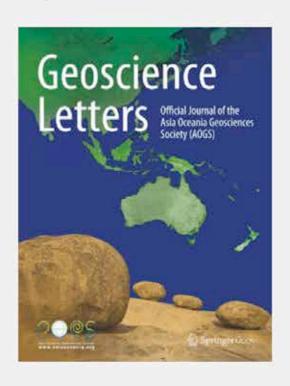






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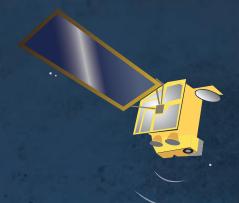


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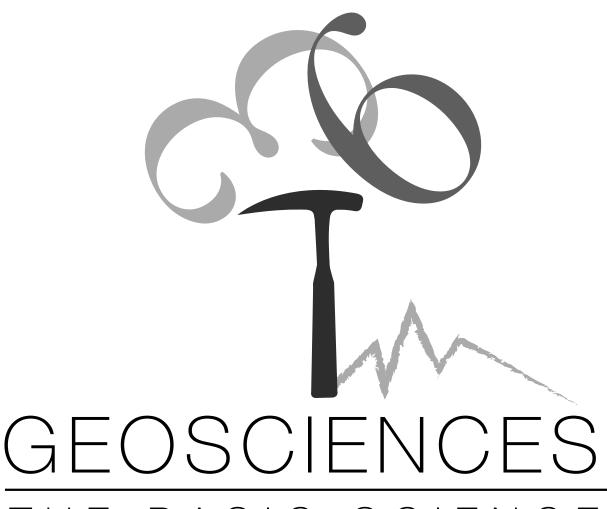


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THE BASIC SCIENCE FOR A SUSTAINABLE FUTURE

WELCOME TO AOGS2018!

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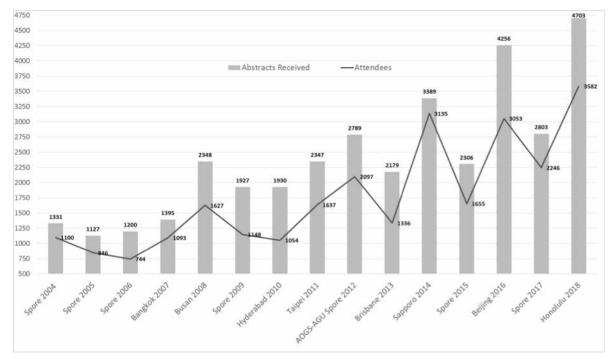
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MESSAGE FROM THE AOGS PRESIDENT

Welcome to Hawaii! Did you know:

- This year, here in Honolulu, is the 15th year of the AOGS meeting since its inauguration in 2004? And the official name of the meeting is AOGS 15th Annual Meeting.
- This meeting is expected to be the largest AOGS gathering ever? The number of registered abstracts is 4003, 842 of which are student papers. We have attendees from 51 countries/regions, 22 of which are Asia-Oceania countries/regions.
- The meeting this year is held as early as early June to "beat the crowd"? Yes, the tourist (and hence expensive) season will start shortly!
- Every other year (like next year) we return to Singapore for the annual meeting? The main reason is that AOGS is registered in Singapore and we hold our general election of AOGS Council (for 2-year term) there. Besides Singapore, we have in the past held the annual meeting in Bangkok, Busan, Hyderabad, Brisbane, Taipei, Sapporo, Beijing. In 2020 we look forward to going to Gangwon, Korea, and we are soon to start the venue selection process for 2022.
- AOGS membership like you are ones who have attended the AOGS annual conference at least once in the past 3 years? The current number of members is 8066.
- The AOGS Council is elected every two years? This team of 13 among eight sections consists of people just like you, volunteering their time and effort to the decision making and execution of AOGS matters.
- AOGS is constantly engaged in outreach/education activities in Earth sciences? Yes, and any volunteering and ideas and thoughts are welcome!

I offer you the following chart, from which you can tell a lot about the growth of AOGS. Behind that success story is the hard work of so many dedicated people, and more importantly the continued support from all or you, over the years.



On behalf of the current AOGS Council, I wish you a nice week on this beautiful island. The current Council will serve until after this meeting, when the new Council led by the new President David Higgitt will be sworn in (while I continue to serve you as the Vice President for another year).

Benjamin Fong CHAO AOGS President

MESSAGE



THE LOCAL ADVISORY COMMITTEE CHAIR

Gregory F.MOORE Professor Department of Geology & Geophysics University of Hawaii

Dear Fellow Participants of AOGS2018,

On behalf of the Local Advisory Committee (LAC) of AOGS2018, it is with great pleasure that I welcome all of you to the 15th annual meeting of AOGS, to be held from the 3rd to the 8th of June, 2018 in Honolulu, the beautiful capitol city of Hawai'i on the Island of O'ahu.

Please allow me to express a few words of welcome. This conference addresses the entire field of Geosciences, including Solid Earth Sciences, Ocean Sciences, Atmospheric Sciences, Hydrological Sciences, Planetary Sciences, Solar and Terrestrial Sciences, Biogeosciences and Interdisciplinary Geosciences. During AOGS2018, discussions will range from scientific research to practical applications, on topics including prevention and mitigation of disasters from various geo-hazards, to space weather and future protection of our environment.

I hope this large group of scientists, students and educators with common focus on Geosciences and their application for the benefit of humanity, will review and discuss freely the present and future directions of scientific studies, while respecting the diversity of ideas and approaches. This event is an important forum for all of us to demonstrate our individual and group scientific achievements. It is also an excellent opportunity for us to establish and renew personal relationships. Please enjoy not only this important conference with its extensive scientific programs and technical exhibits, but also the

hospitality and the summer scenery of this beautiful region of Hawai`i, including the various field trips that have been arranged.

AWARD



2018 AXFORD MEDALIST Paul TAPPONNIER Professor
School of the Environment College of Science,
Nanyang Technological University

The Asia and Oceania Geosciences Society (AOGS) is honored to present the 2018 Axford Medal to Professor Paul Tapponnier, Nanyang Technological University, for his ground breaking contributions to "Continental collision tectonics and Himalayan earthquake faulting", and for providing unprecedented leadership in developing the field of active tectonics.

Professor Tapponnier is one of the foremost scientists of his generation in Continental Neo-Tectonics. He was the first to recognise the full potential of satellite imagery to study faulting and tectonic processes on a large-scale. His mapping, using the very first Landsat images, of large active strike-slip faults in and around Tibet, implied that they accommodated significant shortening between India and Asia. This revolutionised the understanding of collision tectonics. It contributed to provide a mechanical framework for deformation across most of eastern Asian. That fundamental discovery was later confirmed by fieldwork and supported by innovative analogue modelling.

Paul Tapponnier graduated from the Ecole des Mines de Paris, and started his research career at the University of Montpellier and at MIT, where from he published his first influential papers in the mid-seventies. That early work suggested that India had pushed eastern and northern China eastwards, along several left-lateral faults. Such east-directed extrusion had also led to extension along the Shansi and Baikal rift. That research, in collaboration with P. Molnar, had worldwide impact.

In 1979, P. Tapponnier joined the Institut de Physique du Globe de Paris where he created the Laboratory of "Tectonics, mechanics of the Lithosphere", a school within which he trained nearly 30 PhD students, many

of which now brilliant academics in France and abroad. The group contributed to fundamental discoveries in a range of Tertiary tectonic problems, by combining in depth field studies with laboratory experiments. Plasticine models, whose results are now shown in many high-school/graduate text-books, suggested a broader extent of the Indian collision effects, including the westwards expulsion of Sunda and openings of the South China and Andaman seas. This triggered field studies that showed that the Ailao Shan-Red River shear zone had been an Oligo-Miocene plate-boundary between Sunda and South China, with one of the largest strike-slip displacements known (700 km). Concurrently, a new seafloor spreading reconstruction of magnetic anomalies across the South China Sea, confirmed the intimate link between that spreading and slip along the Red River fault, in plate-tectonic's fashion. Such combined onshore/offshore research yielded a comprehensive model of Southeast Asia's Tertiary Tectonics.

Professor Tapponnier and colleagues 20 years-long collaboration with Chinese geologists and geophysicists across Tibet led to first order quantification of present-day, high altitude normal faulting perpendicular to the Himalayas, and to the hypothesis of a stepwise northward growth of the plateau since the early days of the collision. They were also among the first to extensively use cosmogenic isotopes to date, and correlate with climate change back to 180 ka, faulted geomorphic markers, which helped to develop the field of Morpho-Tectonics, and extended deformation rates measurements to time-scales older than the Holocene.

Outside East Asia, Professor Tapponnier and his students/colleagues contributed to clarify rift propagation between Arabia and Africa, earthquake return times and Tsunami sourcing along the Yammouneh fault and the offshore Mt. Lebanon Thrust, and active normal faulting within the Caribbean Arc, consistent with extensional block rotations along a convergent plate boundary.

In 2009, Professor Tapponnier moved to Singapore at Nanyang Technological University, were he actively contributed to develop the Tectonic Group within the newly created Earth Observatory of Singapore, now one of the best academic centres worldwide in earthquake research. In the past decade there, he and his students found the hitherto unrecognized surface ruptures of the great, 1934 and 1950 Himalayan earthquakes, at the front of the Siwaliks in Nepal and of the Abor-Mishmi hills in Assam, respectively. Building on the approach he had kept developing to study the active earth, he also led the way in using ever higher resolution imagery, up to present-day terrestrial and airborne LiDAR surveys, in order to quantify superficial fault offsets of only a few centimetres.

Professor Tapponnier is a fascinating geologist in the field and in the lab, with an encyclopedic knowledge, fed by months-long expeditions to different parts of the world. I was fortunate to work with him on seismic data acquired after the 2004 Sumatra-Andaman earthquake, for which he provided key insights, based on his experience in studying Megathrust on land. Well before the 2011 Tohoku earthquake, he contributed to recognize the importance of "Popup" thrusting at the front of accretionary prisms in generating large tsunamis.

His contributions have been acknowledged by various awards, including: Alfred Wegener Medal, European Union of Geosciences, 1985; Fellow of American Geophysical Union, 1994; Friendship Medal, China, 1998; Lyell Medal, Geological Society of London, 2001; Foreign Member of the US Academy of Sciences, 2005; Member of the French Academy of Sciences, 2005.

Given his pioneering, continuing research across Asia, the 2018 AOGS Axford Medal is a particularly well-deserved distinction.

After three decades of intensive study, we now have a new view of an old ocean, with revised paradigms built on the strength of high-quality time-series data, insights from the application of –omics techniques and observations from autonomous gliders. The pace of new discovery, and the importance of integrating this new understanding into predictive models is an enormous contemporary challenge with great scientific and societal relevance.

AXFORD LECTURES



David M. KARLVictor and Peggy Brandstorm Pavel Professor
of Microbial Oceanography
Director of the Daniel K. Inouye Center for
Microbial Oceanography: Research & Foundation,
University of Hawaii

Mon – 4 Jun, 16:15 – 16:45 Ballroom A, Level 4

"Station Aloha: A Gathering Place for Discovery, Education and Scientific Collaboration"

The North Pacific Subtropical Gyre (NPSG) is one of the largest biomes on Earth. Despite the global significance of the NPSG for energy and matter transformations and its key role in the ocean's carbon cycle, it is undersampled and not well characterized with respect to ecosystem structure and dynamics. Since Oct 1988, interdisciplinary teams of scientists from the University of Hawaii and around the world have conducted research at Station ALOHA (22.75 N, 158 W), a site chosen to be representative of this expansive oligotrophic habitat. Three major field programs, the Hawaii Ocean Time-series (HOT; 1988-present), the Center for Microbial Oceanography: Research and Education (C-MORE; 2006-2016) and the Simons Collaboration on Ocean Processes and Ecology (SCOPE; 2014-present), havecontributed to the creation and dissemination of knowledge with a focus on microbial processes and biogeochemistry. In Nov 2015, the American Society for Microbiology designated Station ALOHA a "Milestones in Microbiology" site in recognition of historic and visionary accomplishments.



Sun-Lin CHUNG Director Institute of Earth Sciences, Academia Sinica Distinguished Chair Professor, Department of Geosciences, National Taiwan University

Mon – 4 Jun, 16:45 – 17:15 Ballroom A, Level 4

"Tibet and Beyond: A Geochemical Perspective on Asia Orogeny and Continental Evolution"

Asia that comprises numerous ancient cratonic blocks and young mobile belts is the largest composite continent on Earth. It was enlarged by assembly of dispersed terranes that, in association with opening and closure of the Paleo-Asian and Tethys oceans, led to significant continental growth. The Central Asian orogenic belt (CAOB), for instance, is celebrated for its accretionary tectonics and production of massive juvenile crust in the Phanerozoic or, predominantly, in the Paleozoic. The Tethyan domain consisted of two major oceans, i.e., Paleo-Tethys in north and Neo-Tethys in south, separated by a strip of continents/terrains called the Cimmerian Continent, most of which had begun splitting from the northern margin of Gondwanaland during Triassic time. Elimination of the Tethys oceans by collisions of the Cimmerian continental fragments and subsequent Gondwana-derived terrains with Eurasia resulted in a double, largely over-printed orogenic system, the Alpine-Himalayan or Tethyan orogenic belt.

Here I present a synthesis of geochemical data of collision zone magmatism from Asia, particularly from Tibet and "CIA" (Caucasus/Iran/Anatolia) in the eastern Tethyan orogenic belt (ETOB) that has traditionally been regarded as a typical collisional system. The dataset suggests that, before the terminal collisions, the entire region was characterized not only by Tethyan subductions but also by accretionary orogenic processes that produced a vast amount of juvenile crust from the Jurassic to Eocene or,

in places, to Oligocene. Consequently, both the CAOB and ETOB appear to have evolved through time from an accretionary into a collisional system. The synthesis further indicates that, in contrast to generating massive juvenile crust in the earlier, accretionary stages of orogenic development, crustal recycling plays a more substantial role in the subsequent, collisional stages. The latter involves addition of older continental crust materials into the upper mantle, which in turn melted and caused compositional transformation of the juvenile crust formed in the accretionary stages. Similar features are observed in young volcanic rocks from eastern Taiwan, i.e., the northern Luzon island arc and part of the complex tectonic system in Southeast Asia, where active orogenic processes are operating and thus may evolve one day to resemble the CAOB or ETOB by collision with the northward advancing Australian continent.

SECTION DISTINGUISHED LECTURES

Atmospheric Sciences (AS)



Kaoru SATO *University of Tokyo*

Wed – 6 Jun, 12:00 – 12:30 Room 315, Level 3

"Vertical and Interhemispheric Coupling in the Middle Atmosphere"

The neutral atmosphere, which is characterized by a constant mixing ratio, extends to a height of about 100 km above the earth's surface. The layer above the troposphere, which is the lowest atmospheric region, is called the middle atmosphere. The bulk of the middle atmosphere consists of two main layers, the stratosphere and the mesosphere, which are distinguished on the basis of temperature stratification. Part of the thermal structure of the middle atmosphere is far different from the state of radiative equilibrium. This peculiar structure is maintained through Lagrangian mean circulation driven by momentum and heat transport by Rossby waves and gravity waves. The recent development of satellite

observation technology has allowed us to examine the middle atmosphere, including the whole mesosphere, and several interesting and spectacular phenomena have been discovered.

This lecture will focus on two striking phenomena initiated by a well-known event called sudden stratospheric warming (SSW), in which the polar winter temperature rises by tens of degrees in a few days. One of these resulting phenomena is a significant warming of the upper mesosphere of the summer hemisphere, which develops almost simultaneously with or slightly after the SSW of the winter hemisphere. The other one is the disappearance and subsequent re-formation of the stratopause at an unusually high level, which sometimes occurs after a strong SSW event.

Because of a lack of solar radiation, the stratopause, which is defined as the region of temperature maximum at the top of the stratosphere, does not arise through ozone heating in the polar winter. Instead, the polar winter stratopause is maintained by adiabatic heating associated with a downward branch of the Lagrangian mean flow in the mesosphere driven by gravity waves originating mainly from the troposphere. In contrast, SSW is caused by an enhanced downward branch of the Lagrangian mean flow generated via the penetration of strong Rossby waves from the troposphere. The modified temperature field in the stratosphere changes the horizontal wind field in the thermal wind balance, which significantly affects the upward propagation of gravity waves in the stratosphere. The mesospheric circulation and hence the polar winter stratopause are also modified by the modulated gravity waves. The modification sometimes extends to the other (i.e., the summer) hemisphere.

The overall scenario has been discussed in consideration of the processes described above. However, the gravity waves have such a small spatial scale that observational evidence of them is hard to obtain. The timings of the elevation of the stratopause and of the interhemispheric coupling are not constant, and the reason is not clear. Moreover, recent studies indicate that gravity waves do not always behave passively toward large-scale Rossby waves in the middle atmosphere. The interplay of Rossby waves and gravity waves may be a clue for developing a quantitative understanding of these phenomena.

International observation campaigns have been performed in recent years using mesosphere–stratosphere–troposphere (MST), meteor, and medium-frequency (MF) radars; lidars; and imagers that can capture the modulation of gravity waves that occurs when an Arctic SSW event is initiated. These observational results will be interpreted using the results of simulations performed with high-resolution general circulation models. This is an international project called The Interhemispheric Coupling Study by Observations and Modelling (ICSOM, PI: KS). The dynamics of vertical and interhemispheric coupling through the middle atmosphere and the recent progress on this issue will be reviewed.

Biogeosciences (BG)



Naohiro YOSHIDA Tokyo Institute of Technology

Wed – 6 Jun, 12:00 – 12:30 Room 304B, Level 3

"The Origin and Process Tracing for Molecules of Biogeochemical Interests Through Isotopologue Analysis Featuring Poition Specific Isotope Abundance of Bioelements"

Since the 1950's, the stable isotope compositions of naturally occurring molecules have been proved to be a strong tool for the study of geological, biological, and anthropogenic processes, and their evolution and effect on biogeochemical cycles of environmental molecules. However, due to technical and conceptual limitations, the complete set of information potentially contained in molecules remains largely unexplored especially in the different modes of isotopic substitution as 1) to 3) stated below. We have developed series of new methodologies that allow analysis of isotopically substituted molecules, through each mode. We are also integrating those in the study of geological, biological and anthropogenic processes which affect the Earth's environment.

1) Position specific isotope abundance analysis (PSIA): We have pioneered PSIA of nitrogen in N2O and of carbon and hydrogen in organic molecules using classic isotope mass spectrometry and nuclear magnetic resonance. We have shown that PSIA of hydrocarbons and organic acids allows us to differentiate processes as distinguishing between biological and non-biological processes. 2) Mass-independent fractionation (MIF): The discovery of MIF of sulfur and oxygen in terrestrial molecules has revolutionized environmental geochemistry and our understanding of the evolutionary history of the Earth's environment and life. 3) Clumped isotopes (i.e. isotopologues with 2 or more minor isotopes) provide unique information about the temperature history of molecules such as carbonates or organic compounds.

We are currently developing new and improved tracers of environmental and biogeochemical processes and apply them to the environmental diagnosis. We have established and standardized new methods for the analyses of above 3 higher dimensional modes of isotopic substitution, and unifying them to develop ultimate environmental diagnosis. The development and application of these new isotopic tools to the environment evolution on the Earth, in modern and ancient eras, represents an important conceptual advance in Earth and life sciences. This will open new areas of research about, for example, the geological production of some atmospheric gases, metabolic processes and the biological fixation of atmospheric greenhouse gases, the production and cycling of pollutant gas by industrial processes. As a whole, these new tracers will be integrated together for diagnosis of the Earth's environment.

The research achievements so far obtained will be reviewed and a perspective will be stated in this talk as I am currently leading a research project "Environmental diagnosis with isotopologue tracers", a Kiban-S grant-in-aid for 5 yrs until 2022, and co-editing "Handbook of Isotopologue Biogeochemistry".

Hydrological Sciences (HS)



Qingyun DUANBeijing Normal University

Tue – 5 Jun, 12:00 – 12:30 Room 301, Level 3

"Confronting Uncertainties in Hydrological Forecasting"

phases Uncertainties are prevalent in all hydrological forecasting. For hydrological forecasts to be useful to our society, those uncertainties must be quantified and/or reduced. In this lecture, I will discuss the properties of uncertainties in hydrological forecasting and the various ways to confront them. Depending on their sources, uncertainties manifest themselves differently and require different statistical methods to describe them. There are three different ways to deal with uncertainties in hydrological forecasts: (1) improving our knowledge of the physical mechanisms involved in hydrological processes and building better models by incorporating knowledge;(2)improvingourabilitytoobservehydrological processes and developing better data assimilation and model calibration methods to merge observations and model simulations; (3) developing better data learning methods to unearth the intrinsic values in observations and model simulations. Plenty of examples will be used to illustrate uncertainty conthe state-of-the-art methods cepts and some of in dealing with them. The lecture will end with a perspective on challenges and future directions.

Interdisciplinary Geosciences (IG)



Yusuke YOKOYAMA University of Tokyo

Mon – 4 Jun, 12:00 – 12:30 Room 323A, Level 3

"Timing is the Key to Understand What Lies Beneath: Recent Developments in Geochronology Untangle Mysteries in Fields from Past Climate Changes to Geohazards"

Determining the precise timing of the past events is a pivotal step towards understand mechanisms of environmental change that is relevant to a number of including climate, biogeosciences, geohazards. Methods to analyze radiometric isotopes to determineages were rapidly developed over the past century. Continued recent work further enables us to conduct increasingly high-precision analyses. Radiocarbon and Uranium series dating are two important methods. The footprint of accelerator mass spectrometers (AMS) continues to decrease without compromising measurement accuracy, precision, and throughput. Ultra small-scale samples (i.e. 0.001-0.05 mg carbon compared to conventional 1 mg carbon) measurements opens up the venue to measure compound specific radiocarbon in geological as well as biological materials. While inductively coupled plasma mass spectrometry can provide reliable U-series ages.

In this presentation, I would like to introduce examples of studies that have advanced our knowledge of geosystems using these methods, such as the melting his tory of Antarctic ice and geohazard studies.

Accurate Antarctic ice sheet history in the past can contribute to a better understanding of the future behavior of the world's largest freshwater reservoir. Its action and reaction to global climate is pivotal to predicting future changes. The main obstacle to obtaining precise dating is the paucity of foraminifera in sediments. Thus previous studies were forced to rely on bulk sediment to extract carbon to determine retreat history. However relict organic carbon caused results to indicate much older ages than the true sediment age, which confused the view of Antarctic ice sheet behavior. We therefore have developed compound specific radiocarbon dating techniques and applied them to Antarctic sediments. This method successfully reconstructs the timing of the ice sheet and ice shelf retreat,

providing insight into the sensitivity of Antarctic ice to climate change.

Understanding of the timing of past events in geohazard areas has also improved due to increased precision and throughput. Radiometric dating of event layers is complicated by preservation state, often producing controversial results. We employ a "big data approach" to overcome these obstacles, and the data can now be treated statistically. This provides uncertainties of events to discuss the mechanisms in a quantitative manner. Our examples include tsunami deposits and volcanic eruption histories. Understanding recurrence of active fault movements also will be discussed.

Ocean Sciences (OS)



James C. MCWILLIAMS
University of California

Thu – 7 Jun, 12:00 – 12:30 Room 324, Level 3

"Oceanic Submesoscale Currents"

This talk is a perspective on the recently discovered realm of submesoscale currents in the ocean. They are intermediate-scale flow structures in the form of density fronts and filaments, topographic wakes, and persistent coherent vortices at the surface and throughout the interior. They are created from mesoscale eddies and strong currents, and they provide a dynamical conduit for energy transfer from the general circulation toward and microscale dissipation diapycnal Consideration is given to their generation mechanisms, instabilities, life-cycles, disruption of approximately diagnostic force balance (e.g., geostrophy), turbulent cascades, internal-wave interactions, and transport and dispersion of biogeochemical materials. Much has been learned from realistic, multiscale simulations and theory, but at a fundamental level may questions remain open, implicating a program for further research.

Planetary Sciences (PS)



Renu MALHOTRA
University of Arizona

Mon – 4 Jun, 12:00 – 12:30 Room 323B, Level 3

"Resonant Kuiper Belt Objects - A Review"

Our understanding of the history of the solar system has undergone a revolution in recent years, owing to new theoretical insights into the origin of Pluto and the discovery of the Kuiper belt and its rich dynamical structure. The emerging picture is one of dramatic orbital migration of the planets in the early history of the solar system, driven by interaction with the primordial Kuiper belt, which produced the final solar system architecture that we live in today. I will provide a brief summary of this new view of our solar system's history, and review the astronomical evidence in the resonant populations of the Kuiper belt.

Solar & Terrestrial Sciences (ST)



Stuart D. BALE *University of California*

Tue – 5 Jun, 12:00 – 12:30 Room 323C, Level 3

"Solar Wind Thermodynamics in the Era of NASA Parker Solar Probe"

The solar wind plasma distributions at 1 AU suggest the evolution by Coulomb collisions from nonthermal states

to collisional equilibrium. Measurements at 0.3 AU are generally more nonthermal. This Coulomb coupling relationship can be used probe the plasma distributions of the inner heliosphere and suggests that the coronal population will be highly nonthermal. Furthermore, measurements of plasma waves at 1 AU suggest nonlinear evolution from a population of intense Alfven waves in the inner heliosphere. Taken together, these suggest that the coronal plasma observations environmentishighly nonthermal and perhaps permeated by impulsive jets or waves. I will also describe the NASA Parker Solar Probe mission which will launch in summer 2018 and orbit the Sun with a final perihelion of 9.8 solar radii, well within the predicted Alfven surface. Parker Solar Probe will make the first ever in situ measurements of plasma heating processes in the solar corona.

Solid Earth Sciences (SE)



Donald A. SWANSONU.S. Geological Survey Hawaiian Volcano Observatory

Thu – 7 Jun, 12:00 – 12:30 Room 314, Level 3

"Volcanoes have Histories, Sometimes Surprising"

Every volcano is different. The laws of physics apply everywhere, but each volcano results from a combination of local, regional, deep, and shallow processes that are seldom if ever the same from one volcano to another. Much will continue to be learned from synoptic studies of volcanic regions and types, but detailed research will always be necessary for proper understanding of individual volcanoes and their hazards to society.

Even a single volcano can change its style of eruption for periods of centuries, perhaps permanently, perhaps temporarily. An example of the latter is Kīlauea Volcano, in Hawai'i. Until recently, Kīlauea was thought be dominantly effusive, with brief, rare periods of explosive activity lasting weeks or less that punctuate a rather steady outpouring of lava flows. That notion developed because all eruptions were effusive during the 200-year period of written observations, except for an explosive 2.5 weeks in 1924. It was assumed that the 200-year period was representative of Kīlauea in general and that the 1924 activity was unusual.

My colleagues and I recently demonstrated that this view of Kīlauea is incorrect. During the past 2500 years,

eruptions, repeated explosive principally phreatic, phreatomagmatic and dominated periods lasting about 1200 and 300 years, respectively. During these periods, the summit apparently had a deep caldera, facilitating interaction of groundwater with magma and hot wall rocks. The supply rate of magma to the surface of the volcano dropped during the explosive periods to only a few percent of that during the intervening dominantly effusive periods. Recognition of this complex history has prompted a rethinking about Kīlauea that involves not only ideas about how magma is supplied to the volcano and what causes its caldera to collapse but also how neighboring communities will have to deal with a return of explosive activity at some unknown future time.

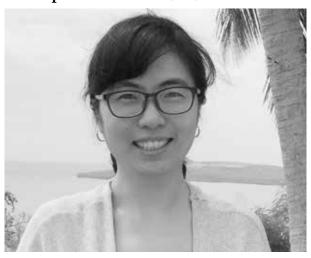
Unraveling Kīlauea's past continues to involve detailed field work augmented by hundreds of AMS 14C ages. There is nothing magic here—just dedicated old-fashioned field work looking at stratigraphic relations and searching for charcoal to date.

Every volcano deserves such treatment. I am not so naïve as to think that this will happen, but it should be an idealistic goal. Excellent examples of such studies exist throughout the world, and they can serve as templates for more such work in Asia and Oceania.

Detailed knowledge about a volcano's past is the best way we currently have to foresee its future on a decadal to century scale. Geophysical and geochemical monitoring currently done at some volcanoes provides a basis for short term warnings but is less applicable to the long term. Such monitoring can work together with robust knowledge of a volcano's history to provide a strong basis to influence long-term societal planning.

KAMIDE LECTURES BY OUTSTANDING EARLY CAREER RESEARCHERS

Atmospheric Sciences (AS)



Lili LEINanjing University

Wed – 6 Jun, 11:30 – 12:00 Room 315, Level 3

"Vertical Localization for EnKF Radiance Assimilation"

Assimilation of satellite radiances has been proven to have positive impacts on the forecast skill, especially for regions with sparse conventional observations. Localization is an essential component to effectively assimilate satellite radiances in ensemble Kalman filters with affordable ensemble sizes. However, localizing the impact of radiance observations is not straightforward, since their location and separation from grid point model variables are not well defined.

Adaptive localization methods, like global group filter (GGF), can provide a theoretical estimate of vertical localization functions for radiance observations being assimilated for global numerical weather prediction. The GGF uses groups of climatological ensembles to provide an estimated localization function that reduces the erroneous increments due to ensemble correlation sampling error. When the GGF is applied to radiance observations, it can provide different localization functions for different channels, which indicates the complexity and large computational cost of tuning the localization scales for radiance observations. Verification to the conventional observations shows that the GGF outperforms the commonly used Gaspari and Cohn (GC) localization.

Besides the adaptive localization methods observation space, model space localization for EnKF can be implemented through a modulation approach. The modulation approach generates the modulated ensemble from the raw ensemble and eigenvectors of the localization matrix. The modulated ensemble implicitly contains model space localization, thus the EnKF using the modulated ensemble without localization is equivalent to EnKF using the raw ensemble with model space localization. For radiance observations, only vertical localization in model space is needed, thus the size of the modulated ensemble is approximately 10 times more than the raw ensemble. The performance of EnKF assimilating radiance observations has been improved by use of the modulation approach, i.e., model space localization.

Biogeosciences (BG)



Yosuke NIWA *Meteorological Research Institute*

Wed – 6 Jun, 11:30 – 12:00 Room 304B, Level 3

"Inverse Modeling with Aircraft Observations for Constraining CO2 Flux Estimates in Asia"

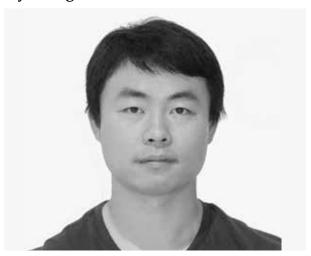
Estimates of carbon dioxide (CO2) fluxes at the earth surface (e.g., between atmosphere and terrestrial biospheres/oceans) have significant uncertainties, which limits our understanding of the carbon cycle. Especially, uncertainties of the flux estimates for the Asian regions are considerable because human activities such as fossil-fuel consumption and land-use changes and frequent biomass burnings complicate the problem.

Globally distributed observations of atmospheric CO2 have been used to constrain estimates of surface CO2 fluxes and a statistical estimation has been often performed by a Bayesian inversion analysis, which employs an atmospheric transport model that links surface fluxes with the atmospheric observations. However, there are many challenges to perform a reliable inversion analysis; for instance, it requires an accurate transport model, a dense observation network, and a sophisticated inversion scheme.

Toward an accurate transport simulation, we have developed the atmospheric transport model NICAM-TM (Nonhydrostatic ICosahedral Atmospheric Model-based Transport Model), which has promising capabilities for mass conservation and a high-resolution simulation. In the inversion analysis with NICAM-TM, we leverage aircraft observation data from the CONTRAIL (Comprehensive Observation Network for Trace gases by Airliner) project to fill the gaps of the conventional surface observation network. Since 2005, CONTRAIL has been continuously operating in-situ measurements of atmospheric CO2 onboard commercial aircraft. Owing to the observations on international flights, its observation network is worldwide and ranges from the boreal high latitudes to the austral mid-latitudes including many parts of Asia. Furthermore, in order to fully exploit a number of CONTRAIL data, we have newly developed an inversion system, named NICAM-TM 4D-Var, by combining the four-dimensional method with NICAM-TM. This system provides high resolution flux estimates with nearly no limitation in the number of observations it can accommodate.

In the inverse modeling with the CONTRAIL data, we have demonstrated great utility of those aircraft data for constraining Asian flux estimates. Especially, the impact of the data is noteworthy for South and Equatorial Asia, where the surface observation network is quite sparse. Over those regions, flux signals are uplifted by convective vertical transport and they are more efficiently captured by the aircraft than by remote surface stations. In 2015, which is the one of the biggest El Niño years for the last two decades, large-scale biomass burnings occurred at Equatorial Asia. Anomalies of the CO2 fluxes induced by those biomass burnings were clearly captured by the high-resolution inversion analysis with NICAM-TM 4D-Var. This study could provide valuable insights on the mechanism of the CO2 fluxes in Equatorial Asia, where a large amount of carbon is stored in tropical rainforests and peatlands and disturbances on those reservoirs have strong impacts on the growth rate of the global atmospheric CO2.

Hydrological Sciences (HS)



Yuting YANG *CSIRO Land and Water*

Tue – 5 Jun, 11:30 – 12:00 Room 301, Level 3

"Eco-hydrological Implications of Long-term Vegetation Responses to CO2 Fertilization: More or Less Streamflow?"

Anthropogenic activities are increasing atmospheric CO2 concentrations. Amongst the many observed and expected impacts of this on our climate and biosphere, one is the so-called CO2 fertilization effect. In this effect, the efficiency with which plants can use carbon relative to water increases proportionally with the CO2 concentration. Greater water use efficiency has implications for carbon and water balances, as plants can either capture more carbon for the same amount of transpired water loss or can transpire less water for the same amount of carbon captured (or some combination thereof). The recent historical rise in CO2 concentrations is now large enough that some of these responses can be observed globally and are affecting all vegetated terrestrial ecosystems, with findings that CO2 fertilization altered continental river flows.

How vegetation responds to increasing atmospheric CO2 concentration can impact catchment-level water use in (at least) three main mechanisms. Firstly, directly by reducing stomatal conductance and thus reducing leaf-level transpiration, so changing the soil moisture dynamics in the soil profile. Secondly, indirectly by vegetation adapting to changing resource availability by increasing its aboveground leaf area (i.e., greening). Thirdly, indirectly by vegetation increasing its rooting depth thus allowing vegetation to access more water during dry spells. It is very unlikely that three mechanisms will have the same impact across all landscapes / climate conditions globally. So, how important are these three mechanisms in different landscapes given different limitations to vegetation growth? Using a 'carbon assimilation-water use' framework, where water-use efficiency is the linking process between the carbon cycle and the water cycle, we hypothesis that the catchmentlevel hydrological responses will be different for energy-limited (when precipitation exceeds potential evaporation) vs. water-limited (when potential evaporation exceeds precipitation) landscapes vs. 'equitant' where potential evaporation is close to precipitation, with their ratio straddling 1.0 and changing seasonally). Also if energy-limited due to cold conditions for much of the year (e.g., boreal regions) there may be a different response than if energylimited due to very high precipitation rates (e.g., tropical evergreen landscapes). Recent findings from satellite vegetation and streamflow data used in the: (i) 'carbon assimilationwater use' framework'; and (ii) statistical models will be drawn together to help unravel the interacting changing processes and provide guidance on how expected hydrological change may vary with landscape / climate type. Knowledge gaps will also be identified.

Interdisciplinary Geosciences (IG)



Andreas F. PREINNational Center for Atmospheric Research

Mon – 4 Jun, 11:30 – 12:00 Room 323A, Level 3

"North American Mesoscale Convective Systems Under Climate Change"

Severe convective storms in the form of Mesoscale Convective Systems (MCSs) increased in frequency and intensity during the past 35 years in the U.S. causing fatalities and rapidly increasing economic losses. However, future climate change impacts on MCSs are largely unknown because traditional climate models cannot simulate them. A North American-scale convection-permitting climate model allows us to simulate realistic MCSs in the current climate and at the end-of-century under a high-end emission scenario (RCP8.5) by assuming similar synoptic-scale conditions in both periods (pseudo global warming). Using a storm tracking algorithm we show that the model is able to accurately reproduce the main characteristics of current MCSs, such as their size, propagation speed, maximum rainfall, and total rainfall volume in the present climate. At the end of the century, the number of intense MCSs are projected to more than triple in North America during summer due to more favorable environmental conditions. In particular, MCSs have higher cloud tops, increased vertical moisture fluxes, and a significantly deeper warm cloud layer (distance from cloud base to freezing level). Changes in the MCS's dynamics, thermodynamics, and cloud microphysics lead to a 15-40 % increases in maximum hourly precipitation rates and a significant spreading in heavy precipitation areas result in up to 80 % higher MCS total precipitation volume. Volume increases are most pronounced in a 40 km radius around the storm center, which is the scale of large cities and

mesoscale river catchments. The potential implication on future flood risk will be discussed.

Ocean Sciences (OS)



Jung-Woo PARKSeoul National University

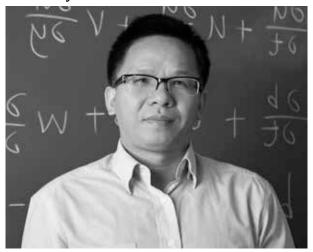
Thu – 7 Jun, 11:30 – 12:00 Room 324, Level 3

"Chalcophile Element Geochemistry of Arc-related Submarine Lavas Associated with Seafloor Sulfide Deposits"

There are two principal hypotheses for the origin of metals in seafloor massive sulfide (SMS) deposits, the wall-rock leaching and magmatic-hydrothermal hypothesis. In the former the metals are leached from the wall rocks above a sub-volcanic magma chamber whereas the latter requires them to be deposited from magmatic fluids derived from an underlying magma chamber. The SMS deposits forming at arc volcanos or immature back-arc spreading centers are considered to have more magmatic fluid component than those at mid ocean ridge spreading centers. The abundance of ore metals in the magma at the time of volatile exsolution is a critical factor for the formation of a Cu-Au-rich SMS deposit if the latter is true. The behavior of these chalcophile elements is largely controlled by sulfide phases during magma evolution because of their strong affinity with sulfide phases. The platinum group elements (PGE) can be used as a sensitive indicator of sulfide saturation because their partition coefficients into immiscible sulfide melts are several orders of magnitude higher than those of Cu and Au, and they are less mobile than these elements during low temperature alteration.

Recent studies on the PGE and chalcophile element geochemistry of two submarine volcanic suites, the Pual Ridge lavas and Niuatahi-Motutahi (N-M) lavas, which are associated with Cu and Au mineralization, suggest that both magmas have experienced late sulfide saturation during their evolution. This results in them being enriched in chalcophile ore metals such as Cu and Au until the point of volatile saturation and so that they could form Cu-and Au-rich magmatic hydrothermal deposits. The SMS deposits with the highest Au ore grade are often found in arc or back arc settings. This can be attributed to the oxidized nature of arc-related magmas, which increases sulfur solubility in the magma and delays the timing of sulfide saturation.

Planetary Sciences (PS)



Jun YANG *Peking University*

Mon – 4 Jun, 11:30 – 12:00 Room 323B, Level 3

"Exoplanets and Planetary Habitability"

Are we alone in the universe? About 25 years ago, the first exoplanet was discovered. Now, more than 3,700 exoplanets have been confirmed. Exoplanets represent a dramatic change in our understanding of planetary sciences, and we are very close to find a second habitable Earth nearby our solar system. The detected exoplanets can be classified to several types, including hot Jupiters, cold giants, lava worlds, ocean worlds, as well as rocky planets. One critical question is to know which of these planets are potentially habitable for life. The next target for exoplanet missions is to characterize the planetary atmospheres and surfaces, especially for Earth-size planets in the liquid water habitable zone. In this talk, I will provide an overview of exoplanet detection and characterization, the concept of liquid water habitable zone, and planetary climates. Planetary habitability is determined by many factors, such as planetary size, distance from the star, atmosphere composition, plate tectonics, magnetic field, ozone layer, etc. I will highlight the possible climates and habitability of tidally locked terrestrial planets around K and M dwarfs.

Solar & Terrestrial Sciences (ST)



Huishan FU *Beihang University*

Tue – 5 Jun, 11:30 – 12:00 Room 323C, Level 3

"Energy Transfer Chain in the Earth's Magnetosphere"

The Earth's magnetosphere, extending from 1000 km above the Earth's surface to 70,000 km toward the Sun or 106 km in the opposite direction, is a region permeated with plasmas and magnetic field. Such region shields the Earth from energetic particles coming from the interplanetary space, and hence is very important to human beings. Although most energetic particles are expelled, some of them can still enter into the Earth's magnetosphere along a special path and subsequently transferred to the near-Earth space, producing colorful auroras. Understanding the transfer of these energetic particles in the magnetosphere—known as energy transfer chain—therefore is an important topic in the study of space weather. Generally, such energy transfer chain follows the Dungey's circle: reconnection of magnetic field at the dayside magnetopause, convection of magnetic field toward the magnetotail, reconnection of magnetic field again in the magnetotail, triggering of substorm and then the dipolarization front in the nightside plasma sheet, convection of suprathermal particles toward the Earth, injection of suprathermal particles into the radiation-belt and ring-current regions, acceleration of these particles to relativistic energies via quasi-linear and non-linear wave-particle interactions. However, the details of this circle/chain have been poorly understood. In this talk, we will comprehensively discuss the details of this chain. Particularly, we will show (1) how the magnetic reconnection is triggered at electron scale at the dayside magnetopause, (2) what type of electron distributions and wave activities can affect the reconnection process at the magnetopause, (3) what magnetic topology should be at the magnetopause reconnection site, (4) how the magnetic reconnection is triggered in the magnetotail, (5) how electrons are accelerated during energetic magnetopause and magnetotail reconnection, (6) how turbulence and magnetic reconnection couple with each other, (7) how depolarization fronts are produced in the magnetotail, (8) what's the relation between magnetic reconnection and dipolarization fronts, (9) how energetic electrons are accelerated at dipolarization fronts, (10) how these electrons are injected into the radiation belts, (11) how these electrons are further accelerated to relativistic

energies in the radiation belts, (12) whether the quasi-linear process or non-linear process dominates during electron acceleration, (13) how the energy transfer between radiation-belt electrons and ring-current ions happens. From the standpoint of space weather, this talk will cover the entire energy transfer chain in the magnetosphere; from the standpoint of plasma physics, this talk will cover the plasma dynamics at electron scale, ion scale, and MHD scale.

Solid Earth Sciences (SE)



Min Sub SIM
Seoul National University

Thu – 7 Jun, 11:30 – 12:00 Room 314, Level 3

"Sulfur Isotopic Constraints on the Evolution of Earth's Surface Environments"

Sulfur occurs in a variety of redox states from the most reduced form sulfide to the most oxidized sulfate, and cycles through environmental and biological reservoirs. Since this versatile element has four stable isotopes, measurements of sulfur isotopic ratios are one of the most powerful tools to study the contemporary sulfur cycle. More importantly, sulfur isotope signatures can persist for a long time in geologic materials; trace sulfate incorporates into marine carbonate rocks, and sulfide precipitates as pyrite. Changes in the global sulfur cycle, recorded in these sedimentary archives, are inherently linked those of other essential elements such as carbon, oxygen, and iron. For example, one of the most convincing evidence for extremely low oxygen levels in the early atmosphere is the mass-independent sulfur isotope anomalies reported from the sedimentary records older than 2.5Ga.

This presentation will focus on the recent advances in our understanding of the bio- and geochemical controls on the sedimentary sulfur isotope records. Throughout the long-term evolution of Earth's biogeochemical cycles, sulfur isotope fractionations between sedimentary sulfate and sulfide have increased to reach the modern values at the beginning of the Phanerozoic. Since microbial sulfate reduction is primarily responsible for this isotope fractionation, small isotopic offsets in the Archean sediments have been conventionally interpreted to represent muted biological fractionation with low environmental sulfate concentrations as the root cause. However, a growing body of evidence shows that organic substrates may have been more available to

sulfate reducing microorganisms in the Archean ocean, leading to smaller fractionations. Recently, we estimated the sulfur isotope effect by the key enzyme involved in microbial sulfate reduction, providing quantitative support for these qualitative arguments. In shorter terms, high resolution sulfur isotope records help to understand the global environmental disturbances such as mass extinction events. Patterns of Isotopic variability have been linked to the size of seawater sulfate pool, and multiple sulfur isotope analyses can constrain the relative timing and location of pyrite formation. Here, I will present paired sulfur isotope records during the Late Devonian and demonstrate that a larger seawater sulfate reservoir may have promoted the development of sulfidic bottom waters during the ocean anoxic events, increasing physiological stress and potentially contributing to the Devonian mass extinction.

SPECIAL LECTURES



2018 AXFORD MEDALIST Paul TAPPONNIER Professor
School of the Environment College of Science,
Nanyang Technological University

Fri – 8 Jun, 13:30 – 14:00 Ballroom A, Level 4

"Holocene Return-times of Himalayan Mega-quakes: Dating and Lidar-imaging of Uplifted Fluvial Terraces on the Main Frontal Thrust Hanging-wall"

For the past 40 years, trenching has been the workhorse of Paleo-Seismology. It is particularly useful across strike-slip faults along which, in shallow excavations, sequences of more than 10 large events may be documented. It is also instructive across normal faults, where the deepening footwalls provide traps for post-seismic deposits. But it has been far less informative across thrust faults, due to limited footwall subsidence and near-surface hanging-wall folding (e.g., El-Asnam 1980; Chi-Chi, 1999; Muzaffarabad, 2005...). Typically, the number of paleo-events identified in thrust trenches rarely exceeds 2. Across megathrusts, where individual great earthquakes can produce > 15-25 m and 5-7 m of slip

and vertical throw, respectively, trenching becomes an almost fruitless approach, even with the use of civil-engineering drilling techniques. This has hindered understanding the history of great earthquakes along the Himalayan front. Specifically: rarely more than one large event is exposed in trenches across the Main Frontal Thrust (MFT); the last 4 historical mega-quakes were long deemed blind; and 14C dates in trenches hundreds of km apart have been audaciously inferred to attest to single event rupture lengths > 600-800 km!

As an alternative paleo-seismological tool, we tested the potential of fluvial terrace uplift on the MFT hanging-wall to record repetitive co-seismic throw during great earthquakes. Using 100 km-long, high-resolution (~ 4 points/m2) Airborne Lidar swath's data along the thrust makes it possible to assess the geomorphic effects of surface faulting with regionally homogeneous, unparalleled precision (< 0.5 m). In eastern Nepal, at 7 different sites along the Siwalik front, 5 to 7 distinct terrace surfaces appear to have been successively uplifted, each time by 5 to 8 meters, to maximum heights of 45/55 m above present-day riverbeds. This implies the occurrence of 5 to 7 great earthquakes with average co-seismic throws of $\sim 6.5\pm1.5$ m depending on local thrust dip (20-40°). Radiocarbon and cosmogenic 10Be dating of the terraces suggest that, during the last ~ 4500 years, great MFT earthquakes with near-characteristic slip returned every ~ 700-800 years on average. In Assam, along the Abor and Mishmi range-fronts, the same "above ground" approach helps resolve long-standing quandaries on the source and repeat time of events comparable to the great 1950 earthquake. Large-scale Lidar surveys and accurate dating of uplifted terraces may thus be the most promising way to elucidate the long-term history of megathrust earthquakes.



2018 KAMIDE AWARD Sarah M. KANG

Ulsan National Institute of Science and Technology

Fri – 8 Jun, 14:00 – 14:30 Ballroom A, Level 4

"How Ocean Dynamics Modulate the Climate Response to One Hemispheric Subpolar Cooling?"

Cross-equatorial atmospheric transport of energy

offers a predictive view of how climatic asymmetry develops in response to interhemispheric difference in energy flux into the coupled ocean-atmosphere system. Indeed, anthropogenic aerosols mostly concentrated in the Northern Hemisphere force an interhemispheric Hadley circulation displacing the ITCZ southward. Confusions arise, however, from recent experiments using realistic dynamical oceans; changes in surface heat flux into the Southern Ocean fail to displace the ITCZ. Using a hierarchy of coupled models, here we identify two hitherto unknown factors important for tropical response to subpolar heat flux forcing. First, the northward displaced mean ITCZ creates a strong asymmetry b/w a subpolar cooling in NH and SH. The ITCZ effectively blocks the NH cooling from intruding across the equator with a strong displacement of the ITCZ towards the unforced hemisphere while the SH cooling penetrates across the equator exciting a symmetric response across the equator. Second, the upwelling of deep water in the Southern Ocean mutes the vertical energy flux into the atmospheric column, reducing the response to a SH forcing while the dynamical ocean damping on the flux forcing is much weaker. In addition, Bjerknes feedback amplifies the symmetric, upward-amplified temperature response in the tropical troposphere. These results advance the energetic framework by highlighting the importance of the mean ITCZ asymmetry and dynamical ocean damping on subpolar TOA radiative forcing.



AOGS 2018 SPECIAL LECTURE Michael H. FREILICH

NASA Headquarters

Fri – 8 Jun, 14:30 – 15:00 Ballroom A, Level 4

"Looking Down on the Earth: Satellites, Science, and Societal Benefit"

Spaceborne observations are crucial for understanding our planet as an integrated system. Satellite measurements form the essential foundation for Earth System Science. Spaceborne data resolve a broad range of time and space scales; only from space can uniformly accurate and stable measurements be made having high spatial resolution and global coverage, frequently at each location for long periods of time. By acquiring and analyzing simultaneous satellite measurements of many different quantities, researchers are gaining quantitative knowledge of the connections between ocean, atmosphere, and land processes as well as the individual processes themselves. Crucially, because all humans reside on Earth, the satellite observations, when coupled with understanding derived from research, can be used to improve the decision-making and lives of every person.

NASA's Earth Science program is composed of 4 elements: a Flight program that develops, launches, and operates a large fleet of Earth-observing satellites and instruments to monitor the planet; an interdisciplinary, competitive, integrative Research and Analysis program covering all aspects of Earth System Science through analysis of domestic and international remotely sensed and in situ measurements and modeling; an Applied Sciences program that builds capacity in user communities, and develops and tests focused information products based on Earth observations and models to support a wide range of decision-makers; and an Earth Science Technology Office that uses competitive grants to advance component, instrument, and data processing technologies as well as conducts in-space technology demonstrations using CubeSats.

The presentation will highlight key accomplishments from NASA's Earth Science Division program, providing unique insights into key Earth systems and examples of societal benefit from applications including disaster and extreme event response support. Particular emphasis will be placed on the need for free and open data exchange, the use of constellations of spacecraft and integrated analyses of global data from multiple sources, and the abilities of decadal-scale remotely sensed time series to illuminate the existence – and causes – of variability and trends in our planet's environment.

INVITED TALKS

Tue – 5 Jun, 13:30 – 15:30 Room 317A, Level 3

SS03 - Science Driven E-infrastructures and Data Management in Support of Geosciences Research

Conveners

Ming-Hsu LI, National Central University Tsair-Fuh LIN, National Cheng Kung University Mustapha MOKRANE, ICSU-WDS International Programme Offices Yue-Gau CHEN, National Taiwan University

Invited Speakers





13:30 The Belmont Forum E-infrastructure and Data Management Project Robert SAMORS, Belmont Forum

13:50 Science-driven E-infrastructure Innovation for Enabling Transnational Data Use in Interdisciplinary and Transdisciplinary Environmental Change Research: a New Belmont Forum Funding Collaborative Research Action.

Jean-Pierre VILOTTE, Institut de Physique du Globe de Paris

14:10 Taiwan Earthquake Research Data Center (TECDC)
Wen-Tzong LIANG, Academia Sinica

14:30 Taiwan Climate Change Information and Knowledge Service Platform
Chao-Tzuen CHENG, National Science and Technology Center for Disaster Reduction (NCDR)

14:50 Potential of Conservation Agriculture
Production Systems (caps) as Climate Smart
Technology for Food Security Under Rainfed
Uplands of India: a Transdisciplinary
Approach
Catherine CHAN, University of Hawaii

Tue - 5 Jun, 13:30 - 15:30 Room 323C, Level 3

SS09 - Volcanoes: Nature, Influence, Impact

Conveners

Kazuhisa GOTO, Tohoku University Florian M. SCHWANDER, Jet Propulsion Laboratory/ California Institute of Technology (Caltech) Fiona WILLIAMSON, National University of Singapore

Invited Speakers



- 13:30 What Life in Volcanic Environments Tells Us About the Emergence of Life and Life Elsewhere Mitchell SCHULTE, NASA Headquarters
- 13:50 Lava Lakes in the Solar System
 Rosaly LOPES, Jet Propulsion Laboratory,
 California Institute of Technology (Caltech)
- 14:10 The Role of the Ocean in Modulating the Dynamics of Silicic Submarine Volcanic Eruptions
 Rebecca CAREY, University of Tasmania
- **14:30 Dynamics of Water-volcano Interactions** Steve INGEBRITSEN, US Geological Survey
- 14:50 Volcanic Hazards: Improving the Science and Communication to the Public Setsuya NAKADA, *University of Tokyo*
- 15:10 Are Climate Scientists Ready to Observe and Model the Next Big Volcanic Eruption?

 Alan ROBOCK, Rutgers University

Wed - 6 Jun, 13:30 - 15:30 Room 319A, Level 3

SS08 - Interdisciplinary Suduction Zone Research Initiatives

Conveners

Gerald BAWDEN, National Aeronautics and Space Administration (NASA) Jack A. KAYE, National Aeronautics and Space Administration (NASA)

Invited Speakers

Laura KONG



13:30 Geophysical Observational Systems for Science and Hazard Reduction
Richard M. ALLEN, UC Berkeley

- 13:45 Monitoring, Imaging and Modeling
 Subduction Zones to Mitigate Subduction
 Zone Geohazards
 Shuichi KODAIRA, Japan Agency for
 Marine-Earth Science and Technology
- 14:00 Subduction Zone Observatory Initiatives and Opportunities in New Zealand Nicola LITCHFIELD, GNS Science
- 14:15 Very Long Term Variability in Interseismic Deformation: A Case Study from the Sumatran Subduction Zone
 Emma HILL, Nanyang Technological University
- 14:30 The SZ4D Initiative: Developing a Comprehensive Approach to Subduction Hazard Geoscience"

 Harold TOBIN, University of Wisconsin-Madison
- 14:45 Gnss Applications to Monitor, Measure and Study Subduction Zone Earthquakes and Their Resulting Tsunamis
 Jeff FREYMUELLER, University of Alaska Fairbanks
- 15:00 Tsunami Early Warning Interdisciplinary
 Collaboration to Save Lives"
 Laura KONG, International Tsunami Information
 Center

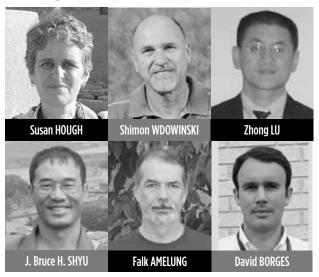
Thu - 7 Jun, 13:30 - 15:30 Room 319B, Level 3

SS07 - Cascading Hazards

Conveners

Gerald BAWDEN, National Aeronautics and Space Administration (NASA) Jack A. KAYE, National Aeronautics and Space Administration (NASA)

Invited Speakers



13:30 The 2015 Mw7.8 Gorkha, Nepal, Earthquake: Destruction and Creation Susan HOUGH, US Geological Survey

- 13:50 Cascading Hazards: Triggering Relations
 Between Wet Tropical Cyclones, Landslides,
 and Earthquakes
 Shimon WDOWINSKI, Florida International
 University
- 14:10 Development of an Incorporated Platform to Characterize Hydrology-Driven Landslide Hazards in Northwestern US
 Zhong LU, Southern Methodist University
- 14:30 Cascading Hazards Along Tropical Orogenic Belts J. Bruce H. SHYU, National Taiwan University
- 14:50 Cascading Hazards: Can Excessive Precipitation Trigger Volcanic Eruptions? Falk AMELUNG, University of Miami
- 15:10 Keeping an Eye on What Happens Next
 David BORGES, National Aeronautics and Space
 Administration (NASA)

WORKSHOP & TUTORIAL

Wed – 6 Jun, 11:00 – 12:30 Room 325A, Level 3

Organizers/Workshop Leaders



Isaac KERLOW, Nanyang Technological University Helena ALBERT, Nanyang Technological University

WS2: SS12 - Earth Girl Volcano

Earth Girl Volcano is a tablet and computer interactive game that simulates a variety of volcanic hazard scenarios at different levels of expertise. This casual strategy game offers players a variety of strategies and tools to prepare for scenarios that are based on real-life examples. Players can learn about the local knowledge and the past volcanic activity by chatting with the villagers at the market. Earth Girl Volcano presents a variety of single and combined hazards including gas emission, ash fall, rock fall, mudflows and burning clouds (PDCs). The game was developed an interdisciplinary group composed of scientists, game experts, animators and software developers at the Earth Observatory of Singapore. The game represents the cutting edge in games that are engaging and also communicate the science behind the gameplay.

Participants in this workshop will learn how to use this interactive game as a tool for learning and explaining volcanic hazard and risk mitigation. The presenters will demonstrate many of the game scenarios played at different levels of difficulty. Participants will

receive a free standalone version of the game to try out and master during the workshop some of the preparedness and evacuation strategies to achieve the goal of zero-casualties. Participants will also learn about some of the design and software development strategies used to translate volcanic hazard complexity into an interactive game of preparedness and risk mitigation. The Earth Girl Volcano game was tested with a mainstream and specialized audiences, and is being launched in 2018 as a free app for Android and iOS tablets as well as Windows and iOs computers. The game will eventually be available in the languages most spoken throughout the Ring of Fire, including English, Indonesian, Tagalog, Japanese and Spanish. Earth Girl Volcano follows in the footsteps of Earth Girl Tsunami, a game already released in eight languages that received over 35,000 Facebook Likes during its initial launch.

Thu - 7 Jun, 16:00 - 18:00 Room 304B, Level 3

Organizers/Workshop Leaders



Forrest HOFFMAN, Oak Ridge National Laboratory Nathan COLLIER, Oak Ridge National Laboratory

WS3: SS10 - International Land Model Benchmarking (ilamb) Package Tutorial

To advance understanding of biogeochemical processes and their interactions with hydrology and the Earth system under changing environmental conditions, new methods are being developed that use observations to constrain model predictions, inform model development, and identify needed measurements and field experiments. The International Land Model Benchmarking (ILAMB) package embodies those methods to provide quick and easy model—data comparison capabilities for multiple Earth system models (ESMs).

The ILAMBv2.2 Package assesses model fidelity on 25 variables in four categories from about 50 data sets; produces graphical global-, regional- and site-level diagnostics; and provides a hierarchical scoring system based on model performance for the annual mean, bias, relative bias, root-mean-square error (RMSE), seasonal cycle phase, spatial distribution, interannual variability, and variable-to-variable comparisons (functional benchmarks).

ILAMB is designed for use by individual modelers or model developers for verification and rapid model development cycles, by modeling centers to track the evolution of model performance, and by model intercomparison projects for multi-model analysis. ILAMB is being integrated into the workflow systems at multiple major modeling centers and are being extended for use in high-latitude and hydrology studies. The package is also expected to provide a platform for engaging experimentalists in identifying model

weaknesses and needed measurements and field experiments.

This hand-on tutorial session will provide students, postdocs, and researchers with experience in installing, running, and extending the ILAMB pckage for assessing model performance in comparison with observations. Participants will be guided through installing the package, written in Python, and observational data on their Linux or MacOS system. Instruction will be provided for evaluating sample model output (provided) or their own model results. In-depth explanation of the software structures and classes will be provided, enabling users to develop their own custom evaluation methods or to use the framework in their own diagnostic packages.

MEETINGS & FUNCTIONS

Section

Sun 3 Jun 11:00 – 14:00, Level 3 – Room 327 Student Volunteer Training 16:00 – 18:00, Level 3 – Room 328 Council Meeting

Room

12:30 – 13:30, Level 3 Section Meetings (Lunch)

AS	315
BG	304B
HS	301
IG	323A
OS	324
PS	323B
ST	323C
SE	314

Mon 4 Jun

> 15:30 – 18:30, Level 4 – Ballroom A AOGS2018 Opening, Axford Lectures, General Assembly 18:30 - 20:30, Level 4 - Ballroom B Welcome Reception/Exhibition Opens Poster Sessions (AS1, IG, PS)

Tue 5 Jun 12:30 – 13:30, Level 3 – Room 327 Regional Advisory Committee Meeting (Lunch) 18:00 – 19:30, Level 3 – Room 327 AOGS2020 Advance Planning Meeting (Dinner)

Wed 6 Jun 12:30 – 13:30, Level 3 – Room 327 Publication Committee/Editorial Board Meeting (Lunch) 18:00 – 19:00, Level 3 – Room 327 AOGS-NASA Advance Planning Meeting 19:00 – 21:00 Offsite (Dinner) Thu 7 Jun 12:30 – 13:30, Level 3 – Room 328 Council Lounge (Lunch) 16:00 – 18:00, Level 4 – Ballroom B/C Foyer Meet-the-Experts Session 19:00 – 21:00, Hiking Hawaii Café Student Volunteer Night

12:30 – 13:30, Level 3 – Room 328 Council Lounge (Lunch) 13:00 – 16:00, Level 4 – Ballroom A AOGS2018 Closing, Special Lectures, Awards & AOGS2019 Meeting Venue Presentation

Fri 8 Jun

16:00 – 17:00, Level 4 – Ballroom A Farewell Reception 16:30 – 20:15, Convener's Dinner (Ticketed Event)

16:30 – Coach Departs HCC for Dinner Cruise 20:15 – Coach Returns to HCC/Ala Moana Hotel

Sat 9 Jun 09:00 – 12:30, Level 3 – Room 328 Council Meeting (Lunch)

OPENING/CLOSING

Level 4 Ballroom A

AOGS2018 Opening: 15:30 – 20:30

15:30 - 16:00

- Guest Arrivals (Coffee/Tea Service) 16:00
 - Welcome & Opening
 - Axford Lectures

Mon | 17:30 4 Jun | • 0

- General Assembly
- Award Presentations: Axford Medal, Y Kamide Early Career Researcher Award

18:30

- Welcome Reception/Exhibition Opens
- Poster Sessions (AS1, IG, PS)

AOGS2018 Closing: 13:30 – 17:00

13:30

- Axford Medalist Lecture
- Kamide Award Lecture
- AOGS2018 Special Lecture

15:00

 Awards & Recognition: Honorary Members, Best Student Posters, AOGS Rotating Out Officers

15:30

Fri

8 Jun

• Next Meeting Destination Presentation: AOGS2019 in Singapore

15:45

- Closing Remarks
- Meet the New Council

16:00

• Farewell Reception

17:00

• AOGS2018 Ends

AOGS OFFICERS

2017-2018 Council

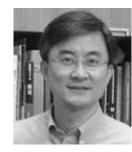
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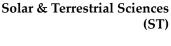
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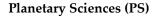
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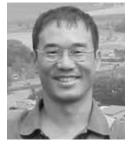


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The SLO works closely with AOGS partner societies (AGU, EGU, JPGU, SEG & AMOS) and select individuals on program content that is distinctly different from what is able to be covered under the Regular Sessions.

Regional Advisory Committee (RAC)

The Regional Advisory Committee (RAC) is established to further fulfil the AOGS vision "In Asia for Asia and the World". RAC members are AOGS Advocates who:

- Promote and advise on the allocation of resources and services that will support geosciences research and scholarships in their home countries
- Provide community-based support in planning and promoting AOGS strategic master plan and processes

RAC Mission is to develop AOGS into the largest non-profit, geoscience networking group in Asia and their main goals are to

- Enhance membership and participation from the geoscientists in ASEAN and India
- Promote multi-lateral academic interaction among various research labs
- Identify opportunities that address diversity, equity and inclusion

PRESENTATION GUIDE (Oral)

Presentation Time Slots (Actual may vary – please check session schedules)

AM1	08:30 - 10:30	PM1	13:30 - 15:30
AM2	11:00 - 12:30	PM2	16:00 - 18:00

Breaks

AM	10:30 - 11:00	PM	15:50 - 16:00
Lunch	12:30 - 13:30		

1. Presentation ID - How to Read

SE27 - D1 - AM2 - 317A - 002								
Session Code	SE27							
Conference Day 1	D1							
AM Session 2	AM2							
Meeting Room	317A							
Presentation No. 2	002							

2. Prepare Your Presentation

Length of presentation material should be in accordance with your time allotted. Total duration including Q&A and speaker changeover is 15 minutes for each talk. Please refer to the Final Program for actual presentation schedules. You are kindly requested to be at the presentation room at least 15 minutes before the session starts.

3. Determine Your Audio-Visual Needs

Each meeting room comes equipped with a laser pointer, computer, LCD projector and screen. The computers in the meeting rooms are being provided to Windows-based PC users. The PC will be configured with Windows Operating System. Please bring your presentation files in thumb drives. For MAC-laptop users, please bring your own VGA adapter cable.

4. Create a Backup Copy of Your Presentation

We recommend that you bring at least 2 copies of your presentation to the meeting for backup purposes. Thumb drives are acceptable.

5. Give Your Presentation

Be considerate to the other speakers and audience by staying within your allocated time. The allocated time for your presentation includes a discussion and changeover to the next speaker. Session Chairs will hold you to the allotted time. This is essential to ensure adequate time for questions and discussion as well as adherence to the schedule. Please discuss the same material as reported in your abstract submission. At the end of the meeting, all presentation files will be destroyed.

PRESENTATION GUIDE (Poster)

1. Locate Your Poster Board

Poster presentations will be held from Mon-4 Jun to Thu-7 Jun 2018 at the Exhibition/Poster Hall (Ballroom B, Level 4). Poster boards are pre-assigned and marked with your Abstract ID. Please feel free to approach the Poster Help Desk for assistance.

2. Poster Set-up, Question and Answer (Q & A) Session and Tear-down

Mon-4 Jun

Sections: AS1, IG and PS **Poster Set-up**: 15:00 - 18:00 ***Poster Q & A**: 18:30 - 20:30 **Poster Tear-down**: 20:30 - 21:00

Tue-5 Jun

Sections: HS and ST **Poster Set-up**: 10:30 - 12:30 ***Poster Q & A:** 13:30 - 15:30 **Poster Tear-down:** 15:30 - 16:00

Wed-6 Jun

Sections: AS2 and BG
Poster Set-up: 10:30 - 12:30
*Poster Q & A: 13:30 - 15:30
Poster Tear-down: 15:30 - 16:00

Thu-7 Jun

Sections: OS and SE **Poster Set-up**: 10:30 - 12:30 ***Poster Q & A**: 13:30 - 15:30 **Poster Tear-down**: 15:30 - 16:00

^{*}Presenter attendance required during Poster Q&A

3. Submitted digital poster files will be uploaded to the Landscape Touch Screen Panels (Digital Boards) placed around the Exhibition/Poster Hall (Ballroom B, Level 4) for visitor viewing throughout the conference but they are <u>not a substitution</u> for the actual poster presentation.

4. Prepare Your Poster

Each presenter is provided with a **2.4m wide x 1m** high poster panel. The presentation must cover the same material as the abstract submitted. The poster should be **1 x A0 size in landscape format, measuring 1189 mm length x 841 mm height maximum**.

- Place your Abstract ID, Abstract Title and Authors' names prominently at the top of the poster to allow viewers to identify your abstract easily.
 Presenter's Name must be underlined and in Bold Letterings.
- Authors' names, e-mails and address information must be provided in case the viewer is interested in contacting you for more information.
- You have complete freedom in displaying your information in figures, tables, text, photographs, etc. in the poster.
- A successful poster presentation depends on how well you convey information to an interested (but not expert) audience. You may wish to structure your poster by including the background of your research followed by results and conclusions.

5. Set Up Your Poster (See also 1 & 2)

- Posters should be set-up by 18:00 (Mon) and 12:30 (Tue-Thu)
- Posters are scheduled to be on display from 18:30 to 20:30 (Mon) and 13:30 to 15:30 (Tue-Thu).
 Poster Q & A Session is as scheduled and presenter attendance is required during the session.
- Adhesive tapes and scissors are available at the Poster Help Desk, nearby the poster boards. If you have special needs for your poster presentation, please bring those supplies with you to the meeting.

6. Remove Your Poster

- Posters must be removed after the viewing time by 21:00 (Mon) and 16:00 (Tue-Thu).
- After this time, posters remaining on the boards may be removed and discarded by cleaners.
 AOGS will not be responsible for posters and materials left on poster boards after the stated hours.

7. Student Poster Competition

To qualify for this competition, participants have to submit a digital copy of their poster via MARS. The deadline to upload your digital poster is Tue-15 May. Awards shall be in the form of Certificates, to be signed by AOGS President and the Section President, and Complimentary Registrations for the Winners to attend AOGS Annual Meeting in the following year.

• One award minimum per Section, and 1 additional award for every 20 student posters.

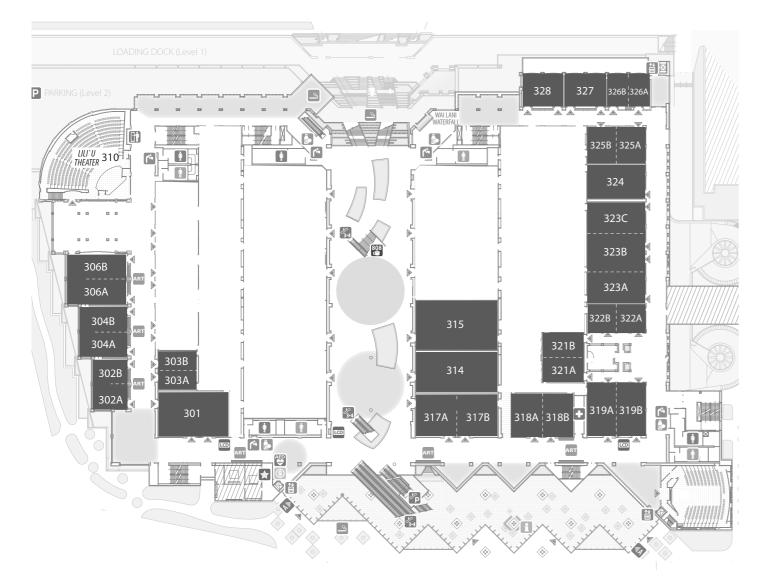
- If won, Best Student Poster Award will be awarded to only the Presenting Author
- Presenter Attendance is Required during the Poster Session (See 2 for your Section's Poster Session Schedule)
- The criteria for evaluating poster presentations are
 - a. Scientific quality and novelty
 - b. Poster design, and
 - c. Ability of student presenter to answer question

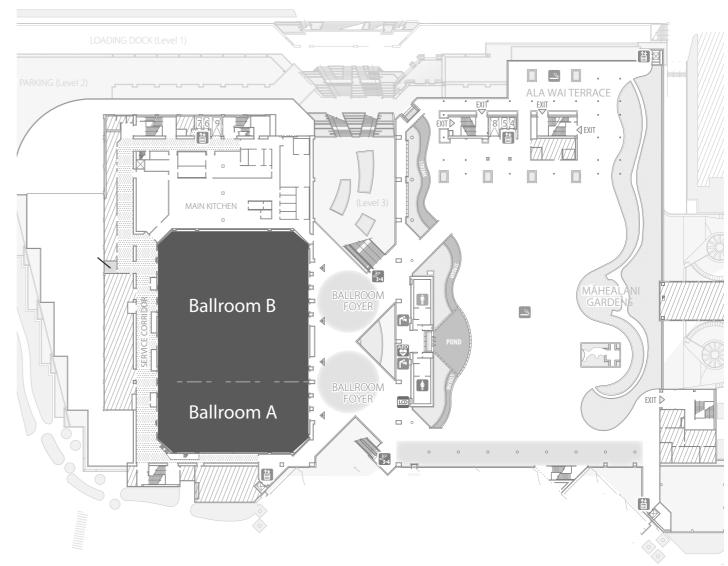
SCIENTIFIC PROGRAM

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Date	Time & Room	301	302A	302B	303A	303B	304A	304B	314	315	317A	317B	318A	318B	319A	319B	321A	321B	322A	322B	323A	323B	323C	324	325A	325B	326A	326B	Ballroom B
	08:30 - 10:30	HS03 (p50)	SE19 (p66)	AS12 (p37)	AS55 (p47)	AS19 (p39)	ST11 (p74)	BG01 (p48)	SE22-35 (p69)	AS31 (p41)	ST20 (p75)	OS06 (p57)	HS01 (p49)	HS30 (p53)	AS09 (p34)	SE20 (p67)	SE18-34-37 (p64)	SE10 (p63)	OS02-AS (p56)	HS07 (p52)	IG24 (p54)	PS10 (p61)	ST03 (p71)	OS23 (p59)	AS10 (p35)	AS17 (p38)	AS28 (p40)	AS46 (p44)	
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ıne 2		(p50)	(p66)	(p37)	(p48)	(p43)	(p74)	(p49)	(p69)	(p42)	(p75)	(p58)	(p50)	(p54)	(p34)	(p68)	(p64)	(p63)	(p56)	(p51)	DL-IG (p7)	DL-PS (p8)	(p71)	(p59)	(p36)	(p38)	(p41)	(p45)	
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on,	12:30 - 13:30	SM-HS						SM-BG	SM-SE	SM-AS											SM-IG	SM-PS	SM-ST	SM-OS					
1: M	13:30 - 15:30	HS03	SE19	AS36	AS54	AS19	ST06	PS01	SE22-35	AS31	ST10-21	OS20	HS16	HS06	AS09	SE20	SE18-34-37	SE04	OS02-AS		IG24	PS16	ST03	OS01	AS11	AS17	AS39	AS48	
Day	16:00 - 18:00	(p51)	(p66)	(p43)	(p46)	(p40)	(p72)	(p60)	(p70)	(p42)	(p73)	(p58)	(p53)	(p52)	(p35)	(p68)	(p65)	(p62)	(p56)	(p54)	(p55)	(p61)	(p72)	(p55)	(p36)	(p39)	(p44)	(p46)	
	10:00 - 10:00													AS1 Posters (p77)															
	EVE	VE EXHIBITION OPENS & WELCOME RECEPTION (18:30 - 20:30), POSTER SESSION: AS1, IG & PS - Venue: Ballroom B, L4											PS Posters (p99)																
Dete	T: 0 D	201	2024	2020	202 4	2020	2014	204B	214	245	2474	01ED	2104	240B	2104	2400	2214	224D	2224	anap.	1 2224	l agan	2226	224	225.4	2250	2264	22(P	IG Posters (p92)
Date	Time & Room	301	302A	302B	303A	303B	304A	304B	314 CE11 12	315	317A	317B	318A	318B	319A	319B	321A	321B	322A	322B	323A	323B	323C	324	325A	325B	326A	326B	Ballroom B
∞	08:30 - 10:30	HS23 (p138)	PS09-04 (p149)	AS08 (p118)	AS16-53 (p122)	AS34 (p129)	PS14 (p153)	BG05-SE (p134)	SE11-13 (p159)	AS31 (p127)	ST17 (p168)	OS12 (p144)	HS34 (p139)	HS18 (p137)	AS20 (p123)	SE31-07 (p163)	SE21 (p161)	SE04 (p158)	OS18 (p145)	IG06 (p141)	IG01 (p139)	PS18 (p154)	ST13 (p166)	OS04 (p143)	AS11 (p119)	AS03 (p116)	AS13 (p121)	AS27 (p126)	
2018		KL-HS	4 7	· · · /	` '	4 1	· · · /	,	* '/	' '	4 -7	· /	4 /	'4 /	·4 -7	4 -7	' '	· -/	1 -/		4 //	' '	KL-ST	1 -/	,	'4 -/	4 /	· · · /	
June	11:00 - 12:30	(p10)	PS05	AS08	AS16-53	AS34	PS14	BG06-AS	SE11-13	AS31		OS12			AS20	SE31-07	SE21	SE03	OS16	IG22		PS11	(p12)	OS05	AS11	AS03	AS13	AS27	
02		DL-HS (p6)	(p149)	(p118)	(p122)	(p130)	(p154)	(p135)	(p160)	(p128)		(p144)			(p123)	(p164)	(p162)	(p157)	(p145)	(p142)		(p151)	DL-ST (p8)	(p143)	(p119)	(p116)	(p121)	(p126)	
: Tue,	12,20 15:20	(1-5)	PS09-04	AS08	AS54	AS34	PS22	BG06-AS	SE22-35	AS31	SS03	OS25-BG			AS20	SE31-07	SE02	SE03	OS18	IG12	IG04	PS11	SS09	OS27	AS11	AS03	AS49	AS22	ST Posters (p184)
Day 2	13:30 - 15:30		(p150)	(p118)	(p133)	(p130)	(p155)	(p135)	(p162)	(p128)	(p165)	(p147)			(p124)	(p164)	(p156)	(p158)	(p146)	(p141)	(p140)	(p152)	(p166)	(p148)	(p120)	(p117)	(p132)	(p124)	HS Posters (p170)
D	16:00 - 18:00	HS32	PS09-04	AS35	AS54	AS37	PS22	BG06-AS	SE22-35	AS31	ST17	OS25-BG	HS05	HS11	AS29	SE31-07	SE02	SE16	OS18	IG12	IG04	PS11	ST13	OS27	AS11	AS03	AS49	AS22	
Dete	T: 0 D	(p138)	(p151)	(p131)	(p133)	(p131)	(p156)	(p136)	(p163)	(p129)	(p168)	(p147)	(p136)	(p137)	(p127)	(p165)	(p157)	(p160)	(p146)	(p142)	(p140)	(p152)	(p167)	(p148)	(p120)	(p117)	(p132)	(p125)	n II n
Date	Time & Room	301	302A	302B	303A	303B	304A	304B	314	315 AS26-BG	317A	317B	318A	318B	319A	319B	321A	321B	322A	322B	323A	323B	323C	324	325A	325B	326A	326B	Ballroom B
83	08:30 - 10:30	HS21 (p215)	PS06 (p229)	AS35 (p208)	AS33 (p206)	AS37 (p208)	PS17 (p231)	BG07 (p211)	SE26 (p243)	(p204)	ST22 (p250)	OS14 (p225)	HS09 (p212)	HS12 (p214)	AS29 (p205)	SE08 (p239)	SE02 (p238)	SE15 (p240)	OS03 (p223)	IG09 (p221)	IG03 (p218)	PS12 (p231)	ST15 (p247)	OS21 (p227)	AS06 (p202)	AS03 (p202)	AS07 (p203)	AS40 (p209)	
e 2018								KL-BG		KL-AS									-										
June	11:00 - 12:30	HS28					PS17	(p9)	SE26	(p9)	ST22	OS19 (p226)	HS09	HS25		SE08	SE01	SE15	OS03	IG22		PS21	ST08		SS12 (p245)	ST19			
d, 06		(p218) (p218) (p232) DL-BG (p243) DL-AS (p250) (p226) (p212) (p216) (p240) (p236) (p241) (p223) (p223) (p225) (p226) (p245) (p245) (p249)																											
: We	13:30 - 15:30	HS17	PS06	IG13			PS17		SE25-40		ST22	OS24	HS26	HS10	SS08	SE06-30-39	SE01	SE23	OS17	IG08	IG03	PS20	ST08	OS13		ST19			BG Posters (p269)
Day 3:	10.00 10.00	(p214)	(p230)	(p222)			(p233)		(p242)		(p251)	(p228)	(p216)	(p213)	(p244)	(p238)	(p237)	(p241)	(p226)	(p220)	(p219)	(p234)	(p245)	(p224)		(p249)			AS2 Posters (p252)
D	16:00 - 18:00	HS17	PS02	SE09	AS33	AS37	PS17	BG10-IG	SE25-40		ST14	OS24	HS26	HS10	AS29	SE06-30-39	SE01			IG08	IG03	PS20	ST08	OS13	AS06	ST16	AS07	AS40	
Date	Time & Room	(p215) 301	(p229) 302A	(p240) 302B	(p207) 303A	(p209) 303B	(p234) 304A	(p211) 304B	(p243) 314	315	(p247) 317A	(p228) 317B	(p217) 318A	(p213) 318B	(p206) 319A	(p239) 319B	(p237) 321A	321B	322A	(p221) 322B	(p219) 323A	(p235) 323B	(p246) 323C	(p224) 324	(p203) 325A	(p248) 325B	(p204) 326A	(p210) 326B	Ballroom B
Dute		HS22	ST04	AS41	AS42	AS43-44	PS03	BG04	SE25-40	313	ST-PS15	OS24	HS33	HS13	AS30	3176	SE41-33	SE38	OS10	IG20	IG02	PS07	ST07	OS09	AS05	AS03	AS07	AS56	Daintoin D
	08:30 - 10:30	(p301)	(p324)	(p286)	(p288)	(p289)	(p312)	(p295)	(p319)		(p328)	(p311)	(p304)	(p298)	(p285)		(p321)	(p320)	(p310)	(p307)	(p305)	(p314)	(p326)	(p309)	(p280)	(p278)	(p282)	(p293)	
2018		11000		16::	4615	1010 11	DC:22	D.C.C.	KL-SE		OTT:	11000		11012	4.622					1001	162-			KL-OS	1.60-	1601	4.651	1.65	
07 June	11:00 - 12:30	HS22 (p301)	ST04 (p325)	AS41 (p287)	AS42 (p289)	AS43-44 (p290)	PS03 (p312)	BG04 (p296)	(p13) DL-SE	-	ST09 (p327)	HS08 (p297)	HS27 (p303)	HS13 (p298)	AS30 (p286)					IG21 (p308)	IG25 (p308)	PS13 (p317)	ST07 (p327)	(p11) DL-OS	AS05 (p281)	AS04 (p279)	AS21 (p283)	AS56 (p293)	
. 07 J		(p001)	(ро20)	(P207)	(P203)	(p250)	(p012)	(p250)	(p8)		(po27)	(p257)	(pooo)	(p250)	(p200)					(2000)	(2000)	(po17)	(po27)	(p7)	(P201)	(p2/7)	(P200)	(p230)	
Thu,	13:30 - 15:30	HS22	ST04	AS41	AS50	AS23	PS03	BG04			ST-PS15	HS20	HS14	HS13	AS45	SS07			BG03-IG	1	IG02	PS07	ST02		AS05	AS04	AS21	AS56	SE Posters (p341)
4:		(p302)	(p325)	(p287)	(p291)	(p284)	(p313)	(p296)	<u> </u>		(p329)	(p300)	(p299)	(p299)	(p290)	(p322)			(p294)	(p306)	(p305)	(p314)	(p323)		(p281)	(p279)	(p284)	(p294)	OS Posters (p331)
Day	16:00 - 18:00	HS22 (p302)	ST12-23 (p328)	AS01 (p278)	AS50 (p292)	AS23 (p285)	PS08 (p316)	SS10 (p323)	SE32 (p319)		ST-PS15 (p330)	OS08 (p309)	HS14 (p300)	HS31 (p303)	AS45 (p291)	SE05 (p318)	SE41-33 (p322)	SE38 (p320)	BG08-IG (p297)	IG16-BG (p307)	IG02 (p306)	PS07 (p315)	ST02 (p323)	OS09 (p310)	AS05 (p282)	AS04 (p280)	AS18-02-OS (p283)	AS51 (p292)	
	EVE	(p302)	(2020)	(P270)	(P272)	(P200)	(P310)	(P020)		L TUDENT VO		_					d: 1956 Ala M					(P313)	(P323)	(2010)	(P202)	(P200)	(P200)	(P-72)	
Date	Time & Room	301	302A	302B	303A	303B	304A	304B	314	315	317A	317B	318A	318B	319A	319B	321A	321B	322A	322B	323A	323B	323C	324	325A	325B	326A	326B	Ballroom B
2018	08:30 - 10:30	HS22	ST05	AS38	AS32	AS47	PS19	BG09-OS	SE36		ST01	OS09	HS24	HS15	AS45	SE24-29	SE12-17	SE27	BG02-IG	IG17	IG11				AS05	AS04	AS52	AS24-25	
1e 20	00:30 - 10:30	(p379)	(p390)	(p373)	(p371)	(p375)	(p384)	(p378)	(p388)		(p389)	(p382)	(p380)	(p378)	(p374)	(p386)	(p385)	(p387)	(p377)	(p382)	(p381)				(p369)	(p369)	(p376)	(p370)	
3 Jun	11:00 - 12:30	HS22	ST05	AS38	AS32	AS47	PS19	BG09-OS	1		ST01	OS09	HS24	HS15	AS45	SE24-29	SE12-17	SE27	BG02-IG	1	IG25				AS05	AS04	AS52	AS24-25	
Fri, 08		(p380) (p391) (p373) (p375) (p375) (p384) (p378) (p389) (p389) (p381) (p381) (p379) (p386) (p386) (p385) (p388) (p377) (p381) (p382) (p370) (p369) (p376) (p371)										E. 1.3. W																	
rç.	13:30 - 15:30							CLOSIN	NG: Special	Lectures, A	wards, & F	Recognition	Next Mee	ting Destin	ation Prese	entation (13:3	30 - 16:00, Fare	well Rece	ption (16:00	0 - 17:00 - V	enue: Ballro	oom A, L4)							Exhibition Ship Out
Day	EVE																												
D	EVE	E CONVENER'S DINNER CRUISE - By Invitation Only (17:30 - 20:15); Depart HCC for Harbour at 16:30																											



VENUE FLOOR PLAN





Level 3 Level 4



Presentations 4 JUN, 2018 MONDAY

Day 1 - 04 Jun 2018, Monday Program Overview

04 Jun 2018, Monday									
T: /D	AM1	AM2	PM1	PM2					
Time / Room	08:30 - 10:30	11:00 - 12:30	13:30 - 15:30	16:00 - 18:00					
MR301	HS03 (p50)	HS03 (p50)	HS03 (p51)						
MR302A	SE19 (p66)	SE19 (p66)	SE19 (p66)						
MR302B	AS12 (p37)	AS12 (p37)	AS36 (p43)						
MR303A	AS55 (p47)	AS55 (p48)	AS54 (p46)						
MR303B	AS19 (p39)	AS36 (p43)	AS19 (p40)						
MR304A	ST11 (p74)	ST11 (p74)	ST06 (p72)						
MR304B	BG01 (p48)	BG01 (p49)	PS01 (p60)						
MR314	SE22-35 (p69)	SE22-35 (p69)	SE22-35 (p70)						
MR315	AS31 (p41)	AS31 (p42)	AS31 (p42)						
MR317A	ST20 (p75)	ST20 (p75)	ST10-21 (p73)						
MR317B	OS06 (p57)	OS06 (p58)	OS20 (p58)						
MR318A	HS01 (p49)	HS02 (p50)	HS16 (p53)						
MR318B	HS30 (p53)	HS30 (p54)	HS06 (p52)						
MR319A	AS09 (p34)	AS09 (p34)	AS09 (p35)						
MR319B	SE20 (p67)	SE20 (p68)	SE20 (p68)						
MR321A	SE18-34-37 (p64)	SE18-34-37 (p64)	SE18-34-37 (p65)						
MR321B	SE10 (p63)	SE10 (p63)	SE04 (p62)						
MR322A	OS02-AS (p56)	OS02-AS (p56)	OS02-AS (p56)						
MR322B	HS07 (p52)	HS04 (p51)	IG07 (p54)						
MR323A	IG24 (p54)	KL-IG (p11), DL-IG (p7)	IG24 (p55)						
MR323B	PS10 (p61)	KL-PS (p12), DL-PS (p8)	PS16 (p61)						
MR323C	ST03 (p71)	ST03 (p71)	ST03 (p72)						
MR324	OS23 (p59)	OS23 (p59)	OS01 (p55)						
MR325A	AS10 (p35)	AS10 (p36)	AS11 (p36)						
MR325B	AS17 (p38)	AS17 (p38)	AS17 (p39)						
MR326A	AS28 (p40)	AS28 (p41)	AS39 (p44)						
MR326B	AS46 (p44)	AS46 (p45)	AS48 (p46)						
				AS1 Posters (p77)					
Ballroom B				PS Posters (p99)					
				IG Posters (p92)					

Sessions & Conveners

* Main Convener

AS09-Aerosol and Cloud Observations from Geostationary Satellites: Breaking the Temporal Barriers

*Pawan GUPTA Universities Space Research Association, Robert LEVY NASA Goddard Space Flight Center, James CRAWFORD NASA Langley Research Center, Steven PLATNICK NASA Goddard Space Flight Center, Mayumi YOSHIDA Japan Aerospace Exploration Agency

AS10-Asian Monsoon Variability in a Warming Environment

*Ramesh KRIPALANI Indian Institute of Tropical Meteorology, Jaiho OH Pukyong National University, Kyung-Ja HA Pusan National University, June-Yi LEE Pusan National University, Amita PRABHU Indian Institute of Tropical Meteorology

AS11-Impacts of Haze and Dust in East Asia: Mechanism,

Observations, and Model Assessments

*Yuan WANG California Institute of Technology, Jianping GUO Chinese Academy of Meteorological Sciences, Chuanfeng ZHAO Beijing Normal University, Yong-Sang CHOI Ewha Womans University, Daizhou ZHANG Prefectural University of Kumamoto

AS12-Data Assimilation for Earth System Applications

*Soyoung HA National Center for Atmospheric Research, Lili LEI Nanjing University

AS17-Land-atmosphere interactions of the Tibetan Plateau and their impacts on weather and climate

*Fei CHEN National Center for Atmospheric Research, Ping ZHAO Chinese Academy of Meteorological Sciences, Yimin LIU Chinese Academy of Sciences

AS19-Impact of Aerosols on Hydro-climate

*Kyu-Myong KIM NASA Goddard Space Flight Center, Yun QIAN Pacific Northwest National Laboratory, Tianjun ZHOU Chinese Academy of Sciences, Maeng-Ki KIM Kongju National University, Teppei YASUNARI Hokkaido University

AS28-Southeast Asian Climate Variability and

Ocean-land-atmosphere Interactions

*Renguang WU Chinese Academy of Sciences, Song YANG Sun Yat-sen University, Xiaojing JIA Zhejiang University

AS31-The Science and Prediction of Tropical Cyclones

*Chun-Chieh WU National Taiwan University, Yuqing WANG University of Hawaii at Manoa, Kosuke ITO University of the Ryukyus, Zhuo WANG University of Illinois at Urbana-Champaign, Jeff KEPERT Centre for Australian Weather and Climate Research

AS36-Ocean-atmosphere Coupling: Dynamics, Assimilation, and Predictability

*Stéphane VANNITSEM Royal Meteorological Institute of Belgium, Wansuo DUAN Chinese Academy of Sciences, Noel KEENLYSIDE University of Bergen, Fei ZHENG Chinese Academy of Sciences

AS39-Theory, Observations and Modelling of Maritime

Continent Convection

*Masaki KATSUMATA Japan Agency for Marine-Earth Science and Technology, Muhammad Eeqmal HASSIM Meteorological Service Singapore, Hanh NGUYEN Australian Bureau of Meteorology

AS46-Precipitation Science and Application of Satellite Data

*Yukari TAKAYABU The University of Tokyo, Gail SKOFRONICK-JACKSON NASA Goddard Space Flight Center, Geun-Hyeok RYU Korea Meteorological Administration, Kenji NAKAMURA Dokkyo University, Kusuma RAO Indian Space Research Organization

AS48-Earth System Predictability, Prediction and

Application

*June-Yi LEE Pusan National University, Andrea ALESSANDRI Royal Netherlands Meteorological Institute, Yoshimitsu CHIKAMOTO Utah State University

AS54-Aerosols, Clouds, Radiation, Precipitation, and Their

Interactions

*Xiquan DONG University of Arizona, Teri NAKAJIMA Japan Aerospace Exploration Agency, Byung-Ju SOHN Seoul National University, C.G. CUI China Meteorological Administration

${\bf AS55\text{-}Observations~and~Representations~of~Subgrid\text{-}scale}$

Processes for Improving Models

*Chuanfeng ZHAO Beijing Normal University, Kuan-Man XU NASA Langley Research Center, Jonathan JIANG Jet Propulsion Laboratory, California Institute of Technology, Xiquan DONG University of Arizona

BG01-Cycling of Carbon and Nitrogen in Terrestrial and Coastal Ecosystems

*Punyasloke BHADURY Indian Institute of Science Education and Research Kolkata, Ajcharaporn PIUMSOMBOON Chulalongkorn University

HS01-Interactions Between Water and Ecosystem -

Catchment Dynamics

*Jian-Ping SUEN National Cheng Kung University, Ting Fong May CHUI The University of Hong Kong

HS02-Interactions with Water and Ecosystem - Riparian Zone

Processes

*Kyungrock PAIK Korea University, Gene Jiing-Yun YOU National Taiwan University

HS03-Challenges in Hydrologic Modeling

*Bellie SIVAKUMAR University of New South Wales, Shie-Yui LIONG National University of Singapore, Ji CHEN The University of Hong Kong, Dawen YANG Tsinghua University

HS04-Hydroinformatics

*Dawei HAN *University of Bristol*, Jeanne Jinhui HUANG Nankai University

HS06-Cascade Reservoir Operations and Its Impact on

Hydrology and Ecology

*Xiaohui LEI China Institute of Water Resources and Hydropower Research, Xiaohui LEI China Institute of Water Resources and Hydropower Research, Shailesh SINGH National Institute of Water and Atmospheric Research

HS07-Hydrometeorology

*C.G. CUI China Meteorological Administration, Tao PENG China Meteorological Administration

HS16-Water-related Hazards and Their Forecasting and Warning

*Gwo-Fong LIN National Taiwan University, Jui-Yi HO National Applied Research Laboratories

HS30-Ecohydrological Responses to Environmental Changes and Efficient Water Resources Management in Dryland Regions

*Ke ZHANG Hohai University, Jingfeng WANG Georgia Institute of Technology, Weijiang ZHANG Ningxia University

IG07-Modeling of Natural Hazard Risks in Asia and Around the World

*Shuangcai LI Risk Management Solutions, Yizhong QU AIR Worldwide, Christian MORTGAT Risk Management Solutions, Jingshan YU Beijing Normal University, Guoqiang WANG Beijing Normal University

IG24-Natural Hazards and Disaster Risk

*Vena Pearl BONGOLAN University of the Philippines Diliman, James TERRY Zayed University, Arti PRATAP

OS01-Ocean Salinity Variability and Its Impact on Weather, Climate and Biogeochemistry

*Hailong LIU Shanghai Jiao Tong University, Nathalie GOODKIN Nanyang Technological University, Sunghyun NAM Agency for Defense Development, Xidong WANG Hohai University

OS02-AS-Tropical Cyclone-ocean Interactions

*I-I LIN National Taiwan University, Guihua WANG Fudan University, Chunzai WANG South China Sea Institute of Oceanology, Dake CHEN State Oceanic Administration

OS06-Future Coast and Ocean Under Increasing Stormy and Anthropogenic Scenarios

*Daidu FAN Tongji University, Jingping XU Southern University of Science and Technology, Xiao Hua WANG University of New South Wales, Guan-Hong LEE Inha University, Zai-Jin YOU Ludong University

OS20- Building Resilience - Climate Change Impacts,

Adaptation, and Challenges.

*Serena LEE Griffith University, Oceana FRANCIS University of Hawaii at Manoa, Charles LEMCKERT University of Canberra

OS23-Tropical Western Pacific and Eastern Indian Ocean

Palaeoceanography and Palaeoclimatology

*Mahyar MOHTADI University of Bremen, Markus KIENAST Dalhousie University, Stephan STEINKE Xiamen University, Andreas LUECKGE Federal Institute of Geosciences and Natural Resources

PS01-The Science of Exploration as Enabled by the Moon,

Near Earth Asteroids and the Moons of Mars

*Greg SCHMIDT National Aeronautics and Space Administration Headquarters(NASA), James GREEN NASA Headquarters, Doris DAOU NASA Headquarters

PS10-Dwarf Planet Ceres After Dawn

*Jennifer SCULLY Jet Propulsion Laboratory, California Institute of Technology, Jian-Yang LI Planetary Science Institute, Norbert SCHORGHOFER Planetary Science Institute, Wing-Huen IP National Central University

PS16-Cassini's Grand Finale: Science Highlights and

Discoveries

*Scott EDGINGTON Jet Propulsion Laboratory, California Institute of Technology, Sushil ATREYA University of Michigan, Athena COUSTENIS Paris Observatory, Wing-Huen IP National Central University

SE04-Dynamic System of Earth: Interactions from Surface to

*Takashi NAKAGAWA Japan Agency for Marine-Earth Science and Technology, Weijia KUANG NASA Goddard Space Flight Center, Daoyuan SUN University of Science and Technology of China, Eh TAN Academia Sinica, Xiaodong SONG U of Illinois Urbana-Champaign / Wuhan U

SE10-Mantle and Core: Structure, Dynamics, Chemistry, and Seismology

*Kenji KAWAI *The University of Tokyo,* Maxim BALLMER *ETH Zurich,* Taku TSUCHIYA *Ehime University,* Murli MANGHNANI *University of Hawaii*

SE18-34-37-Observations and Implication of Stress

Geomechanics Integrations, Slow and Fast Earthquake

Source Physics and Triggered and Induced Seismicity

*Chung-Han CHAN Nanyang Technological University, Hung-Yu WU Japan Agency for Marine-Earth Science and Technology, Liqing JIAO Nanyang Technological University, Sushil KUMAR Wadia Institute of Himalayan Geology, Roland GRITTO Array Information Technology

SE19-Characterizing Precambrian Crust and Lithosphere

*Huaiyu YUAN Macquarie University, Yu GU University of Alberta, Klaus GESSNER Geological Survey of Western Australia, Liang ZHAO Chinese Academy of Sciences

SE20-Accretionary and Collisional Orogenesis of the Central Asian Orogenic Belt

*Keda CAI China University of Geosciences, Misha BUSLOV Siberian Branch of the Russian Academy of Sciences, Bo WANG Nanjing University, Bo WAN Chinese Academy of Sciences, Shan LI Institute of Geology, Chinese Academy of Geological Sciences

SE22-35-Earthquakes, Fault Ruptures and Seismic Hazards in

Southeast and East Asia and Selected Sedimentary Basins

*Yu WANG National Taiwan University, Noelynna RAMOS University of the Philippines Diliman, Myo THANT Monywa University, Phil CUMMINS Australian National University, Sri WIDIYANTORO Bandung Institute of Technology

ST03-Wave-Particle Interactions in the Magnetosphere

*Yuto KATOH Tohoku University, Danny SUMMERS Memorial University of Newfoundland, Yoshiharu OMURA Kyoto University, Dong-Hun LEE Kyung Hee University

ST06-Cross-scale Kinetic Processes in Magnetospheric

Boundary Layers

*Keizo FUJIMOTO Beihang University, Dongsheng CAI University of Tsukuba, Bertrand LEMBEGE National Centre for Scientific Research, Richard SYDORA University of Alberta

ST10-21-Upper Atmosphere Responses to Lithosphere,

Atmosphere and Anthropogenic Disturbances

*Charles LIN National Cheng Kung University, Yang-Yi SUN China University of Geosciences, Chi-Yen LIN National Central University, Jann-Yenq (Tiger) LIU National Central University, William SCHREINER University Corporation for Atmospheric Research

ST11-Use of Nano/microsatellites for Solar-terrestrial Studies

*Kyoung Wook MIN Korea Advanced Institute of Science and Technology, Koichiro OYAMA National Cheng Kung University, Devi MINAKSHI Gauhati University, Shinichi NAKASUKA The University of Tokyo

ST20-Fundamental Physics of the Solar Corona and Inner

Heliosphere

*Chadi SALEM University of California, Berkeley, Jiansen HE Peking University, Beijing, Marco VELLI University of California, Los Angeles, Leon OFMAN Catholic University of America

AS09 / Aerosol and Cloud Observations from Geostationary Satellites: Breaking the Temporal Barriers

Mon - 04 Jun | MR319A

Time 08:30 - 10:30

Chair(s) Robert LEVY, NASA Goddard Space Flight Center

Mayumi YOSHIDA, Japan Aerospace Exploration Agency

AS09-D1-AM1-319A-001 | AS09-A010 (Invited)

North American Pollution Measurements from Geostationary Orbit with Tropospheric Emissions: Monitoring of Pollution (TEMPO)

Kelly CHANCE1#+

¹Harvard-Smithsonian Center for Astrophysics

AS09-D1-AM1-319A-002 | AS09-A020

Algorithm for Retrieval of Aerosol Optical Properties over the East Asia from Geostationary Environment Monitoring Spectrometer (GEMS)

Sujung GO^{1#}, Jhoon KIM¹, Mijin KIM¹, Omar TORRES², Changwoo AHN³, Robert SPURR⁴, Myungje CHOI¹, Hyunkwang LIM¹

¹Yonsei University, ²NASA Goddard Space Flight Center, ³Science Systems and Applications, Inc., ⁴RT Solutions

AS09-D1-AM1-319A-003 | AS09-A036 (Invited)

A New Era for Aerosol Products from Geostationary Satellites Shobha KONDRAGUNTA¹⁵⁺, Istvan LASZLO¹, Amy HUFF² ¹National Oceanic and Atmospheric Administration, ²Penn State University

AS09-D1-AM1-319A-004 | AS09-A015

GOES-16 ABI Aerosol Products: Revolutionizing Ozone and Particulate Matter Ambient Air Quality Forecasting Associated with Wildfires and Blowing Dust

Amy HUFF1**, Shobha KONDRAGUNTA², Hai ZHANG², William RYAN¹

¹Penn State University, ²National Oceanic and Atmospheric Administration

AS09-D1-AM1-319A-005 | AS09-A005

Aerosol Retrieval and Validation from Geostationary Satellites
Pawan GUPTA^{1,2*+}, Robert LEVY², Shana MATTOO³
¹Universities Space Research Association, ²NASA Goddard Space
Flight Center, ³Science Systems and Applications, Inc./ NASA
Goddard Space Flight Center

AS09-D1-AM1-319A-006 | AS09-A033

Overview of Multi-Sensor Research and Applications at NASA Sport

Aaron NAEGER1#+

¹University of Alabama in Huntsville

AS09-D1-AM1-319A-007 | AS09-A008 (Invited)

Spectral Variability in Earth's Global Reflectance as Observed by DSCOVR/EPIC

Alexander MARSHAK $^{1#}$, Weidong YANG 2 , Tamas VARNAI 3 , Yuri KNYAZIKHIN 4

¹NASA Goddard Space Flight Center, ²GESTAR, ³University of Maryland, Baltimore County, ⁴Boston University

Time 11:00 - 12:30

Chair(s) Pawan GUPTA, USRA/NASA Goddard

Steven PLATNICK, NASA Goddard Space Flight Center

AS09-D1-AM2-319A-008 | AS09-A001

Retrieval of Ice Cloud Properties from Himawari-8

Geostationary Satellite Measurement

Husi LETU^{1±+}, Takashi M. NAGAO², Takashi NAKAJIMA³, Hiroshi ISHIMOTO⁴, Jerome RIEDI⁵, Huazhe SHANG¹
¹Chinese Academy of Sciences, ²Japan Aerospace Exploration Agency, ³Tokai University, ⁴Japan Meteorological Agency, ⁵LOA / Université de Lille

AS09-D1-AM2-319A-009 | AS09-A027

Towards Consistent Water Cloud Optical Property Products from Geostationary and Polar Orbiting Satellite Data:

Himawari-8/AHI and GCOM-C/SGLI

Takashi NAGAO^{1#}, Hiroshi MURAKAMI¹, Maki KIKUCHI¹, Mayumi YOSHIDA¹, Takashi NAKAJIMA²
¹Japan Aerospace Exploration Agency, ²Tokai University

AS09-D1-AM2-319A-010 | AS09-A031

Progress in Porting NASA VIIRS-Like Cloud Property

Algorithms to ABI and AHI Imagers

Steven PLATNICK 1* , Kerry MEYER 1 , Robert HOL Z^2 , Steven ACKERMAN 2 , Andrew HEIDINGER 3 , Galina WIND 4 , Nandana AMARASINGHE 4

¹NASA Goddard Space Flight Center, ²University of Wisconsin, ³National Oceanic and Atmospheric Administration, ⁴Science Systems and Applications, Inc.

AS09-D1-AM2-319A-011 | AS09-A034

Validation and Temporal Analysis of the SEV06-CLD Cloud Product, a MODIS-Like Cloud Properties Dataset from SEVIRI/MSG

Jerome RIEDI¹⁵⁺, Galina WIND², Maximilien PATOU³, Steven PLATNICK⁴, Andrew HEIDINGER⁵, François THIEULEUX³, Kerry MEYER⁴, Jerome VIDOT⁶

¹LOA / Université de Lille, ²Science Systems and Applications, Inc., ³Université Lille 1, ⁴NASA Goddard Space Flight Center, ⁵National Oceanic and Atmospheric Administration, ⁶CMS MeteoFrance

AS09-D1-AM2-319A-012 | AS09-A028

A Study on Improved Thin Cloud Detection Using TOA
Reflectance and the BRDF Model-Based Surface Reflectance
Hye-Won KIM^{1‡+}, Jong-Min YEOM¹, Sun-Hee WOO¹
¹Korea Aerospace Research Institute

Time 13:30 - 15:30

Chair(s) James CRAWFORD, NASA's Langley Research Center

Pawan GUPTA, USRA/NASA Goddard

AS09-D1-PM1-319A-013 | AS09-A007

Common Retrieval of Atmospheric Aerosol Properties Using Satellite Imaging Sensors for JAXA Earth Observation

Mayumi YOSHIDA^{1#+}, Maki KIKUCHI¹, Takashi M. NAGAO¹, Hiroshi MURAKAMI¹, Tomoyuki NOMAKI², Higurashi AKIKO³ ¹Japan Aerospace Exploration Agency, ²Remote Sensing Technology Center of Japan, ³National Institute for Environmental Studies

AS09-D1-PM1-319A-014 | AS09-A012

Understanding of Atmospheric Aerosol Behavior Using a Semi-Regional Model, a Geostationary Satellite and in Situ

Measurements over Japan in May 2016

Daisuke GOTO^{1,2+}, Maki KIKUCHI², Kentaro SUZUKI³, Masamitsu HAYASAKI⁴, Mayumi YOSHIDA², Takashi M. NAGAO², Nobuo SUGIMOTO¹, Atsushi SHIMIZU¹, Teri NAKAJIMA²

¹National Institute for Environmental Studies, ²Japan Aerospace Exploration Agency, ³The University of Tokyo, ⁴University of Tsukuba

AS09-D1-PM1-319A-015 | AS09-A017

Application of GOCI Aerosol Optical Properties from Near-Real-Time Air-Quality Monitoring to Long-Term

Climatological Analysis over East Asia

Myungje CHOI¹#+, Jhoon KIM¹, Seoyoung LEE¹, Jaehwa LEE² ¹Yonsei University, ²NASA Goddard Space Flight Center

AS09-D1-PM1-319A-016 | AS09-A029

Observing Significant Aerosol Events Using Sensors in LEO and GEO Orbits

Robert LEVY1 1,2 , Shana MATTOO2, Pawan GUPTA1,3, Virginia SAWYER1

¹NASA Goddard Space Flight Center, ²Science Systems and Applications, Inc./ NASA Goddard Space Flight Center, ³Universities Space Research Association

AS09-D1-PM1-319A-017 | AS09-A037

Next Generation Geostationary Imagers AHI/ABI Processing and Visualization Support at SSEC for NASA Earth Science and Integration into the NASA Worldview Application

Robert HOLZ^{1;*}, Ralph KUEHN¹, Coda PHILIPS¹, Ryan BOLLER², Matthew CECHINI², Kerry MEYER², Steven PLATNICK², Andrew HEIDINGER³

¹University of Wisconsin, ²NASA Goddard Space Flight Center, ³National Oceanic and Atmospheric Administration

AS09-D1-PM1-319A-018 | AS09-A035

DSCOVR-EPIC Aerosol Products

Omar TORRES
1#+, Chamgwoo AHN², Jun WANG³, Xiaoguang XU³

¹NASA Goddard Space Flight Center, ²Science Systems and Applications, Inc., ³The University of Iowa

AS09-D1-PM1-319A-019 | AS09-A038

AERONET's Ground - Based RS Network Measurements for

Diurnal Aerosol Assessments

Brent HOLBEN¹⁵⁺, David GILES^{1,2}, Thomas ECK¹, Ilya SLUTSKER^{1,3}, Alexander SMIRNOV^{1,3}, Joel SCHAFER¹, Aliaksandr SINYUK¹, Mikhail SOROKIN¹

 1NASA Goddard Space Flight Center, 2Science Systems and Applications, Inc., 3Sigma Space Corporation

AS10 / Asian Monsoon Variability in a Warming Environment

Mon - 04 Jun | MR325A

Time 08:30 - 10:30

Chair(s) Kyung-Ja HA, Pusan National University

AS10-D1-AM1-325A-001 | AS10-A002 (Invited)

Summer Tibetan Plateau Snow Variability and its Influence on

Asian Summer Rainfall

Renguang WU^{1#+}, Zhibiao WANG¹ ¹Chinese Academy of Sciences

AS10-D1-AM1-325A-002 | AS10-A006 (Invited)

Comparative Study of Response of Indian Summer Monsoon

to Changes in SST and Snow Depth in a GCM

Sushil Kumar DASH1#+

¹Indian Institute of Technology Delhi

AS10-D1-AM1-325A-003 | AS10-A007 (Invited)

The Nonlinearity in the Indian Summer Monsoon Rainfall Responses to Opposite Phases of IOD

Swadhin BEHERA^{1#+}, Venkata Ratnam JAYANTHI¹
¹Japan Agency for Marine-Earth Science and Technology

AS10-D1-AM1-325A-004 | AS10-A001

Climatic Impact of Tropical Volcanic Eruption: The Role of Background Climate and Volcanic Perturbation

Chaochao GAO^{1#+}
¹Zhejiang University

AS10-D1-AM1-325A-005 | AS10-A011

Spatial Patterns of Drought/Flood over Eastern China in the Periods of Anomalous Solar Activity During the Past Millennium

Jingyun ZHENG^{1*+}, Zhixin HAO¹, Xuezhen ZHANG¹ ¹Chinese Academy of Sciences

AS10-D1-AM1-325A-006 | AS10-A015

Changes in Global Precipitation Associated with Global

Warming and Natural SST Modes

Kyung-Ja HA^{1#+}, Byeong-Hee KIM¹
¹Pusan National University

AS10-D1-AM1-325A-007 | AS10-A019

Recent Decadal Change in Surface Air Temperature over East

Asia: From Weak to Strong Winter Monsoon

Kyung-Ja HA^{1#}, Junghee YUN¹⁺
¹Pusan National University

Time 11:00 - 12:30

Chair(s) Kyung-Ja HA, Pusan National University

Sushil Kumar DASH, Indian Institute of Technology

Delhi

AS10-D1-AM2-325A-008 | AS10-A013 (Invited)

Extreme Precipitation Changes in Global Land Monsoon Regions in a 1.5 Degree Warming World

Tianjun ZHOU1#+

¹Chinese Academy of Sciences

AS10-D1-AM2-325A-009 | AS10-A012 (Invited)

Use of APHRODITE Raingauge Based Precipitation Product for Improving Asian Monsoon Seasonal Precipitation Forecasts by the Superensemble Method

Akiyo YATAGAI^{1#+}, Vinay KUMAR²
¹Hirosaki University, ²Texas A&M University

AS10-D1-AM2-325A-010 | AS10-A014 (Invited)

Understanding ENSO-Indian Summer Monsoon

Teleconnections During Last Millennium with Emphasis on

MWP and LIA: A PMIP3 Approach

Karumuri ASHOK $^{1\sharp+}$, Charan Teja TEJAVATH 1 , Supriyo CHAKRABORTY 2 , Rengaswamy RAMESH 3

¹University of Hyderabad, ²Indian Institute of Tropical Meteorology, ³National Institute of Science Education and Research

AS10-D1-AM2-325A-011 | AS10-A023

Addressing on Mechanism of Different Types of ENSO and

Related Teleconnections and Solar Influence

Indrani ROY^{1#+}
¹University of Exeter

AS11 / Impacts of Haze and Dust in East Asia: Mechanism, Observations, and Model Assessments

Mon - 04 Jun | MR325A

Time 13:30 - 15:30

Chair(s) Yuan WANG, California Institute of Technology

Jianping GUO, Chinese Academy of Meteorological

Sciences

AS11-D1-PM1-325A-001 | AS11-A046 (Invited)

Formation and Impacts of Regional Haze in China

Renyi ZHANG1#+

¹Texas A&M University

AS11-D1-PM1-325A-002 | AS11-A057 (Invited)

Quantifying Contributions of Natural and Anthropogenic Dust

Emission from Different Climatic Regions

Jianping HUANG^{1#+}, Siyu CHEN¹

¹Lanzhou University

AS11-D1-PM1-325A-003 | AS11-A018

A New High Frequency Multi-Satellite Constrained Aerosol

Emissions Database, and Associated Impacts on Aerosol

Loadings and Radiative Forcing: Missing Sources, Long-Range

Transport, and Spatial-Temporal Changes

Jason COHEN1#+

¹Sun Yat-sen University

AS11-D1-PM1-325A-004 | AS11-A003

Variation of Bacterial Aerosols in Asian Continental Outflow with Synoptic Weather: Recent Observations at Southwestern

Japan

Daizhou ZHANG^{1‡+}, Kotaro MURATA², Wei HU¹, Hiromi MATSUSAKI¹, Hongli YUAN³, Weilin LI³, Makiko KAKIKAWA⁴

¹Prefectural University of Kumamoto, ²National Institute for Polar Research, ³China Agricultural University, ⁴Kanazawa University

AS11-D1-PM1-325A-005 | AS11-A050

Wintertime Nitrate Formation During Haze Days in Xi'an,

China: A Case Study

Tian FENG¹+, Naifang BEI², Shuyu ZHAO¹, Jiarui WU¹, Xia LI³-⁴, Ting ZHANG¹, Junji CAO¹, Weijian ZHOU¹, Guohui LI¹-⁴¹Chinese Academy of Sciences, ²Xi′an Jiaotong University, ³Institute of Earth Environment, Chinese Academy of Sciences, ⁴University of Chinese Academy of Sciences

AS11-D1-PM1-325A-006 | AS11-A063

Quantifying the Haze Aerosol Optical Depth over East Asia

Using Modified MODIS Dark Target Algorithm

Yingxi SHI 1z , Pawan GUPTA 1,2 , Robert LEVY 2 , Lorraine REMER 3,4 , Shana MATTOO 5 , Leiku YANG 6

¹Universities Space Research Association, ²NASA Goddard Space Flight Center, ³University of Maryland, Baltimore County, ⁴Airphoton LLC, ⁵Science Systems and Applications, Inc./ NASA Goddard Space Flight Center, ⁶Henan Polytechnic University

AS12 / Data Assimilation for Earth System Applications

Mon - 04 Jun | MR302B

Time 08:30 - 10:30

Chair(s) Soyoung HA, National Center for Atmospheric Research

Jerome MONNIER, INSA & Mathematics Institute of

Toulouse

AS12-D1-AM1-302B-001 | AS12-A008 (Invited)

DART: An Ensemble Data Assimilation Facility for Earth

System Research, Education and Operations

Jeffrey ANDERSON1#+

¹National Center for Atmospheric Research

AS12-D1-AM1-302B-002 | AS12-A014 (Invited)

Impact of Assimilating All-Sky Infrared Radiance on Tropical

Cyclone Simulation Using WRF-ENKF

Lei ZHU¹, Yonghui WENG², Fuqing ZHANG², Zhiyong MENG¹*

¹Peking University, ²Pennsylvania State University

AS12-D1-AM1-302B-003 | AS12-A005

Adaptive Localization for Satellite Radiance Observations in an Ensemble Kalman Filter

Lili LEI^{1‡+}, Jeffrey ANDERSON², Jeffrey WHITAKER³
¹Nanjing University, ²National Center for Atmospheric Research,
³National Oceanic and Atmospheric Administration

AS12-D1-AM1-302B-004 | AS12-A021

Multi-Sensor Land Data Assimilation: Toward a Robust Global

Soil Moisture and Snow Estimation

Long ZHAO¹⁺, Zong-Liang YANG^{2‡}
¹Southwest University, ²The University of Texas at Austin

AS12-D1-AM1-302B-005 | AS12-A016

Multi-Resolution Outer-Loop for Hybrid Four-Dimensional

Ensemble-Variational Data Assimilation

 $\label{eq:hydrogond} Hyo\mbox{-Jong SONG$^{1\#+}$, Ji-Hyun HA1, Junghan KIM1 Korea Institute of Atmospheric Prediction Systems (KIAPS)$

AS12-D1-AM1-302B-006 | AS12-A024

Improving Short Term Wind Power Forecast over Southern

California Wind Resources Area

Chih-Ying CHEN^{1,2‡+}, Shu-Hua CHEN¹
¹University of California, Davis, ²National Central University

Time 11:00 - 12:30

Chair(s) Lili LEI, Nanjing University

Jeffrey ANDERSON, National Center for Atmospheric

Research

AS12-D1-AM2-302B-007 | AS12-A009 (Invited)

Randomized Incremental Optimal Technique (RIOT) for

Chemical Data Assimilation and Large-Scale Bayesian

Atmospheric Inversions

Daven K. $HENZE^{1#+}$, Nicolas BOUSSERE \mathbb{Z}^2 , Jonathan GUERRETTE³

¹University of Colorado Boulder, ²European Centre for Medium-Range Weather Forecasts, ³National Oceanic and Atmospheric Administration

AS12-D1-AM2-302B-008 | AS12-A019

Variable-Resolution Analysis Using the Regional Model for

Prediction Across Scales

Soyoung HA1#+

¹National Center for Atmospheric Research

AS12-D1-AM2-302B-009 | AS12-A018

LIDAR Data Assimilation and its Impact on PM2.5 Prediction

in Taiwan

Lian-Jie WANG¹**, Chia-Hua HSU¹, Fang-Yi CHENG¹, Sheng-Hsiang WANG¹, Shu-Chih YANG¹

¹National Central University

AS12-D1-AM2-302B-010 | AS12-A011

Aerosol Data Assimilation and Forecast Using Multi-Satellite

Data and In-Situ Observations

Ganghan KIM¹⁺, Myong-In LEE^{1‡}
¹Ulsan National Institute of Science and Technology

AS12-D1-AM2-302B-011 | AS12-A007

Ice-Sheet Bed Topography Estimations from a Reduced

Uncertainty Flow Model and Surface Data

Jerome MONNIER^{1,2#+}, Jiamin ZHU¹

¹Mathematics Institute of Toulouse, ²National Institute of Applied Sciences Toulouse

AS12-D1-AM2-302B-012 | AS12-A012

Impacts of the Australian Wind Profiler Network on Global

Numerical Weather Prediction

Bronwyn DOLMAN $^{1\sharp *}$, Chris TINGWELL², Iain REID 1,3 , Maxime HERVO 4

¹ATRAD Pty Ltd, ²Australian Government Bureau of Meteorology, ³University of Adelaide, ⁴MeteoSwiss

AS17 / Land-atmosphere interactions of the Tibetan Plateau and their impacts on weather and climate

Mon - 04 Jun | MR325B

Time 08:30 - 10:30

Chair(s) Fei CHEN, National Center for Atmospheric Research

Kun YANG, Tsinghua University

Yaoming MA, Chinese Academy of Sciences

AS17-D1-AM1-325B-001 | AS17-A013 (Invited)

Tibetan Plateau Forcing and See-Saw in Asian Summer Monsoon

Guoxiong WU^{1#+}, Bian HE¹, Qing BAO¹

¹Chinese Academy of Sciences

AS17-D1-AM1-325B-002 | AS17-A041 (Invited)

APSOS for Whole Atmosphere Observation over Tibet-System

Description and Preliminary Study

Daren LYU1,2#+, Weilin PAN3, Yinan WANG3

¹Institute of Atmospheric Physics, Chinese Academy of Sciences,

²University of Chinese Academy of Sciences, ³Chinese Academy of Sciences

AS17-D1-AM1-325B-003 | AS17-A039 (Invited)

Advances in Modeling and Observation of Tibetan Plateau

Land Surface Processes

Dennis LETTENMAIER1#+

¹View West Associates

AS17-D1-AM1-325B-004 | AS17-A018

The Role of Air-Sea Interactions in Regulating the Thermal

Effect of the Tibetan-Iranian Plateau on the Asian Summer

Monsoon

Yimin LIU^{1#+}, Bian HE¹, Ziqian WANG², Qing BAO¹
¹Chinese Academy of Sciences, ²Sun Yat-sen University

AS17-D1-AM1-325B-005 | AS17-A003

Can the Tibetan Plateau Snow Cover Influence the Interannual

Variations of Eurasian Heat Wave Frequency?

Zhiwei WU1#+

¹Fudan University

AS17-D1-AM1-325B-006 | AS17-A009

Study of Precipitation Recycling over the Tibetan Plateau

Using Evaporation-Tagging Approach

Yanhong GAO^{1#+}, Fei CHEN², Gonzalo MIGUEZ-MACHO³
¹Chinese Academy of Sciences, ²National Center for Atmospheric

Research, ³Universidade de Santiago de Compostela

AS17-D1-AM1-325B-007 | AS17-A008

The Performance of Different Time Scale Signal over Tibet Plateau

Xiaodan GUAN^{1#+}, Jieru MA¹, Jingchen LIU¹
¹Lanzhou University

Time 11:00 - 12:30

Chair(s) Zongliang YANG, The University of Texas at Austin

Yanhong GAO, Chinese Academy of Sciences

AS17-D1-AM2-325B-008 | AS17-A011 (Invited)

The Impact of the Tibetan Plateau Winter/Spring Snow Depth and Surface Heat Source on Asian Summer Monsoon: A

Review

Anmin DUAN1#+

¹Chinese Academy of Sciences

AS17-D1-AM2-325B-009 | AS17-A004 (Invited)

Combining Satellite Data with Atmospheric Boundary Layer

Observations for Land Surface Heat Fluxes over

Heterogeneous Landscape of the Third Pole

Yaoming $MA^{1\sharp *}$, Weiqiang MA^1 , Lei $ZHONG^2$, Binbin $WANG^1$, Cunbo HAN^1 , Zhikun ZHU^1

¹Chinese Academy of Sciences, ²University of Science and Technology of China

AS17-D1-AM2-325B-010 | AS17-A017

Progress in Understanding Uncertainties and in Improving

Land-Surface Models over the Tibetan Plateau

Fei CHEN1#+

¹National Center for Atmospheric Research

Time 13:30 - 15:30

Chair(s) Yimin LIU, Chinese Academy of Sciences

Zhiwei WU, Fudan University

Anmin DUAN, Chinese Academy of Sciences

AS17-D1-PM1-325B-011 | AS17-A044 (Invited)

Hydroclimatic Impacts of Multisensor and Multivariate Land Data Assimilation on the Global Scale and for the Tibetan Region

Zong-Liang YANG^{1‡+}, Long ZHAO², Peirong LIN¹, Qingyun BIAN³

¹The University of Texas at Austin, ²Southwest University, ³Chinese Academy of Sciences

AS17-D1-PM1-325B-012 | AS17-A001 (Invited)

The Elevation-Dependence of Meteorological Variables in the South Slope of Central Himalaya

Kun YANG $^{1,2\sharp+}$, Nicolas GUYENNON 3 , Lin OUYANG 4 , Gianni TARTARI 3 , Franco SALERNO 3

¹Institute of Tibetan Plateau Research, Chinese Academy of Sciences, ², ³National Research Council, ⁴Tsinghua University

AS17-D1-PM1-325B-013 | AS17-A038

Impact of Tibetan Plateau Snowpack Pollution on Precipitation in South and East Asia

Cenlin HE^{1‡+}, Fei CHEN¹, Mike BARLAGE¹, Yun QIAN²
¹National Center for Atmospheric Research, ²Pacific Northwest
National Laboratory

AS17-D1-PM1-325B-014 | AS17-A045

Comparative Analyses of Vertical Structure of a Deep Convective Cloud with Multi-Source Satellite and Ground-Based Observational Data at Naqu over the Tibetan Plateau

Hui WANG^{1#+}, Xueliang GUO¹
¹Chinese Academy of Meteorological Sciences

AS17-D1-PM1-325B-015 | AS17-A043

Lightning Activity over North Himalayas and Tibetan Plateau: Long Term Trends and Their Association with Regional Wind Dynamics

D.M. LAL¹, Manoj K. SRIVASTAVA²*+, M. MAHAKUR¹, Sachin GHUDE¹

¹Indian Institute of Tropical Meteorology, ²Banaras Hindu University

AS17-D1-PM1-325B-016 | AS17-A023

Impact of Solar Activity on Correlation Between Snow over the Tibetan Plateau and Summer Precipitation in China $Yan \, SONG^{1\sharp +}$

¹China Meteorological Administration

AS19 / Impact of Aerosols on Hydro-climate

Mon - 04 Jun | MR303B

Time 08:30 - 10:30

Chair(s) Kyu-Myong KIM, NASA/GSFC

Yun QIAN, PNNL

Maeng-Ki KIM, Kongju National University

AS19-D1-AM1-303B-001 | AS19-A010

Elevational Variation in Snow-Mediated Radiative Effects of

Dust Particles over Himalayas

Chandan SARANGI¹⁺, Yun QIAN^{1#}, Thomas PAINTER², Karl RITTGER³, Ying LUI¹, Guangxing LIN¹, Hui WAN¹, Hailong WANG¹

¹Pacific Northwest National Laboratory, ²National Aeronautics and Space Administration, ³University of Colorado Boulder

AS19-D1-AM1-303B-002 | AS19-A022

Fast Adjustments of the Asian Summer Monsoon to

Anthropogenic Aerosols

Xiaoqiong LI^{1‡+}, Mingfang TING¹, Dong Eun LEE¹ ¹Columbia University

AS19-D1-AM1-303B-003 | AS19-A006 (Invited)

Rapid Warming and Dry of Eurasia: A Hydro-Climate

Feedback Induced by Snow-Darkening Effects of Absorbing

Aerosols

William LAU1#+

¹University of Maryland

AS19-D1-AM1-303B-004 | AS19-A008 (Invited)

Linking Atmospheric Pollution to Cryospheric Change over the Third Pole Region: Current Research Status and Future Prospects

Shichang KANG^{1#+}, Qianggong ZHANG¹ ¹Chinese Academy of Sciences

AS19-D1-AM1-303B-005 | AS19-A028

Simulated Climate Response to Calipso-Guided Corrections to Black Carbon Aerosols Vertical Profile

Salil MAHAJAN^{1#+}

¹Oak Ridge National Laboratory

AS19-D1-AM1-303B-006 | AS19-A026

Revisited Asian Monsoon Hydroclimate Response to Volcanic

Eruptions

Chaochao GAO1#+

¹Zhejiang University

AS19-D1-AM1-303B-007 | AS19-A007

Intra-Annual Relationships Among Siberian Wildfire
Occurrences, and Meteorological and Hydro-Climatological
Conditions

Teppei YASUNARI^{1#+}, Kyu-Myong KIM², Arlindo DA SILVA² ¹Hokkaido University, ²NASA Goddard Space Flight Center

Time 13:30 - 15:30

Chair(s) Yun QIAN, PNNL

AS19-D1-PM1-303B-008 | AS19-A013 (Invited)

Global Climate Change Driven by Soot Ejection Following the Asteroid Impact as the Cause of the Extinction of the Dinosaurs Naga OSHIMA¹⁸⁺, Kunio KAIHO²

¹Japan Meteorological Agency, ²Tohoku University

AS19-D1-PM1-303B-009 | AS19-A016

Anthropogenic Aerosols Induced Drying Trends in Global Land Monsoon Area

Tianjun ZHOU1#+

¹Chinese Academy of Sciences

AS19-D1-PM1-303B-010 | AS19-A005

Quantifying Light Absorption and its Source Attribution of Insoluble Light-Absorbing Particles in Tibetan Plateau Glaciers from 2013-2015

Xin WANG1#+

¹Lanzhou University

AS19-D1-PM1-303B-011 | AS19-A024 (Invited)

Long Term Measurements of Aerosol Size Distribution and CCN Concentration in and Around the Korean Peninsula Seong Soo YUM^{1‡+}, Minsu PARK¹, Najin KIM¹
¹Yonsei University

AS19-D1-PM1-303B-012 | AS19-A027

Biomass Burning Aerosol Interactions with Hydroclimate

Charles ICHOKU^{1‡+}, Xiaohua PAN¹, Kyu-Myong KIM¹, Gabriel PEREIRA², Francielle CARDOZO², Luke ELLISON³, William LAU⁴, Arlindo DA SILVA¹, Mian CHIN¹, Ralph KAHN¹ ¹NASA Goddard Space Flight Center, ²Federal University of São João del Rei, ³Science Systems and Applications, Inc., ⁴University of Maryland

AS19-D1-PM1-303B-013 | AS19-A012

Impact of the East Asia Jet Stream on the Interannual Variation of Aerosol over Northeast Asia in Spring

Seunghee LEE^{1s+}, Myong-In LEE¹, Chang-Keun SONG¹, Kyu-Myong KIM², Arlindo DA SILVA² ¹Ulsan National Institute of Science and Technology, ²NASA Goddard Space Flight Center AS19-D1-PM1-303B-014 | AS19-A020

Inadvertent Modification of Precipitation by the Severe Hazes

in Korea for 2011 to 2016

Seung-Hee EUN¹‡+, Wenting ZHANG¹, Sung Min PARK¹, Byung-Gon KIM¹

¹Gangneung-Wonju National University

AS28 / Southeast Asian Climate Variability and Ocean-land-atmosphere Interactions

Mon - 04 Jun | MR326A

Time 08:30 - 10:30

Chair(s) Renguang WU, Chinese Academy of Sciences

Xiaojing JIA, Zhejiang University

AS28-D1-AM1-326A-001 | AS28-A025 (Invited)

Process-Oriented Diagnostics for Understanding and

Predicting Extended Monsoon Episodes over South Asia H. ANNAMALAI $^{1\sharp +}$, T.S. MOHAN 1

¹University of Hawaii

AS28-D1-AM1-326A-002 | AS28-A003

Selective Monsoon-ENSO Interaction: Active Role of the

Southeast Asian Monsoon

Song YANG^{1#+}, Tuantuan ZHANG¹, Zhenning LI¹
¹Sun Yat-sen University

AS28-D1-AM1-326A-003 | AS28-A016 (Invited)

Thermal Configuration of the Bay of Bengal-Tibetan Plateau Region and the May Precipitation Anomaly in Yunnan Jie $CAO^{1\#+}$

¹Yunnan University

AS28-D1-AM1-326A-004 | AS28-A021

Inter-Model Warming Projection Spread: Inherited Traits from Control Climate Diversity

Xiaoming $HU^{1\sharp *}$, Ming CAI^2 , Song $YANG^1$, Yi DENG³, Patrick TAYLOR⁴, Sergio SEJAS⁴

¹Sun Yat-sen University, ²Florida State University, ³Georgia Institute of Technology, ⁴National Aeronautics and Space Administration

AS28-D1-AM1-326A-005 | AS28-A017

Diverse Impacts of ENSO on Wintertime Precipitation over the

Maritime Continent

Jingwen GE^{1#+}, Xiaojing JIA¹
¹Zhejiang University

AS28-D1-AM1-326A-006 | AS28-A004

Springtime Westward Strengthening of the Western Pacific

Convection Modulates Pacific Trade Wind During 1901-2010

Zhenning LI1+, Song YANG1#

¹Sun Yat-sen University

AS28-D1-AM1-326A-007 | AS28-A015

Effect of Boreal Spring Precipitation Anomaly Pattern Change in the Late 1990s over Tropical Pacific on the Atmospheric

Teleconnection

Yuanyuan GUO¹⁴+, Zhiping WEN¹², Ruidan CHEN¹, Xiuzhen LI¹, Xiu-Qun YANG³

¹Sun Yat-sen University, ²Fudan University, ³Nanjing University

AS28-D1-AM1-326A-008 | AS28-A018

Interdecadal Changes in the Relationship Between North

Tropical Atlantic SST and Center Pacific ENSO

Xiaoxue YIN¹⁺, Liantong ZHOU^{1#}
¹Chinese Academy of Sciences

Time 11:00 - 12:30

Chair(s) Song YANG, Sun Yat-sen University

Renguang WU, Chinese Academy of Sciences

AS28-D1-AM2-326A-009 | AS28-A014 (Invited)

Numerical Study on Interdecadal Modulations of the

Interannual Variability of Spring Rainfall over South China by

the Pacific Decadal Oscillation

Jiangyu MAO^{1#+}, Xiaofei WU¹ ¹Chinese Academy of Sciences

AS28-D1-AM2-326A-010 | AS28-A006

Intraseasonal Rainfall and SST Variations in the South China

Sea Linked to East Asian Winter Monsoon

Renguang WU^{1#+}, Xi CAO¹
¹Chinese Academy of Sciences

AS28-D1-AM2-326A-011 | AS28-A005

Interannual Variations And Prediction Of Spring Precipitation

Over China

Xiaojing JIA^{1#+}
¹Zhejiang University

AS28-D1-AM2-326A-012 | AS28-A023

Tibetan Plateau Heating as a Driver of Monsoon Rainfall

Variability in Pakistan

Ziqian WANG^{1*+}, Song YANG¹, Anmin DUAN², Kalim ULLAH³
¹Sun Yat-sen University, ²Chinese Academy of Sciences, ³COMSATS
Institute of Information Technology

AS28-D1-AM2-326A-013 | AS28-A013

Multi-Scale Spatial and Temporal Variations of Thermal

Characteristics over the Tropical Western Pacific: A

Process-Based Attribution Analysis

Yana LI1#+

¹Sun Yat-sen University

AS31 / The Science and Prediction of Tropical Cyclones

Mon - 04 Jun | MR315

Time 08:30 - 10:30

Chair(s) Chun-Chieh WU, National Taiwan University

Wei MEI, University of North Carolina

AS31-D1-AM1-315-001 | AS31-A086

Introduction of the Tropical Cyclone-Pacific Asian Research

Campaign for Improvement of Intensity Estimations/Forecasts (T-PARCII) Project: Test Flight and the First Observation

Penetrating into the Eye of Typhoon LAN (2017)

Kazuhisa TSUBOKI^{1,2+}, Hiroyuki YAMADA², Tadayasu OHIGASHI³, Kosuke ITO², Norio NAGAHAMA⁴, Kensaku SHIMIZU⁴, Munehiko YAMAGUCHI⁵, Taro SHINODA¹, Nobuhiro TAKAHASHI¹, Tetsuo NAKAZAWA⁵

 ${}^1Nagoya\ University,\, {}^2University\ of\ the\ Ryukyus,\, {}^3Kyoto\ University,$

⁴Meisei Electric, ⁵Japan Meteorological Agency

AS31-D1-AM1-315-002 | AS31-A016 (Invited)

Tropical Cyclone Boundary Layer Momentum Diffusivity from

Aircraft Observations in the South China Sea

Ralf TOUMI^{1‡+}, Nathan SPARKS¹, Johnny CHAN², K.K. HON³, P.W. CHAN³

¹Imperial College London, ²City University of Hong Kong, ³Hong Kong Observatory

AS31-D1-AM1-315-003 | AS31-A032

Taiwan-Area Atmospheric and Hydrological Observation and

Prediction Experiment (TAHOPE)

Ching-Yuang HUANG1#+, Michael BELL2

¹National Central University, ²Colorado State University

AS31-D1-AM1-315-004 | AS31-A084 (Invited)

Observation Study for Understanding the Relationship

Between Lightning Activity and Tropical Cyclone Intensity in

the Philippine Sea

Hisayuki KUBOTA^{1‡+}, Yukihiro TAKAHASHI¹, Mitsuteru SATO¹, Kozo YAMASHITA², Jun-Ichi HAMADA³
¹Hokkaido University, ²Ashikaga Institute of Technology, ³Tokyo Metropolitan University

AS31-D1-AM1-315-005 | AS31-A067

Impact of Horizontal and Vertical Resolutions on a Simulated

Tropical Cyclone

Young-Cheol KWON^{1#+}, Ki-Byung KIM¹

¹Korea Institute of Atmospheric Prediction Systems (KIAPS)

AS31-D1-AM1-315-006 | AS31-A035

Double Warm-Core Structure of Typhoon Lan (2017) Observed

by Dropsondes During T-PARCII

Hiroyuki YAMADA¹²⁺, Kazuhisa TSUBOKI², Norio NAGAHAMA³, Kensaku SHIMIZU³, Tadayasu OHIGASHI⁴, Taro SHINODA², Kosuke ITO¹, Munehiko YAMAGUCHI⁵, Tetsuo NAKAZAWA⁵

¹University of the Ryukyus, ²Nagoya University, ³Meisei Electric, ⁴Kyoto University, ⁵Japan Meteorological Agency

AS31-D1-AM1-315-007 | AS31-A023

Preliminary Data Assimilation and Forecast Experiments with

Dropsondes During T-PARCII

Kosuke ITO^{1;*}, Munehiko YAMAGUCHI², Hiroyuki YAMADA¹, Norio NAGAHAMA³, Kensaku SHIMIZU³, Tadayasu OHIGASHI⁴, Taro SHINODA⁵, Kazuhisa TSUBOKI⁵, Tetsuo NAKAZAWA²

¹University of the Ryukyus, ²Japan Meteorological Agency, ³Meisei Electric, ⁴Kyoto University, ⁵Nagoya University

AS31-D1-AM1-315-008 | AS31-A058

Time Evolution of Warm Core in Typhoon Lan (2017)

Simulated by a Cloud-Resolving Model

Satoki TSUJINO¹⁵⁺, Kazuhisa TSUBOKI¹, Hiroyuki YAMADA², Tadayasu OHIGASHI¹, Kosuke ITO², Norio NAGAHAMA³
¹Nagoya University, ²University of the Ryukyus, ³Meisei Electric

Time 11:00 - 12:30

Chair(s) Zhuo WANG, University of Illinois

Xiao-Dong TANG, Nanjing University

AS31-D1-AM2-315-009 | AS31-A038

Modulating Effects of Mesoscale Oceanic Eddies on Sea

Surface Temperature Response to Tropical Cyclones

Zhanhong MA^{1#+}, Bojiang YANG¹, Lijun YU¹
¹National University of Defense Technology

AS31-D1-AM2-315-010 | AS31-A004

Influence of the North Atlantic Capacitor on Tropical Cyclone Genesis over the Western North Pacific Following Strong El

Niño Events

Jinhua YU^{1‡+}, Ke FANG¹, Xinzhong LIANG², Jie SONG³
¹Nanjing University of Information Science & Technology, ²University of Maryland, ³Northern Illinois University

AS31-D1-AM2-315-011 | AS31-A051

Young Ocean Waves Favor Rapid Intensification of Tropical

Cyclones

Lin ZHANG^{1#+}, Lie-Yauw OEY¹
¹National Central University

AS31-D1-AM2-315-012 | AS31-A059

Remote Effect of Synoptic-Scale Weather Systems in

Mid-Latitudes on Tropical Cyclone Intensification Through the

Moisture Supply from the Kuroshio

Keita FUJIWARA¹‡*, Ryuichi KAWAMURA¹, Tetsuya KAWANO¹

¹Kyushu University

AS31-D1-AM2-315-013 | AS31-A077

Statistical-Dynamical Typhoon Intensity Predictions in the

Western North Pacific Using Track Pattern Clustering and

Ocean Coupling Predictors

Sung-Hun KIM^{1,2‡+}, Il-Ju MOON¹, Pao-Shin CHU³
¹Jeju National University, ²Korea Meteorological Administration,
³University of Hawaii

Time 13:30 - 15:30

Chair(s) Zhaoxia PU, University of Utah

Shu-Chih YANG, National Central University

AS31-D1-PM1-315-014 | AS31-A089

Predictability of North Atlantic Tropical Cyclogenesis in

Different Synoptic Flow Regimes

Zhuo WANG1#+

¹University of Illinois at Urbana-Champaign

AS31-D1-PM1-315-015 | AS31-A097

Intensification of Landfalling Typhoons over the Northwest

Pacific Since the Late 1970s

Wei MEI1#+, Shang-Ping XIE2

¹University of North Carolina at Chapel Hill, ²University of California San Diego

AS31-D1-PM1-315-016 | AS31-A060 (Invited)

Sensitivity of Tropical Cyclone Intensification to Axisymmetric Latent Heat Sources: The Role of Microphysical Processes

M.K.(Peter) YAU1#+

¹McGill University

AS31-D1-PM1-315-017 | AS31-A082

Tropical Cyclone Intensity Forecast in Northwest Pacific Ocean

Considering the Land Effect

Qinglan LI¹²⁺, Lei ZHANG², Hui LI², Xiaoxue WANG¹, Liqun SUN¹, Guangxin LI¹, Dian HUANG¹

¹Chinese Academy of Sciences, ²Shenzhen Meteorological Bureau

AS31-D1-PM1-315-018 | AS31-A043

Introduction of K-MPAS and Verification of its Typhoon Track Prediction

Minsu JOH¹**, Jin-Hee YUK¹, Ji-Sun KANG¹¹Korea Institute of Science and Technology Information

AS31-D1-PM1-315-019 | AS31-A029

A Dynamical-Statistical Ensemble Analogue Forecast (DEAF) Model and its Application in Predicting Tropical Cyclone Precipitation

Fumin REN1#+

¹Chinese Academy of Meteorological Sciences

AS31-D1-PM1-315-020 | AS31-A028

Improvement of Weighted Analog Intensity Prediction for Different Stages of the Western North Pacific Tropical Cyclones

Hsiao-Chung TSAI^{1‡+}, Russell ELSBERRY²
¹Tamkang University, ²Naval Postgraduate School

AS36 / Ocean-atmosphere Coupling: Dynamics, Assimilation, and Predictability

Mon - 04 Jun | MR302B

Time 13:30 - 15:30

Chair(s) Fei ZHENG, Chinese Academy of Sciences

Stephane VANNITSEM, Royal Meteorological Institute

of Belgium

AS36-D1-PM1-302B-006 | AS36-A007 (Invited)

Improved Decadal Climate Prediction Using EnOI-Assimilated Initial Condition

Qingquan LI^{1,*}, Min WEI¹, Xiaoge XIN¹, Wei ZHOU², Yong LUO³, Zongci ZHAO³

¹China Meteorological Administration, ²Chinese Academy of Sciences, ³Tsinghua University

AS36-D1-PM1-302B-007 | AS36-A002

Role of Subsurface Ocean Data Assimilation in Decadal

Climate Predictability Over the South Atlantic

Yushi MORIOKA^{1#}, Takeshi DOI¹, Andrea STORTO², Simona MASINA², Swadhin BEHERA¹

¹Japan Agency for Marine-Earth Science and Technology, ²Euro-Mediterranean Centre on Climate Change

AS36-D1-PM1-302B-008 | AS36-A008

Influnece of Initial Perturbation Amplitudes and Ensembel

Sizes on Ensembel Forecast Skill

Wansuo DUAN1#+

¹Chinese Academy of Sciences

AS36-D1-PM1-302B-009 | AS36-A012

Impacts of North Pacific Subtropical and Subarctic Oceanic Frontal Zones on the Wintertime Atmospheric Large-Scale

Circulations

Jing HUANG¹⁺, Yang ZHANG^{1‡}
¹Nanjing University

AS36-D1-PM1-302B-010 | AS36-A005

Climate Impacts of Stochastic Atmospheric Perturbations on the Ocean

Jie ZHANG1#+

¹China Meteorological Administration

AS36-D1-PM1-302B-011 | AS36-A016

Seasonal-to-Decadal Prediction with the Norwegian Climate

Prediction Model

Noel KEENLYSIDE¹⁵⁺, Yiguo WANG², Francois COUNILLON², Ingo BETHKE³, Panxi DAI⁴, Helene LANGEHAUG², Madlen KIMMRITZ², Stephanie GLEIXNER¹, Lea SVENDSEN¹

¹University of Bergen, ²Nansen Environmental and Remote Sensing Center, ³Uni Research, ⁴Peking University

AS36 / Ocean-atmosphere Coupling: Dynamics, Assimilation, and Predictability

Mon - 04 Jun | MR303B

Time 11:00 - 12:30

Chair(s) Noel KEENLYSIDE, University of Bergen

Wansuo DUAN, Chinese Academy of Sciences

AS36-D1-AM2-303B-001 | AS36-A001 (Invited)

Changes in Dynamics and Predictability of the North Atlantic Atmospheric Circulation

Davide FARANDA $^{1\sharp\star}$, Gabriele MESSORI 2 , M Carmen ALVAREZ-CASTRO 3 , Pascal YIOU 4

¹National Center for Scientific Research, ²Stockholm University, ³Euro-Mediterranean Center on Climate Change, ⁴National Center for Scientific Research/ CEA Saclay/ Université Paris Saclay

AS36-D1-AM2-303B-002 | AS36-A009

Causal Dependences Between the Coupled Ocean-Atmosphere Dynamics over the Tropical Pacific, the North Pacific and the North Atlantic

Stéphane VANNITSEM^{1‡+}, Pierre EKELMANS²
¹Royal Meteorological Institute of Belgium, ²Max Planck Institute for Brain Research

AS36-D1-AM2-303B-003 | AS36-A017

Synchronizing Earth System Models in Improving Model

States

Mao-Lin SHEN $^{1\pi+}$, Noel KEENLYSIDE 1 , Marion DEVILLIERS 1 , Francois COUNILLON 2

¹University of Bergen, ²Nansen Environmental and Remote Sensing Center

AS36-D1-AM2-303B-004 | AS36-A018

Ocean-Atmosphere Coupled Pacific Decadal Variability Simulated by a Climate Model

Fei ZHENG^{1‡+}, Hao LUO¹, Noel KEENLYSIDE², Jiang ZHU¹
¹Chinese Academy of Sciences, ²University of Bergen

AS36-D1-AM2-303B-005 | AS36-A004

Lyapunov Instability Study of High-Dimensional Atmospheric and Climate Models

Lesley DE CRUZ^{1‡+}, Sebastian SCHUBERT², Jonathan DEMAEYER¹, Valerio LUCARINI³, Stéphane VANNITSEM¹
¹Royal Meteorological Institute of Belgium, ²University of Hamburg, ³University of Reading

AS39 / Theory, Observations and Modelling of Maritime Continent Convection

Mon - 04 Jun | MR326A

Time 13:30 - 15:30

Chair(s) Masaki KATSUMATA, Japan Agency for Marine-Earth

Science and Technology

AS39-D1-PM1-326A-001 | AS39-A005

Diurnal Cycle and the MJO over the Maritime Continent

Chidong ZHANG¹ 1 *, Robert JOYCE², Pingping XIE¹, Agie WANDALA³

¹National Oceanic and Atmospheric Administration, ²Innovim LLC, ³Indonesian Agency for Meteorology, Climatology and Geophysics

AS39-D1-PM1-326A-002 | AS39-A008

Diurnal Variability in the Maritime Continent: Diabatic

Heating, the Land/Sea Breeze Circulation and Precipitation

Claire Louise VINCENT^{1,2‡+}, Todd LANE^{1,2}, Ewan SHORT¹

¹The University of Melbourne, ²ARC Centre of Excellence for Climate Extremes

AS39-D1-PM1-326A-003 | AS39-A001

Propagating and Non-Propagating Rainfall System Relate to Cold Surge-Cold Tongue Interaction over the Northern Coast of West Java

Erma YULIHASTIN^{1,2#+}

¹National Institute of Aeronautics and Space, ²Bandung Institute of Technology

AS39-D1-PM1-326A-004 | AS39-A003

YMC-Sumatra 2017 Field Campaign as One of Intensive

Observation Periods of the YMC: Overview

Kunio YONEYAMA^{1‡+}, Shuichi MORI¹, Satoru YOKOI¹, Junko SUZUKI¹, Masaki KATSUMATA¹, Iwao UEKI¹, Tomoe NASUNO¹, Urip HARYOKO², Fadli SYAMSUDIN³, Kelvin RICHARDS⁴

¹Japan Agency for Marine-Earth Science and Technology, ²Indonesian Agency for Meteorology, Climatology and Geophysics, ³Agency for Assessment and Application of Technology, ⁴University of Hawaii

AS39-D1-PM1-326A-005 | AS39-A002

The Effect of an Active Phase of the Madden-Julian Oscillation on Precipitation and Surface Winds on the Western Coast of Sumatra Island

Pei-Ming WU^{1#}, Dodi ARDIANSYAH², Shuichi MORI¹, Kunio YONEYAMA¹

¹Japan Agency for Marine-Earth Science and Technology, ²Indonesian Agency for Meteorology, Climatology and Geophysics

AS39-D1-PM1-326A-006 | AS39-A010

Radar Characteristics of Precipitation Systems Occurring in Different Synoptic Wind Regimes Around Sumatra Island Biao GENG^{1‡+}, Masaki KATSUMATA¹ ¹Japan Agency for Marine-Earth Science and Technology

AS39-D1-PM1-326A-007 | AS39-A006

The Piston Field Campaign: Propagation of Intra-Seasonal Tropical Oscillations

Steven RUTLEDGE^{1#+}
¹Colorado State University

AS46 / Precipitation Science and Application of Satellite Data

Mon - 04 Jun | MR326B

Time 08:30 - 10:30

Chair(s) Gail SKOFRONICK-JACKSON, NASA Goddard Space

Flight Center

Masafumi HIROSE, Meijo University

AS46-D1-AM1-326B-001 | AS46-A018

A Space-Based Four-Year Perspective of Rain and Snow from

the Global Precipitation Measurement (GPM) Mission

Gail SKOFRONICK-JACKSON $^{1s+}$, George HUFFMAN 1 , Walter PETERSEN 1 , Chris KIDD 2

¹NASA Goddard Space Flight Center, ²University of Maryland, College Park AS46-D1-AM1-326B-002 | AS46-A008

Updates to the IMERG Morphing Algorithm

Jackson TAN $^{\text{1}\sharp *}$, George HUFFMAN 2 , David BOLVIN 3 , Eric NELKIN 3

¹Universities Space Research Association, ²NASA Goddard Space Flight Center, ³Science Systems and Applications Incorporated (SSAI)

AS46-D1-AM1-326B-003 | AS46-A007

Development of A-Priori Database for Precipitation Retrieval

Using Multi-Microwave Satellites

Geun-Hyeok RYU $^{1\#}$, Eunkyoung SEO 2 , Hwa-Young JEOUNG 1 , Jun-Dong PARK 1 , Jaedong JANG 1

¹Korea Meteorological Administration, ²Kongju National University

AS46-D1-AM1-326B-004 | AS46-A005

Current Status of the Global Precipitation Measurement (GPM) Mission in Japan

Takuji KUBOTA^{1‡+}, Riko OKI¹, Moeka YAMAJI¹, Toshio IGUCHI², Yukari TAKAYABU³

¹Japan Aerospace Exploration Agency, ²National Institute of Information and Communications Technology, ³The University of Tokyo

AS46-D1-AM1-326B-005 | AS46-A022 (Invited)

Ground Validation of Satellite Based Precipitation Products in Bolivia

Oliver SAAVEDRA^{1#}, Andres VALLEJOS¹, Jhonatan UREÑA¹
¹Universidad Privada Boliviana

AS46-D1-AM1-326B-006 | AS46-A015

Accuracy Verification of a New Rainfall Estimation Data Utilizing Himawari-8 Middle-Level Water Vapor Band in

Asian-Monsoon Region

Hitoshi HIROSE^{1‡+}, Atsushi HIGUCHI¹
¹Chiba University

AS46-D1-AM1-326B-007 | AS46-A016

Bias Correction of Surface Rainfall Based on Precipitation

Profiles at Low Levels

Masafumi HIROSE^{1#+}

¹Meijo University

Time 11:00 - 12:30

Chair(s) Yukari N. TAKAYABU, The University of Tokyo

Geun-Hyeok RYU, Korea Meteorological Administration

AS46-D1-AM2-326B-008 | AS46-A006 (Invited)

Enhancing Data Assimilation of GPM Observations

Takemasa MIYOSHI^{1,2#}, Shunji KOTSUKI¹, Koji TERASAKI¹, Keiichi KONDO³, Guo-Yuan LIEN¹, Kenta KUROSAWA¹, Masaki SATOH⁴, Hirofumi TOMITA¹, Eugenia KALNAY²
¹RIKEN Advanced Institute for Computational Science, ²University of Maryland, ³Japan Meteorological Agency, ⁴The University of Tokyo

AS46-D1-AM2-326B-009 | AS46-A001 (Invited)

Multiscale Structure of the MJO Revealed from Long-Term Satellite Observations

Kazuyoshi KIKUCHI $^{1\pm}$, George KILADIS 2 , Juliana DIAS 2 , Tomoe NASUNO 3

¹University of Hawaii at Manoa, ²National Oceanic and Atmospheric Administration, ³Japan Agency for Marine-Earth Science and Technology

AS46-D1-AM2-326B-010 | AS46-A019

Large-Scale Environmental Effects on Precipitation

Characteristics Around Japan in Warm Seasons

Yukari TAKAYABU¹♯+, Chie YOKOYAMA¹, Atsushi HAMADA¹, Hiroki TSUJI¹

¹The University of Tokyo

AS46-D1-AM2-326B-011 | AS46-A017

Future Changes in Precipitation Characteristics Around Japan in Early Summer Reconstructed from CMIP5 Model

Large-Scale Environments

Chie YOKOYAMA^{1‡+}, Yukari TAKAYABU¹, Osamu ARAKAWA², Tomoaki OSE³

¹The University of Tokyo, ²Japan Agency for Marine-Earth Science and Technology, ³Japan Meteorological Agency

AS48 / Earth System Predictability, Prediction and Application

Mon - 04 Jun | MR326B

Time 13:30 - 15:30

Chair(s) June-Yi LEE, Pusan National University

Yoshimitsu CHIKAMOTO, Utah State University

AS48-D1-PM1-326B-001 | AS48-A001 (Invited)

Relating Model Bias and Prediction Skill in the Tropical

Atlantic

Noel KEENLYSIDE¹**, Francois COUNILLON², Shunya KOSEKI¹, Teferi DEMISSIE³, Yiguo WANG², Lea SVENDSEN¹, Thomas TONIAZZO³, Ingo BETHKE³

¹University of Bergen, ²Nansen Environmental and Remote Sensing Center, ³Uni Research

AS48-D1-PM1-326B-002 | AS48-A011 (Invited)

Seasonal and Interannual Variations of Fire Weather and

Wildfires over the Contiguous United States

Kyu-Myong KIM $^{1\sharp +}$, William LAU 2 , Charles ICHOKU 1 , Anton DARMENOV 1 , Gabriel PEREIRA 3 , Arlindo DA SILVA 1 , Luke ELLISON 4

¹NASA Goddard Space Flight Center, ²University of Maryland, ³Federal University of São João del Rei, ⁴Science Systems and Applications, Inc.

AS48-D1-PM1-326B-003 | AS48-A006

Mechanisms and Predictability of Multiyear Ecosystem

Variability in the North Pacific

Megumi CHIKAMOTO^{1‡+}, Axel TIMMERMANN^{2,3}, Yoshimitsu CHIKAMOTO⁴, Hiroki TOKINAGA⁵, Naomi HARADA⁶
¹University of Hawaii, ²Pusan National University, ³IBS Center for Climate Physics, ⁴Utah State University, ⁵Kyoto University, ⁶Japan Agency for Marine-Earth Science and Technology

AS48-D1-PM1-326B-004 | AS48-A019

Development of Nuist Earth System Model for CMIP6 and its

Application: Seasonal Prediction over East Asian Monsoon

Young-Min YANG1#+, Bin WANG1

¹University of Hawaii

AS48-D1-PM1-326B-005 | AS48-A020

Grand European and Asian-Pacific Multi-Model Seasonal

Forecasts: Maximization of Skill and of Potential Economical

Value to End-Users

Andrea ALESSANDRI^{1#}, Matteo DE FELICE², Franco CATALANO², June-Yi LEE³, Bin WANG⁴, Doo Young LEE⁵, Jin-Ho YOO⁶, Antije WEISHEIMER⁷

¹Royal Netherlands Meteorological Institute, ²Agenzia Nazionale per le Nuove Tecnologie, l'Energia e lo Sviluppo Economico Sostenibile (ENEA), ³Pusan National University, ⁴University of Hawaii, ⁵Barcelona Supercomputing Center, ⁶Asian-Pacific Economic Cooperation Climate Center (APCC), ⁷European Center For Medium Range Weather Forecasts (ECMWF)

AS48-D1-PM1-326B-006 | AS48-A002

Quantifying the Agreement Between Observed and Simulated

Extratropical Modes of Interannual Variability

Ji-Woo LEE $^{1\sharp *}$, Ken SPERBER 1 , Peter GLECKLER 1 , Céline BONFILS 1 , Karl TAYLOR 1

¹Lawrence Livermore National Laboratory

AS54 / Aerosols, Clouds, Radiation, Precipitation, and Their Interactions

Mon - 04 Jun | MR303A

Time 13:30 - 15:30

Chair(s) Xiquan DONG, University of Arizona

AS54-D1-PM1-303A-001 | AS54-A027 (Invited)

Reducing Uncertainty in Climate Sensitivity with

Climate-Specific Radiometer Calibration and Requirements

Yolanda SHEA¹⁵⁺, Bruce WIELICKI¹, Constantine LUKASHIN¹, Gregory KOPP², Peter PILEWSKIE², Kurtis THOME³, Gary FLEMING¹, Gregory UCKER², Sunny SUN-MACK^{1,4}, Patrick MINNIS¹, Mark ZELINKA⁵, Tyler THORSEN¹

¹NASA Langley Research Center, ²University of Colorado Boulder, ³NASA Goddard Space Flight Center, ⁴Science Systems and Applications, Inc., ⁵Lawrence Livermore National Laboratory

AS54-D1-PM1-303A-002 | AS54-A012 (Invited)

Determine the Daytime Earth Radiation Budget from DSCOVR

Wenying SU^{1#+}, David DUDA², Konstantin KHLOPENKOV², Lusheng LIANG², Mandana THIAMIN², Patrick MINNIS¹
¹NASA Langley Research Center, ²Science Systems and Applications, Inc.

AS54-D1-PM1-303A-003 | AS54-A001

The Impact of Clouds on Radiation over Ocean and Land

Using DOE ARM Measurements and Retrievals

Baike XI^{1#+}, Xiquan DONG¹, Peng WU¹, Xiaojian ZHENG¹ ¹University of Arizona

AS54-D1-PM1-303A-004 | AS54-A013

A Revisit of Dust Radiative Effects in North Atlantic with

Recent Measurements of Dust Physical and Optical Properties

Zhibo ZHANG^{1#+}, Hongbin YU², Qianqian SONG¹, Seiji KATO³, Ping YANG4, Peter COLARCO2, Lorraine REMER1,5

¹University of Maryland, Baltimore County, ²National Aeronautics and Space Administration, 3NASA Langley Research Center, 4Texas A&M University, 5Airphoton LLC

AS54-D1-PM1-303A-005 | AS54-A002

Optical Properties of Cirrus Transition Zones over China Detected by CALIOP

Hong-Ke CAI1#+, Yun-Fei FU2

¹Chengdu University of Information and Technology, ²University of Science and Technology of China

AS54-D1-PM1-303A-006 | AS54-A045

Quantifying the Direct Radiative Effect of Aerosols for

Numerical Weather Prediction

Mayra OYOLA1#+, James CAMPBELL2, Peng XIAN2, Anthony BUCHOLTZ², Richard FERRARE³, Sharon BURTON³, Olga KALASHNIKOVA4, Ben RUSTON2, Simone LOLLI5 ¹American Society for Engineering Education, ²Naval Research Laboratory, ³NASA Langley Research Center, ⁴Jet Propulsion Laboratory, California Institute of Technology, 5Institute of Methodologies for Environmental Analysis

AS54-D1-PM1-303A-007 | AS54-A022

Aerosol Vertical Distribution and Optical Properties over the

Arid and Semi-Arid Areas of Northwest China

Lei ZHANG1#+

¹Lanzhou University

AS55 / Observations and Representations of Subgrid-scale Processes for Improving Models

Mon - 04 Jun | MR303A

Time 08:30 - 10:30

Chair(s) Kuan-Man XU, NASA Langley Research Center

Xiquan DONG, University of Arizona

Jonathan JIANG, NASA JPL

AS55-D1-AM1-303A-001 | AS55-A019

Using Kites for Meteorological Measurement of the Marine

Boundary Layer

David DECOU1#+, Alison D. NUGENT1

¹University of Hawaii at Manoa

AS55-D1-AM1-303A-002 | AS55-A016

A Comparison of Different Estimation Methods and Data Sources of Anthropogenic Heat Fluxes - A Case Study from

Taiwan

Suranjith Bandara KORALEGEDARA^{1,2#+}, Chuan-Yao LIN², Yangfan SHENG²

¹National Central University, ²Academia Sinica

AS55-D1-AM1-303A-003 | AS55-A015 (Invited)

Evaluation of EAMv1-Simulated Clouds and Their Sensitivity

to Model Resolution

Yuying ZHANG1#+, Shaocheng XIE1, Wuyin LIN2, Philip J. RASCH3

¹Lawrence Livermore National Laboratory, ²Brookhaven National Laboratory, 3Pacific Northwest National Laboratory

AS55-D1-AM1-303A-004 | AS55-A004

Analysis of Long-Term Cloud Vertical Structure from

Millimeter Wave Cloud Radar in Beijing, China

Qing ZHOU1#+, Yong ZHANG1, Jianping GUO2 ¹China Meteorological Administration, ²Chinese Academy of Meteorological Sciences

AS55-D1-AM1-303A-005 | AS55-A002

Competing Contribution of Aerosol and Precipitation Water

Vapor Amount to Aerosol-Cloud Relationship

Chuanfeng ZHAO1#+, Yanmei QIU1 ¹Beijing Normal University

AS55-D1-AM1-303A-006 | AS55-A007 (Invited)

An Evaluation of Marine Boundary Layer Cloud Property Simulations in Community Atmosphere Model Using Satellite Observations: Conventional Sub-Grid Parameterization vs.

Zhibo ZHANG1#+, Hua SONG1, Po-Lun MA2, Minghuai WANG3, Steve GHAN²

¹University of Maryland, Baltimore County, ²Pacific Northwest National Laboratory, 3Nanjing University

AS55-D1-AM1-303A-007 | AS55-A006

Improvement of the Surface Flux Scheme in Finite Volume Method Models

Seiya NISHIZAWA1,2#+, Yuji KITAMURA2 ¹RIKEN Advanced Institute for Computational Science, ²Japan Meteorological Agency

Time 11:00 - 12:30

Chair(s) Chuanfeng ZHAO, Beijing Normal University

Jonathan JIANG, NASA JPL

Xiquan DONG, University of Arizona

AS55-D1-AM2-303A-008 | AS55-A008

Continental Shallow Cumulus and its Transition to Deep Convection - The Impact of Surface Heterogeneity and Background Wind Speed

Yunyan ZHANG1#+

¹Lawrence Livermore National Laboratory

AS55-D1-AM2-303A-009 | AS55-A001

Changes in Tropical Clouds and Atmospheric Circulation Associated with Rapid Adjustment Induced by Increased

Atmospheric CO2 - A Multiscale Modeling Framework Study Kuan-Man XU^{1,*}, Zhujun LI², Anning CHENG³, Yongxiang HU¹ ¹NASA Langley Research Center, ²Universities Space Research

Association, ³National Oceanic and Atmospheric Administration

AS55-D1-AM2-303A-010 | AS55-A017

Simulation of Aerosol Impact on Cloud Droplet Size

Distribution with a Prognostic Approach in PAM (Piecewise

Lognormal Approximation Aerosol Module)

Yiran PENG¹⁵⁺, Knut VON SALZEN², Richard LEAITCH³, Xiaobo DONG⁴, Chuanfeng ZHAO⁵

¹Tripologa University ²Canadian Center for Climate Modelling

¹Tsinghua University, ²Canadian Center for Climate Modelling and Analysis, ³Environmental Canada, ⁴Weather Modification Office of Hebei Province, ⁵Beijing Normal University

AS55-D1-AM2-303A-011 | AS55-A014

Implication of Radiative Cloud Forcing via Interation Between

PBL Mixing and Shallow Convection

Rae-Seol PARK^{1#+}, Young-Cheol KWON¹
¹Korea Institute of Atmospheric Prediction Systems (KIAPS)

BG01 / Cycling of Carbon and Nitrogen in Terrestrial and Coastal Ecosystems

Mon - 04 Jun | MR304B

Time 08:30 - 10:30

Chair(s) Punyasloke BHADURY, Indian Institute of Science

Education and Research Kolkata

BG01-D1-AM1-304B-001 | BG01-A010 (Invited)

Presence of Adjacent Grasses Enhances While

14NH4+-Addition to Receiver-Pines Reduces 15N-Movement

Between Paired-Pine Saplings in a Californian Pine Forest

Xinhua HE1,2#+

¹Southwest University, ²University of Western Australia

BG01-D1-AM1-304B-002 | BG01-A007 (Invited)

Dissolved Carbon Transport in a Subtropical Small

Mountainous River, Taiwan

Jr-Chuan HUANG^{1#+}, Tsung-Yu LEE², Yu-Ting SHIH¹, Li-Chin LEE¹, Chung-Te CHANG¹, Pei-Hao CHEN¹

¹National Taiwan University, ²National Taiwan Normal University

BG01-D1-AM1-304B-003 | BG01-A015

Studying the Impacts of Environmental Factors and

Agricultural Management Practices on Methane Emissions

Intensity from Rice Fields Using a Land Surface Model

Tzu-Shun LIN^{1‡+}, Shijie SHU¹, Atul JAIN¹
¹University of Illinois at Urbana-Champaign

BG01-D1-AM1-304B-004 | BG01-A022

Drainage and Tillage Practices in the Winter Fallow Season Mitigate CH4 and N2O Emissions from a Double-Rice Field in China

Guangbin ZHANG^{1‡+}, Haiyang YU¹, Yuting YANG¹, Jing MA¹, Hua XU¹

¹Chinese Academy of Sciences

BG01-D1-AM1-304B-005 | BG01-A003

Carbon Exchange and its Response to Experimental Warming

from the Natural Wetlands in Northeast China

Changchun SONG 1** , Xianwei WANG 1 , Li SUN 1 , Yuedong GUO 1 , Yanyu SONG 1

¹Chinese Academy of Sciences

BG01-D1-AM1-304B-006 | BG01-A009 (Invited)

Projection of Dissolved Organic Carbon Supply from Kushiro Mire Basin to the Coastal Region of the Oyashio Current Using Multi GCMs

Katsuaki KOMAI^{1‡+}, Yasuyuki MARUYA², Hajime KASAMA¹, Koudai DEJIMA³, Naoki NOBUYAMA¹

¹Kitami Institute of Technology, ²Gifu University, ³Akan Kyoritsu Doken K.K.

BG01-D1-AM1-304B-007 | BG01-A024

Evaluation of Bioaerosol Exposure and Immune Response of Health Care Workers

¹Chung Shan Medical University, ²Occupational Safety and Health, ³Institute of Biochemistry, Microbiology and Immunology

Time 11:00 - 12:30

Chair(s) Punyasloke BHADURY, Indian Institute of Science

Education and Research Kolkata

BG01-D1-AM2-304B-008 | BG01-A014

Distribution Patterns of Nitrogen-Cycling Bacterial Groups Between Pristine and Anthropogenically Influenced Coastal Sites Along the Northern Bay of Bengal

Anwesha GHOSH^{1#+}, Punyasloke BHADURY¹
¹Indian Institute of Science Education and Research Kolkata

BG01-D1-AM2-304B-009 | BG01-A002

Role of Heterotrophic Diazotrophs in Balancing Nutrient Stoichiometry (N:P) in a Tropical Eutrophic Estuary

Mohamed Hatha A. A. $^{1s+}$, Jabir THAJUDEEN 1 , Jesmi YOUSUF 1 , Vipindas T. V. 1

¹Cochin University of Science and Technology

BG01-D1-AM2-304B-010 | BG01-A016

Investigation of the Carbon Cycle in the Methane Seepage Area with Multilayers of Carbonate in the Northern South China Sea

Lihua LIU^{1‡+}, Matthias HAECKEL², Nengyou WU¹
¹Chinese Academy of Sciences, ²GEOMAR Helmholtz Centre for Ocean Research Kiel

HS01 / Interactions Between Water and Ecosystem - Catchment Dynamics

Mon - 04 Jun | MR318A

Time 08:30 - 10:30

Chair(s) Ting Fong May CHUI, The University of Hong Kong

Jian-Ping SUEN, National Cheng Kung University

HS01-D1-AM1-318A-001 | HS01-A003

Delineation of Hyporheic Zone Depth and Using Probabilistic Approach

Heejung KIM¹⁺, Sanghoon LEE¹, Kang-Kun LEE^{1‡}, Ho-Yeong KIM², Vinh BUI TRONG³, Dugin KAOWN¹

¹Seoul National University, ²BCMP Korea, ³Bach Khoa University

HS01-D1-AM1-318A-002 | HS01-A014

Simulating the Distribution of Upwelling and Downwelling

Areas in the Hyporheic Zone at the Wu Guo Shui Area, Taiwan

Jian-Ping SUEN^{1#+}, Chih-Yu CHANG²

¹National Cheng Kung University, ²Ecological Water Resources Management Lab

HS01-D1-AM1-318A-003 | HS01-A006

Study on Tilapia and Shallot

for Fresh Water Aquaponics System

Jhe-Yi YANG1#+

¹National Taiwan University

HS01-D1-AM1-318A-004 | HS01-A013

Investigation of Projected Organic Waste Impact on a Tropical

Wetland in Singapore

Swee Yang Edmund LOW^{1‡+}, Dongeon KIM¹, Canh Tien Trinh NGUYEN¹, Yabin SUN², Yixiong CAI³, Shie-Yui LIONG¹
¹National University of Singapore,

²CCCC-FHDI Engineering Co., Ltd., ³National Parks Board

HS01-D1-AM1-318A-005 | HS01-A009

Modeling Dissolved Organic Carbon and Nitrate Export for a

New York Water Supply Watershed

Kyongho SON $^{1\sharp *}$, Laurence LIN² , Lawrence BAND² , Emmet OWENS³

¹Research Foundation of the City University of New York, ²The University of Virginia, ³New York City Department of Environmental Protection

HS01-D1-AM1-318A-006 | HS01-A011

Impact Analysis of Discharging Water Temperature from

Water Heat Energy System on Downstream of the River

Jisu NAM¹+, Jae Won JUNG¹, Hong Jun JOO¹, Hung Soo KIM¹ $^{\sharp}$ ¹Inha University

HS01-D1-AM1-318A-007 | HS01-A015

On Runoff Coefficient

Sanghyun YOO¹+, Kyungrock PAIK¹* ¹Korea University

HS01-D1-AM1-318A-008 | HS01-A016

Impact of Low Impact Development on Flood Reduction on

Basin, Watershed, and City Scales

Jiun-Huei JANG $^{1\#+}$, Jin-Cheng FU 2 , Chun-Mao HUAN 3 , Wen-Yen LIN 3 , Chia-Cheng YEH 2

¹National Cheng Kung University, ²National Science and Technology Center for Disaster Reduction, ³Ming Chuan University

HS02 / Interactions with Water and Ecosystem - Riparian Zone Processes

Mon - 04 Jun | MR318A

Time 11:00 - 12:30

Chair(s) Jian-Ping SUEN, National Cheng Kung University

Kyungrock PAIK, Korea University

HS02-D1-AM2-318A-001 | HS02-A001

Scale Effect of Velocity, Input Concentration and Water Depth on the Transport of Colloids Through Wetland Vegetation

Congrong YU^{1#+}
¹Hohai University

HS02-D1-AM2-318A-002 | HS02-A005

Strategies of Flood Control and Sediment Reduction for

Nanshi River with Guishan Dam Sluicing Operation

Hoting SU^{1‡+}, Gene Jiing-Yun YOU¹, Yu-Chieh LIN¹
¹National Taiwan University

HS02-D1-AM2-318A-003 | HS02-A006

An Examination of Two-Dimensional Overland Flow in Urban Area

Chia-Chen CHIEN¹⁺, Gene Jiing-Yun YOU^{1‡}, Yung-Chia HSU²
¹National Taiwan University, ²National Cheng Kung University

HS02-D1-AM2-318A-004 | HS02-A008

Impact of Vegetative Filter Strips with Shallow Groundwater Tables on Transport Reductions of Runoff, Sediment, and Phosphorus

Yi-Ming KUO^{1#+}, Ran LI¹
¹China University of Geosciences

HS02-D1-AM2-318A-005 | HS02-A003 (Invited)

Effects of Streamflow, Bedform Amplitude and Groundwater on Hyporheic Exchange in a Sinuous Gravel Stream with Pool-Riffle Sequences

Peng HUANG¹, Ting Fong May CHUI^{1‡+}
¹The University of Hong Kong

HS03 / Challenges in Hydrologic Modeling

Mon - 04 Jun | MR301

Time 08:30 - 10:30

Chair(s) Bellie SIVAKUMAR, University of New South Wales

Shie-Yui LIONG, National University of Singapore

HS03-D1-AM1-301-001 | HS03-A006

Runoff Predictions in Ungauged Catchments with Catchment Morphing

Jun ZHANG^{1#+}

¹University of Bristol

HS03-D1-AM1-301-002 | HS03-A029

Complex Networks for Hydrologic Modeling and Forecasting Bellie SIVAKUMAR^{1,2#+}, Mahesh MASKEY³, Carlos PUENTE³ ¹University of New South Wales, ²Indian Institute of Technology

Bombay, ³University of California, Davis

HS03-D1-AM1-301-003 | HS03-A005 (Invited)

A Data-Based Modeling of Dominant Rainfall-Runoff

Mechanisms: Application to Snowy Watershed

Yoshiyuki YOKOO¹²+, Kaoru YOSHIDA¹, Kaede SUZUKI¹, Chris LEONG¹

¹Fukushima University

HS03-D1-AM1-301-004 | HS03-A020

Application of Multi-Objective Calibration for Swat Model

Using NSGA-II Algorithm in South Korea

Yong Gwan LEE^{1#+}, Seong-Joon KIM¹
¹Konkuk University

HS03-D1-AM1-301-005 | HS03-A014

Comparison of Nearest Neighbor Method and Random Forest Algorithm for Classification of Catchments in the United States

R. VIGNESH^{1#+}, Bellie SIVAKUMAR^{2,3}

¹Vel Tech Rangarajan Dr. Sagunthala R , ²University of New South Wales, ³Indian Institute of Technology Bombay

Time 11:00 - 12:30

Chair(s) Ji CHEN, University of Hong Kong

Dawen YANG, Tsinghua University

HS03-D1-AM2-301-006 | HS03-A011

How Much Streamflow Data is Needed to Calibrate

Physically-Based Distributed Hydrological Models?

Wenchao SUN^{1‡+}, Jingshan YU¹, Zhanjie LI¹, Baolin XUE¹
¹Beijing Normal University

HS03-D1-AM2-301-007 | HS03-A013

Water Allocation Model in Geum River, South Korea

Heeseong PARK¹, Yeoungrok OH², Nanhee HWANG², Hyeong-Joo LEE², Gunhui CHUNG^{2#}

¹Korea Institute of Civil Engineering and Building Technology, South Korea, ²Hoseo University

HS03-D1-AM2-301-008 | HS03-A027

Modeling Severities of Rainfall and Runoff Extremes in

Ungauged Catchments

Ji CHEN^{1#+}, Qian XU¹, Mervyn PEART¹
¹The University of Hong Kong

Time 13:30 - 15:30

Chair(s) Bellie SIVAKUMAR, University of New South Wales

Ji CHEN, University of Hong Kong

HS03-D1-PM1-301-009 | HS03-A016

Multivariate, Space and Time Bias Correction of Climate

Change Simulations

Rajeshwar MEHROTRA^{1#+}, Ashish SHARMA¹
¹University of New South Wales

HS03-D1-PM1-301-010 | HS03-A024

Parameterization Scheme of Large-Scale Hydrologic Models in

China

Xia ZHAO^{1,2*+}, Xiang ZHANG¹, Junkai DU², Cunwen NIU²
¹Wuhan University, ²China Institute of Water Resources and
Hydropower Research

HS03-D1-PM1-301-011 | HS03-A026

Flood Hazard Assessment with Applications of Satellite Data and Data Mining Techniques

Dongeon KIM¹²+, Jiandong LIU¹, Mengjie LIEW¹, Srivatsan RAGHAVAN¹, Ngoc Son NGUYEN¹, Jina HUR¹, Shie-Yui LIONG¹

¹National University of Singapore

HS03-D1-PM1-301-012 | HS03-A007

Simulation of Vegetation Dynamics over the Heihe River Basin

in Northwestern China

Jing FU¹⁺, Jun NIU^{1#}
¹China Agricultural University

HS03-D1-PM1-301-013 | HS03-A030

Reconstruction of MODIS NDVI Data for Hydrological

Modeling, Using a Graph-Based Method

Wang FU1+, Tiejian LI1+, Jiaye LI1, Chen CHEN1, Yuantao GU1, Guangqian WANG1

¹Tsinghua University

HS03-D1-PM1-301-014 | HS03-A021

Numerical Modeling of Influences of Point Source and

Non-Point Source Pollution on Water Quality in the Pearl

River Basin in South China

Xiao FENG^{1#+}, Ji CHEN¹
¹The University of Hong Kong

HS03-D1-PM1-301-015 | HS03-A032

Evaluation of Impacts of Non-Point Source Pollutant and

Climate Change on Watershed Water Quality

Lichi CHIANG^{1#+}, Pin-Chih SHIH¹
¹National United University

HS04 / Hydroinformatics

Mon - 04 Jun | MR322B

Time 11:00 - 12:30

Chair(s) Gwo-Fong LIN, National Taiwan University

HS04-D1-AM2-322B-001 | HS04-A002

Creation of Pseudo Observational Data Using Reanalysis Data for Climate Change Impact Assessment in a Data Scarce

Yasuyuki MARUYA^{1#+}, Satoshi WATANABE²
¹Gifu University, ²The University of Tokyo

HS04-D1-AM2-322B-002 | HS04-A003

HEC-HMS and HEC-RAS Based Spatial Decision Support

System for Flood-Prone Lower Tapi Basin, Gujarat, India

Nandita GOSWAMI^{1‡+}, P. K. GUPTA², Ajai AJAI² ¹Gujarat University, ²Space Applications, Centre, ISRO

HS04-D1-AM2-322B-003 | HS04-A009

Assessment of TELEMAC 2D Model Performance for

River-Network-Floodplain System Using Automated CRP

Technique

Vijay Kisan MALI¹**, Soumendra Nath KUIRY¹
¹Indian Institute of Technology Madras

HS04-D1-AM2-322B-004 | HS04-A008

Mapping Chlorophyll-a Concentration in Kasumigaura Lake,

Japan

Manh NGUYEN $^{{\scriptscriptstyle I}\sharp*},$ Hone-Jay CHU $^{\scriptscriptstyle I},$ Lin CHAO HUNG $^{\scriptscriptstyle I},$ Jaelani LALU MUHAMAD $^{\scriptscriptstyle 2}$

¹National Cheng Kung University, ²Institut Teknologi Sepuluh Nopember

HS04-D1-AM2-322B-005 | HS04-A010

A Decision Support System for Sponge City Planning with

Flood Forecasting Capability

Jeanne Jinhui HUANG^{1#+}
¹Nankai University

HS06 / Cascade Reservoir Operations and Its Impact on Hydrology and Ecology

Mon - 04 Jun | MR318B

Time 13:30 - 15:30

Chair(s) Shailesh SINGH, National Institute of Water and Air

Mingna WANG, China Institute of Water Resources and

Hydropower Resources

HS06-D1-PM1-318B-001 | HS06-A017

Model Study of Impact of Climate Change and Reservoir

Operations on Water Resources

Maochuan HU^{1#+}, Kenji TANAKA¹, Takahiro SAYAMA¹
¹Kyoto University

HS06-D1-PM1-318B-002 | HS06-A004

Ecological Flow Analysis Method Based on the Comprehensive

Variation Diagnosis of Gini Coefficient

Siyu CAI1#+

¹China Institute of Water Resources and Hydropower Research

HS06-D1-PM1-318B-003 | HS06-A016

Quantifying Changes in the Yangtze River Thermal Regime by

the Three Gorges-Gezhouba Reservoir Cascade

Qiongfang LI^{1#+}
¹Hohai Universiy

HS06-D1-PM1-318B-004 | HS06-A005

Flood Forecast by the Distributed Hydrological Model

EasyDHM Coupled with the MM5 Model

Weihong LIAO1#+

¹China Institute of Water Resources and Hydropower Research

HS06-D1-PM1-318B-005 | HS06-A015

Functional Degradation of the Water-Sediment Regulation

Scheme in the Lower Yellow River: Spatial and Temporal

Analyses

Dongxian KONG^{1#+}, Chiyuan MIAO¹, Qingyun DUAN¹ *Beijing Normal University

HS06-D1-PM1-318B-006 | HS06-A011

Research on Urban Drainage Network Stagnation Monitoring

Simulation and Warning Technology

Aiqing KANG^{1‡+}, Xiaohui LEI¹, Jinbo QIN², Ji LIANG²
¹China Institute of Water Resources and Hydropower Research,
²Huazhong University of Science and Technology

HS06-D1-PM1-318B-007 | HS06-A014

A New Method to Calculate the Dynamic Factor - Flow

Velocity in Giuh

Yingbing CHEN^{1#+}, Peng SHI¹
¹Hohai University

HS07 / Hydrometeorology

Mon - 04 Jun | MR322B

Time 08:30 - 10:30

Chair(s) C.G.CUI, Institute of Heavy Rain, CMA, Wuhan

HS07-D1-AM1-322B-001 | HS07-A002

Flood Forecast Experiment Based on WRF and

Semi-Distributed Hydrological Model

C.G. $CUI^{1\# *}$, Zhiyuan YIN $^{\! 1}$, Li JUN $^{\! 1}$, Peng TAO $^{\! 1}$

¹China Meteorological Administration

HS07-D1-AM1-322B-002 | HS07-A015

Very Short-Term Drought Forecasting Using Remote Sensing

Data and MJO Index Through Random Forest over East Asia

Seonyoung PARK^{1‡+}, Jungho IM¹, Eunkyo SEO¹, Daehyun KANG¹, Myong-In LEE¹, Sumin PARK¹

 1 Ulsan National Institute of Science and Technology

HS07-D1-AM1-322B-003 | HS07-A016

Development of the Traffic Weather Data Management

Technology Using the Standardization of Rain Sensor

Information for Vehicles

Byung-Hyun LEE¹*, Byung Sik KIM¹, Sukho LEE¹ ¹Kangwon National University

HS07-D1-AM1-322B-004 | HS07-A004

The Characteristic of Air Water Resource Derived from

Ground-Based Microwave Radiometer over Hubei

Wengang ZHANG^{1#+}, Guirong XU¹
¹China Meteorological Administration

HS07-D1-AM1-322B-005 | HS07-A006

Precipitation Time Series Trend Analysis in Kosice, Slovakia

Martina ZELENAKOVA^{1‡+}, Pavol PURCZ¹, V. JOTHIPRAKASH², Helena HLAVATÁ³

¹Technical University of Kosice, ²Indian Institute of Technology Bombay, ³Slovak Hydrometeorological Institute HS07-D1-AM1-322B-006 | HS07-A007

Characteristic Comparison of Precipitation Events Affected and Unaffected by Eastward Movement of Convective Clouds in the Tibetan Plateau

Xiaofang WANG1#+

¹China Meteorological Administration

HS07-D1-AM1-322B-007 | HS07-A001

The Experiment of Genetic-Neural Network Flood Forecasting Based on QPE and QPF

Zhiyuan YIN^{1*+}, Peng TAO¹, Shen TIEYUAN¹ ¹China Meteorological Administration

HS16 / Water-related Hazards and Their Forecasting and Warning

Mon - 04 Jun | MR318A

Time 13:30 - 15:30

Chair(s) Gwo-Fong LIN, National Taiwan University

Jui-Yi HO, Taiwan Typhoon and Flood Research Institute

HS16-D1-PM1-318A-001 | HS16-A003

Construction of Flood Prediction Model by Deep Learning for

Large Scale Rivers and Consideration on Constant Setting

Takeshi YAMANAKA^{1#+}, Atsuhiko KONJA¹, Shiori ABE¹, Takashi IWASAKI¹, Kokukei SAI¹, Yasuyuki MARUYA²
¹Mitsui Consultants Co., Ltd., ²Gifu University

HS16-D1-PM1-318A-002 | HS16-A021

An Analogical Reasoning Algorithm to Predict Water Level

Based on In-Situ Data

Sheng-Chi YANG $^{1\sharp *}$, Ming-Chang WU 1 , Hong-Ming KAO 1 , Tsun-Hua YANG 1

¹National Applied Research Laboratories

HS16-D1-PM1-318A-003 | HS16-A011

Relationship of Cumulative Rainfall and Occurrence of Disaster in Heavy Rainfall of North Kyushu District in July 2017

Toshiyuki MORIYAMA^{1‡+}, Motoyuki USHUYAMA² ¹Fukuoka Institute of Technology, ²Shizuoka University

HS16-D1-PM1-318A-004 | HS16-A006

A Variable Parameter Bidirectional Stage Routing Model for Tidal Rivers with Lateral Inflow

Xiaoqin ZHANG1**, Wenqing LIANG², Weimin BAO¹, Dandan SHEN¹

¹Hohai University, ²Jiangsu Water Source Company Ltd.of the Eastern Route of the South-to-North Water Diversion Project HS16-D1-PM1-318A-005 | HS16-A007

Transitional Properties of Droughts and Related Impacts of

Climate Indices in the Pearl River Basin, China

Mingzhong XIAO^{1#+}
¹Hohai University

HS30 / Ecohydrological Responses to Environmental Changes and Efficient Water Resources Management in Dryland Regions

Mon - 04 Jun | MR318B

Time 08:30 - 10:30

Chair(s) Weijiang ZHANG, Ningxia University

Jingfeng WANG, Georgia Institute of Technology

Ke ZHANG, Hohai University

HS30-D1-AM1-318B-001 | HS30-A033 (Invited)

Assessing Advances and Challenges in Observing and Modeling Ecohydrological Processes over Drylands Across

Different Continents

Zong-Liang YANG¹; Wen-Ying WU¹, Hui ZHENG², Peirong LIN¹, Jingjing LIANG², Lingcheng LI¹, Long ZHAO³

¹The University of Texas at Austin, ²Chinese Academy of Sciences, ³Southwest University

HS30-D1-AM1-318B-002 | HS30-A026 (Invited)

Drying Trend and its Impacts in China

Zhuguo MA1#+

¹Chinese Academy of Sciences

HS30-D1-AM1-318B-003 | HS30-A028

Variation of Groundwater Flow Paths Under Artificial

Regulation in the Arid Area Based on a Sand Tank

Longcang SHU^{1#+}, Peipeng WU¹, Abunu ESHETE²
¹Hohai University, ²State Key Laboratory of Hydrology-Water
Resources and Hydraulic Engineering

HS30-D1-AM1-318B-004 | HS30-A038

Dynamical Vegetation Responses to Climate Extremes: From Remote Sensing Observations over the Northeast China

Transect

Hong SHEN^{1#+}
¹Tsinghua University

HS30-D1-AM1-318B-005 | HS30-A037

Characteristics of Ecohydrological Regime Shifts from Dunefield to Steppe in the Korqin Sandy Land, Northeast

China

Guang HAN¹#+ ¹Hunan Normal University

HS30-D1-AM1-318B-006 | HS30-A019

Variation Characteristics of Ecological Water Requirement Research About Forestland and Grassland in the Arid Area of the Central and Southern Ningxia

Jinyan LI^{1#+}

¹Ningxia University

Time 11:00 - 12:30

Chair(s) Jingfeng WANG, Georgia Institute of Technology

Ke ZHANG, Hohai University

HS30-D1-AM2-318B-007 | HS30-A042 (Invited)

The Coupling Between Irrigation Water and Water Circulation

Wang DEQUAN1#+

¹Ningxia University

HS30-D1-AM2-318B-008 | HS30-A016

Water Consumption and System Stability of the Desert Oasis

in the Middle Heihe River Basin of Northwestern China

Wenzhi ZHAO1#+

¹Chinese Academy of Sciences

HS30-D1-AM2-318B-009 | HS30-A003

Event-Based Rainfall Characteristics at Shapotou in North

China

Xinping WANG1#+

¹Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences

HS30-D1-AM2-318B-010 | HS30-A021

Assessment of Hydrologic Alteration Induced by the Three

Gorges Dam in the Dongting Lake, China

Ligang XU1#+, Junxiang CHENG2

¹Nanjing Institute of Geography & Limnology, Chinese Academy of Sciences, ²Chinese Academy of Sciences

IG07 / Modeling of Natural Hazard Risks in Asia and Around the World

Mon - 04 Jun | MR322B

Time 13:30 - 15:30

Chair(s) Shuangcai LI, Risk Management Solutions

Chris MORTGAT, Risk Management Solutions

IG07-D1-PM1-322B-001 | IG07-A005

Simulate Inland Flood, Storm Surge, and Tsunami Using a

GPU-Based Coupled Modeling System

Shuangcai Ll^{1‡}, Christian MORTGAT¹, Arno HILBERTS¹
¹Risk Management Solutions

IG07-D1-PM1-322B-002 | IG07-A011

A Simulation-Based Probabilistic Tsunami Hazard Model for

New Zealand

Tabrez ALI 1s , Aggeliki BARBEROPOULOU 1 , Wenzheng YANG 1 , Bingming SHEN-TUE 1 , Mehrdad MAHDYIAR 1 , Elliot KLEIN 1 , Yizhong QU 1

¹AIR Worldwide

IG07-D1-PM1-322B-003 | IG07-A012

Estimating Losses of Realistic Disaster Scenarios in the West

Valley Fault of Metro Manila

Yue-Jun YIN¹²⁺, Alvaro FARIAS¹, Elliot KLEIN¹, Khosrow SHABESTARI¹, Tao LAI¹, Bingming SHEN-TUE¹
¹AIR worldwide

IG07-D1-PM1-322B-004 | IG07-A014 (Invited)

North America Wildfire Risk Assessment

Lifang LUO^{1#+}, Marc-Etienne SCHLUMBERGER¹, Patxi URIZ¹, Yasuyuki AKITA¹, Auguste BOISSONNADE¹

¹Risk Management Solutions

IG07-D1-PM1-322B-005 | IG07-A009

Estimating Direct Economic Losses Due to a Megathrust

Earthquake in the Java Subduction Zone

Tao LAI¹^{‡†}, Yue-Jun YIN¹, Elliot KLEIN¹, Bingming SHEN-TUE¹ ¹AIR Worldwide

IG07-D1-PM1-322B-006 | IG07-A001

Impact of Enso on Typhoon Wind Hazard in the Coast of

Southeast China

Zhongdong DUAN1#+

¹Harbin Institute of Technology (Shenzhen)

IG24 / Natural Hazards and Disaster Risk

Mon - 04 Jun | MR323A

Time 08:30 - 10:30

Chair(s) Yi-Ting LI, National Cheng-Kung University

Vena Pearl BONGOLAN, University of the Philippines

Diliman, Philippines

IG24-D1-AM1-323A-001 | IG24-A026

Application of GIS Technology for the Prediction of Landslide

Hazard: A Case Study at Aranayaka Landslide, Sri Lanka

Sumanajith KUMARA^{1#+}, Nelum KANTHILATHA¹

¹University of Sri Jayewardenepura

IG24-D1-AM1-323A-002 | IG24-A003 (Invited)

Non-Structural Countermeasures Against Debris Flow

Disasters in Taiwan

Chen-Yang LEE¹, Hsiao-Yuan YIN^{1‡+}, Ching-Weei LIN², Rou-Fei CHEN³

¹Soil and Water Conservation Bureau, ²National Cheng Kung University, ³Chinese Culture University

IG24-D1-AM1-323A-003 | IG24-A033

Application of a Coupled Numerical Approach for Landslides

Ching HUNG1#+, Chih-Hsuan LIU1

¹National Cheng Kung University

IG24-D1-AM1-323A-004 | IG24-A005 (Invited)

Application of Standard Deviation for Single-Station

Ground-Motion Prediction Model in a Probabilistic

Seismic-Hazard Analysis

Chih Hsuan SUNG^{1#+}, Chyi-Tyi LEE¹
¹National Central University

IG24-D1-AM1-323A-005 | IG24-A023

Earthquake Preparation Processes Evolving Globally as

Registered by Global Network of Multi-Electrode

Underground Electric Sensors

Vadim BOBROVSKIY¹²²+, Sushil KUMAR², Neil SINGH³, Francesco STOPPA⁴, Alexey LYUBUSHIN⁵, Sergey SHOPIN⁶, Alexander SHITOV³, Grigory RAZGON¹

¹Cosmetecor, ²The University of the South Pacific, ³University of the South Pacific, ⁴D'Annunzio University of Chieti–Pescara, ⁵Russian Academy of Sciences, ⁶Tula State University, ⁷Gorno-Altaisk State University

Time 13:30 - 15:30

Chair(s) Vena Pearl BONGOLAN, University of the Philippines

Diliman, Philippines

Kai GU, Nanjing University

IG24-D1-PM1-323A-006 | IG24-A019

Observation of Land Subsidence in Deltas Using Distributed

Fiber Optic Sensing Techniques

Kai GU^{1‡+}, Bin SHI¹, Jinghong WU¹, Chengcheng ZHANG¹, Suping LIU¹, Guangqing WEI²

¹Nanjing University, ²Suzhou NanZee Sensing Ltd.

IG24-D1-PM1-323A-007 | IG24-A016 (Invited)

Coal Fires in the Asia-Pacific Region: A Still Burning Problem

and an Open Invitation to Scientists

Manfred W. WUTTKE1#+

¹Leibniz Institute for Applied Geophysics

IG24-D1-PM1-323A-008 | IG24-A015 (Invited)

Computation of Wave-Driven Sediment Transport During

Super-Typhoon Haiyan

Masashi WATANABE^{1#+}, Volker ROEBER², Kazuhisa GOTO¹, Jeremy BRICKER³, Fumihiko IMAMURA¹

¹Tohoku University, ²University of Hawaii, ³Delft University of Technology

IG24-D1-PM1-323A-009 | IG24-A021

The Impact of AD 1257 Samalas Eruption to Coral Reef

Ecosystems on the East of Lombok, Indonesia

Bachtiar Wahyu MUTAQIN^{1,2s+}, Franck LAVIGNE², Adrien LANDA², Hilman AHYADI³, Danang Sri HADMOKO¹, Nugroho D. HANANTO⁴, Lina HANDAYANI⁴

¹Universitas Gadjah Mada, ²Université Paris 1 Panthéon Sorbonne,

³Universitas Mataram, ⁴Indonesian Institute of Sciences

OS01 / Ocean Salinity Variability and Its Impact on Weather, Climate and Biogeochemistry

Mon - 04 Jun | MR324

Time 13:30 - 15:30

Chair(s) Hailong LIU, Shanghai Jiaotong University

Sunghyun NAM, Agency for Defense Development

Xidong WANG, Hohai University

OS01-D1-PM1-324-001 | OS01-A017

The Sea Surface Temperature and Salinity Variations in the

Southern Huangyan Island, South China Sea Since ~70 Ka Bp

Qixian ZHOU $^{1\sharp *}$, Xiaoqiang YANG 1 , Huahong GAO 1 , Jie PENG 1 , Yixuan XIE 1 , Qiong CHEN 1

¹Sun Yat-sen University

OS01-D1-PM1-324-002 | OS01-A015

Nonlinear Laplacian Spectral Analysis of Indo-Pacific Ocean Variability

Joanna SLAWINSKA1#+, Dimitris GIANNAKIS2

¹University of Wisconsin-Milwaukee, ²New York University

OS01-D1-PM1-324-003 | OS01-A013

Wind Sinks Salt into the Shallow Overturning Cell of the

North Atlantic During Recent Decades

Hao LIU1#+, Xiaopei LIN1, Lisan YU2

¹Ocean University of China, ²Woods Hole Oceanographic Institution

OS01-D1-PM1-324-004 | OS01-A007

Interannual Variations (2000-2016) of Salinity and Alongshore

Current in Summer off the East Coast of Korea

Jae-Hyoung PARK^{1#+}, Sung-Hyun NAM¹
¹Seoul national university

OS01-D1-PM1-324-005 | OS01-A006 (Invited)

Nonlinear Modulations of ENSO Due to Freshwater Flux and Salinity Effect in a Hybrid Coupled Atmosphere and Ocean

Physics-Biology Model

Rong-Hua ZHANG1#+

¹Institute of Oceanology, Chinese Academy of Sciences

OS01-D1-PM1-324-006 | OS01-A005

Linking Water and Carbon Cycles with Space Based Salinity

Observation

W. Timothy LIU1#+, Xiaosu XIE1

¹Jet Propulsion Laboratory

OS02-AS / Tropical Cyclone-ocean Interactions

Mon - 04 Jun | MR322A

Time 08:30 - 10:30

Chair(s) Chunzai WANG, South China Sea Institute of

Oceanology

Dake CHEN, State Oceanic Administration

OS02-AS-D1-AM1-322A-001 | OS02-AS-A040

The Momentum Exchange at the Air-Sea Interface for High

Wind Speed

Hiroki OKACHI^{1#+}, Tomohito J. YAMADA¹, Yasunori

WATANABE1

¹Hokkaido University

OS02-AS-D1-AM1-322A-002 | OS02-AS-A013

Tropical Cyclone Activity in the Western North Pacific During

ENSO Subsequent Years

Chunzai WANG1#+, Chunxiang LI2

 $^1South\ China\ Sea\ Institute\ of\ Oceanology,\,^2Chinese\ Academy\ of$

Sciences

OS02-AS-D1-AM1-322A-003 | OS02-AS-A024

Persistent Influence of Tropical North Atlantic Wintertime Sea

Surface Temperature on the Subsequent Atlantic Hurricane

Season

Xidong WANG1#+

¹Hohai University

OS02-AS-D1-AM1-322A-004 | OS02-AS-A039 (Invited)

The State of the Air-Sea Interface During Rapid Intensification

of Tropical Cyclones

Alexander SOLOVIEV^{1#+}, Roger LUKAS², Mark DONELAN³,

Brian K. HAUS³, Isaac GINIS⁴

¹Nova Southeastern University, ²University of Hawaii, ³University of

Miami, 4University of Rhode Island

OS02-AS-D1-AM1-322A-005 | OS02-AS-A001

Hurricane Harvey Links to Ocean Heat Content

Lijing CHENG1#+, Kevin TRENBERTH2

¹Chinese Academy of Sciences, ²National Center for Atmospheric

Research

Time 11:00 - 12:30

Chair(s) I-I LIN, National Taiwan University

OS02-AS-D1-AM2-322A-006 | OS02-AS-A023

Effect of the Mesoscale Eddy on Typhoon-Kalmaegi-Induced

Inertial Oscillations

Hongli FU1#+, Xuefeng ZHANG1, Xidong WANG1, Caixia SHAO1

¹National Marine Data and Information Service

OS02-AS-D1-AM2-322A-007 | OS02-AS-A017

Tropical Cyclone-Ocean Interaction, Climate Variability, and

Gaia

I-I LIN1#+, Chun-An SHI1, Chun-Chi LIEN1, Shou-Fu KENG1

¹National Taiwan University

OS02-AS-D1-AM2-322A-008 | OS02-AS-A035

Decade Variability of Tropical Cyclone Genesis in the South

China Sea

Hong LI¹, Fanghua XU^{1#+}, Jinru SUN¹

¹Tsinghua University

OS02-AS-D1-AM2-322A-009 | OS02-AS-A036

Increasing Threat of Landfalling Typhoons in the Western

North Pacific Between 1974 and 2013

Shoude GUAN $^{1\#+}$, Shuiqing LI $^{\!1}$, Yijun HOU $^{\!1}$

¹Chinese Academy of Sciences

Time 13:30 - 15:30

Chair(s) Guihua WANG, Fudan University

OS02-AS-D1-PM1-322A-010 | OS02-AS-A008

Impact of Wave Whitecapping on Land Falling Tropical

Cyclones

Ralf TOUMI1#+, Nicolas BRUNEAU2, Shaui WANG1

¹Imperial College London, ²National Oceanography Centre

OS02-AS-D1-PM1-322A-011 | OS02-AS-A009

Sudden Intensification of Typhoon Hato (2017) over Shallow

Water

Johnny CHAN^{1#+}, Iam Fei PUN², I-I LIN², Kelvin T. F. CHAN¹,

James PRICE3, Allen WU2, Hsiao-Ching HUANG2

¹City University of Hong Kong, ²National Taiwan University, ³Woods

Hole Oceanographic Institution

OS02-AS-D1-PM1-322A-012 | OS02-AS-A002

The Oceanic Response Induced by Twin Typhoons over

Northwest Pacific Ocean

Venkata Subrahmanyam MANTRAVADI $^{1\# \star}$, Liuzhu WANG 1 , Shengyan YU 1

¹Zhejiang Ocean University

OS02-AS-D1-PM1-322A-013 | OS02-AS-A004

A Deep Learning Algorithm of Neural Network on

Parameterizing Typhoon-Ocean Interaction

Jun WEI1#+

¹Peking University

OS02-AS-D1-PM1-322A-014 | OS02-AS-A007

The Upper-Ocean Heat Content During Two Recent Tropical

Cyclones in the Southwest Pacific Region

Ashneel CHANDRA^{1‡+}, Awnesh SINGH¹, Sushil KUMAR¹
¹The University of the South Pacific

OS02-AS-D1-PM1-322A-015 | OS02-AS-A029

The Impact of Summertime North Indian Ocean SST on

Tropical Cyclone Genesis over the Western North Pacific

Jiayu ZHENG¹**, Qiaoyan WU², Yi-Peng GUO³, Sen ZHAO^{4,5}
¹Chinese Academy of Sciences, ²Second Institute of Oceanography,
³Nanjing University, ⁴University of Hawaii at Manoa, ⁵Nanjing
University of Information Science & Technology

OS06 / Future Coast and Ocean Under Increasing Stormy and Anthropogenic Scenarios

Mon - 04 Jun | MR317B

Time 08:30 - 10:30

Chair(s) Zai-Jin YOU, Ludong University

Guan-hong LEE, Inha University

OS06-D1-AM1-317B-001 | OS06-A016 (Invited)

Changes in Sediment Transport Due to Potential Tidal Power

Extraction in the Upper Bay of Fundy

Yongsheng WU1#+

¹Bedford Institute of Oceanography

OS06-D1-AM1-317B-002 | OS06-A030

Anthropocene Alterations of Korean Estuaries

Guan-Hong LEE1**, Hyun-Jung SHIN¹, Steven FIGUEROA¹, Timothy DELLAPENNA²

¹Inha University, ²Texas A&M University

OS06-D1-AM1-317B-003 | OS06-A007

The Impact of Human Activities on Water Exchange in a Tidal Resonant Bay

Dehai SONG¹⁸⁺, Wen WU¹, Jiyun ZHANG¹, Yuhan YAN¹
¹Ocean University of China

OS06-D1-AM1-317B-004 | OS06-A013

Physical and Sedimentary Processes on the Tidal Flat of Central Jiangsu Coast, China: Headland Induced Tidal Eddies and Benthic Fluid Mud Layers

Qian YU^{1‡+}, Yunwei WANG², Shu GAO³
¹Nanjing University, ²Hohai University, ³East China Normal
University

OS06-D1-AM1-317B-005 | OS06-A001

Numerical Prediction on the Scour Burial of Cylinder Object Freely Resting on the Sandy Seabed in the East China Sea Chongguang $PANG^{1\sharp +}$

¹Institute of Oceanology, Chinese Academy of Sciences

OS06-D1-AM1-317B-006 | OS06-A009 (Invited)

Impact of Typhoon Morakot on Suspended Particle Size

Distributions on the East China Sea Inner Shelf

Yunhai LI1#+, Dongyi LI2, Liang WANG2

¹Third Institute of Oceanography, State Oceanic Administration, ²State Oceanic Administration

OS06-D1-AM1-317B-007 | OS06-A002

Impact of Tropical Cyclones on the Evolution of the

Monsoon-Driven Upwelling System in the Coastal Waters of

the Northern South China Sea

Binxin ZHENG1#+, Yunhai LI2

¹State Oceanic Administration, ²Third Institute of Oceanography, State Oceanic Administration

OS06-D1-AM1-317B-008 | OS06-A024

Tropical Storm Induced Coastal Hazards on the Coast of China

Zai-Jin YOU1#+, Hong-Yuan SHI1

¹Ludong University



Time 11:00 - 12:30

Chair(s) Jingping XU, Southern University of Science and

Technology

Daidu FAN, Tongji University

OS06-D1-AM2-317B-009 | OS06-A008 (Invited)

Seasonal Transportation and Deposition of the Suspended Sediments in the Bohai Sea and Yellow Sea and the Related Mechanisms

Lulu QIAO¹, Yi ZHONG¹, Nan WANG^{1‡*}, Guangxue LI¹, Xianwen BAO¹

¹Ocean University of China

OS06-D1-AM2-317B-010 | OS06-A018

A Novel Measurement of Suspended Sediment Transport Through Bohai Strait

Xiao WU¹⁺, Jingping XU²⁺, Hui WU³, Houjie WANG¹, Chenghao WANG¹, Changwei BIAN¹, Haiqin DUAN¹, Cheng TANG⁴

¹Ocean University of China, ²Southern University of Science and Technology, ³East China Normal University, ⁴Chinese Academy of Sciences

OS06-D1-AM2-317B-011 | OS06-A027

In-Situ Observations of Wave-Induced Fluid Mud Flows on the Yellow River Subaqueous Delta

Xiaolei LIU^{1#+}, Lukuan MA¹ ¹Ocean University of China</sup>

OS06-D1-AM2-317B-012 | OS06-A029

A Record of Holocene Abrupt Cooling Events in Neritic and Hemipelagic Sediments of the East China Sea

Anchun LI1#+

¹Chinese Academy of Sciences

OS06-D1-AM2-317B-013 | OS06-A004 (Invited)

Fates of Terrestrial Materials Delivered by a Small Tropical Mountainous River: A Case Study of the Kelantan River, Malaysia

Aijun WANG1#+

¹Third Insitute of Oceanography, State Oceanic Administration

OS06-D1-AM2-317B-014 | OS06-A005

Recent Morphological Change in the Northern Red River Delta, Vietnam

Daidu FAN1#+, Vuong BUI VAN2

¹Tongji University, ²Vietnam Academy of Science and Technology

OS20 / Building Resilience - Climate Change Impacts, Adaptation, and Challenges.

Mon - 04 Jun | MR317B

Time 13:30 - 15:30

Chair(s) Serena LEE, Griffith University

Oceana FRANCIS, University of hawaii Charles LEMCKERT, University of Canberra

OS20-D1-PM1-317B-001 | OS20-A004

First-Pass Water Resources Assessment for a Small Island

Developing State, Tanna Island, Vanuatu

Gaelle FAIVRE¹, Rodger TOMLINSON¹, Daniel WARE¹, Brendan MACKEY¹
¹Griffith University

OS20-D1-PM1-317B-002 | OS20-A001

Should Coastal Planners Worry About Where the Ice is Melting?

Eric LAROUR1#+

¹Jet Propulsion Laboratory, California Institute of Technology

OS20-D1-PM1-317B-003 | OS20-A005

A Framework to Reduce the Challenges in Defining the Vulnerability of the Hawaiian Islands and an Initial Selection of Local Scale Adaptation Measures

Yaprak ONAT^{1#+}, Oceana FRANCIS¹
¹University of Hawaii at Manoa

OS20-D1-PM1-317B-004 | OS20-A006

Numerical Modelling of Beach Nourishment

Darrell STRAUSS $^{1\sharp +}$, Guilherme VIEIRA DA SILVA 1 , Tom MURRAY 1

¹Griffith University

OS20-D1-PM1-317B-005 | OS20-A007

Understanding the Relationship Between Sea Level Rise, Tides and Coastal Inundation - A Case Study in the Mid Atlantic Bight

Serena LEE^{1‡+}, Ming LI², Fan ZHANG²
¹Griffith University, ²University of Maryland

OS20-D1-PM1-317B-006 | OS20-A008 (Invited)

Adapting Coastal Defences to Erosion and Climate-Induce Sea Level Rise in Mega-Delta System

Heqin CHENG1#+

¹East China Normal University

OS20-D1-PM1-317B-007 | OS20-A009

Climate Variability and the Management of Coastal Responses:

A Case Study of the Eastern Australian Coastline

Rodger TOMLINSON^{1#+}, Peter HELMAN¹, Darrell STRAUSS¹ ¹Griffith University

OS20-D1-PM1-317B-008 | OS20-A011

Coastal Adaptive Design and Adaptation

Oceana FRANCIS1#+

¹University of Hawaii at Manoa

OS20-D1-PM1-317B-009 | OS20-A012 (Invited)

Challenges of Implementation: Adaptation in Coastal

Communities

Karl KIM1#+

¹University of Hawaii

OS23 / Tropical Western Pacific and Eastern Indian Ocean Palaeoceanography and Palaeoclimatology

Mon - 04 Jun | MR324

Time 08:30 - 10:30

Chair(s) Mahyar MOHTADI, University of Bremen

Markus KIENAST, Dalhousie University

OS23-D1-AM1-324-001 | OS23-A019 (Invited)

Drivers of Prolonged Expansion and Contraction Periods of the

Indo-Pacific Tropical Rain Belt over the Last Millennium

Caroline C. UMMENHOFER^{1#+}, Rhawn DENNISTON² ¹Woods Hole Oceanographic Institution, ²Cornell College

OS23-D1-AM1-324-002 | OS23-A009 (Invited)

Two Anomalous Modes of the Precessional Modulated Annual Cycle in the Tropical Pacific

Yue WANG^{1#+}, Zhimin JIAN¹, Ping ZHAO², Haowen DANG¹, Zhongfang LIU¹, Dong XIAO², Chunming CHEN²
¹Tongji University, ²Chinese Academy of Meteorological Sciences

OS23-D1-AM1-324-003 | OS23-A021

Decadal to Centennial Variabilities of the Indian Summer Monsoon During the Past Five Centuries Driven by Both

External and Internal Forcings

Hong-Wei CHIANG^{1‡+}, Yu WANG^{1,2}, J. Bruce H. SHYU¹, Chung-Che WANG¹, Lin Thu AUNG^{2,3}, Oo THAN⁴, Xianfeng WANG², Phyo Maung MAUNG², Soe MIN⁵, Soe Thura TUN⁶ ¹National Taiwan University, ²Nanyang Technological University, ³Myanmar Geosciences Society, ⁴Department of Meteorology and Hydrology, ⁵Yangon University, ⁶Myanmar Earthquake Committee

OS23-D1-AM1-324-004 | OS23-A012

Mid- to Late Holocene Upwelling Dynamics in the Eastern Indian Ocean

Stephan STEINKE^{1‡+}, Mahyar MOHTADI², Jeroen GROENEVELD³, Selvaraj KANDASAMY¹

¹Xiamen University, ²University of Bremen, ³Alfred Wegener Institut Potsdam

OS23-D1-AM1-324-005 | OS23-A003

New Multi-Decadal to Sub-Centennial Time Scale Record of ISM for the last 14 Ka

Champoungam PANMEI $^{1\sharp *}$, Divakar NAIDU 1 , Mahyar MOHTADI 2

¹National Institute of Oceanography, ²University of Bremen

OS23-D1-AM1-324-006 | OS23-A017

Nitrogen Isotope Dynamics in the Western Equatorial Pacific

During the Last 25,000 Yrs: A Tale of Two Hemispheres

Markus KIENAST $^{1s+}$, Nadine LEHMANN 1 , Martina HOLLSTEIN 2 , Mahyar MOHTADI 2

¹Dalhousie University, ²University of Bremen

OS23-D1-AM1-324-007 | OS23-A025

Impact of Geothermal Heating on the Atlantic Meridional

Overturning Circulation During the Last Glacial Maximum

Ming ZHANG¹⁺, Yonggang LIU^{1#}

¹Peking University

Time 11:00 - 12:30

Chair(s) Mahyar MOHTADI, University of Bremen

Stephan STEINKE, Xiamen University

OS23-D1-AM2-324-008 | OS23-A013

Neogene Biotic Response and Macroevolutionary History in the Western Pacific Warm Pool Region: Preliminary Results of

Deep-Sea Ostracods from IODP Expedition 363

Moriaki YASUHARA^{1#}, Huai-Hsuan May HUANG¹, Denise KULHANEK², Yair ROSENTHAL³, Ann HOLBOURN⁴, The IODP EXPEDITION 363 SCIENTISTS⁵

¹The University of Hong Kong, ²Texas A&M University, ³Rutgers University, ⁴Christian-Albrechts University of Kiel, ⁵International Ocean Discovery Program (IODP)

OS23-D1-AM2-324-009 | OS23-A022

Millennial Scale Variations in 100-Year Resolution

Northwestern Pacific Sea Surface Temperature Record over the

Last 400,000 Years

Kyung-Eun LEE $^{1\sharp*}$, Steven CLEMENS², Yoshimi KUBOTA³, Ann HOLBOURN 4

¹Korea Maritime University, ²Brown University, ³National Musium of Nature and Science, ⁴Christian-Albrechts University of Kiel

OS23-D1-AM2-324-010 | OS23-A008

Orbital Variations of the Tropical Indo-Pacific Thermocline in Late Quaternary

Haowen DANG^{1*}, Zhimin JIAN¹, Yue WANG¹, Liming YE², Chao ZHOU¹, Peijun QIAO¹, Haiyan JIN¹ ¹Tongji University, ²State Oceanic Administration

OS23-D1-AM2-324-011 | OS23-A020

Biomarker Stable Isotope Records of Late Quaternary Climate

and Organic Matter Export in Southwestern Taiwan

Queenie CHANG^{1‡+}, Michael HREN¹, Andrew LIN², Yvette ELEY¹, Shun-Wen YU², Gregory HARRIS1¹
¹University of Connecticut, ²Natioinal Central University

OS23-D1-AM2-324-012 | OS23-A006

Forcing Mechanisms of Western Pacific Warm Pool Surface and Thermocline Conditions over the Last Glacial-Interglacial Cycle

Martina HOLLSTEIN¹[‡], Mahyar MOHTADI¹, Yair ROSENTHAL², Matthias PRANGE¹, Delia OPPO³, Gema MARTÍNEZ MÉNDEZ¹, Kazuyo TACHIKAWA⁴, Paola MOFFA SANCHEZ⁵, Stephan STEINKE⁶, Jeroen GROENEVELD⁷, Markus KIENAST⁶, Dierk HEBBELN¹

¹University of Bremen, ²Rutgers University, ³Woods Hole Oceanographic Institution, ⁴Aix Marseille University, ⁵Cardiff University, ⁶Xiamen University, ⁷Alfred Wegener Institut Potsdam, ⁸Dalhousie University

PS01 / The Science of Exploration as Enabled by the Moon, Near Earth Asteroids and the Moons of Mars

Mon - 04 Jun | MR304B

Time 13:30 - 15:30

Chair(s) Doris DAOU, NASA Headquarters

James GREEN, NASA Headquarters

PS01-D1-PM1-304B-001 | PS01-A011

International Partnerships in Exploration Science

Gregory SCHMIDT^{1#+}

¹NASA Solar System Exploration Research Virtual Institute

PS01-D1-PM1-304B-002 | PS01-A012 (Invited)

NASA's Human Exploration and Operations Mission

Directorate's Lunar Activities

Ben BUSSEY1#+

¹National Aeronautics and Space Administration

PS01-D1-PM1-304B-003 | PS01-A008

Exogeolab & Exohab Test Bench Preparing Science &

Technology for the Moon, Mars & Asteroids

Bernard FOING^{1,2*}, Germaine VAN DER SANDEN¹, Louis DUBOIS^{1,3}, EuroMoonMars TEAM², Doris DAOU⁴
¹European Space Agency, ²VU University Amsterdam, ³The Institut Supérieur de l'Aéronautique et de l'Espace (ISAE-SUPAERO), ⁴NASA Headquarters

PS01-D1-PM1-304B-004 | PS01-A014

Landing on the Moon Again: A Report from the Lunar Science for Landed Missions Workshop

Gregory SCHMIDT^{1±+}, Clive NEAL², Ryan WATKINS³, Erica JAWIN⁴, Sarah VALENCIA⁵, James CROWELL⁶

¹NASA Solar System Exploration Research Virtual Institute, ²Notre Dame University, ³Planetary Science Institute, ⁴Brown University, ⁵Washington University in St. Louis, ⁶Arizona State University

PS01-D1-PM1-304B-005 | PS01-A015

Lunar COTS Concept: Building an Economical and Sustainable

Lunar Infrastructure to Enable Human Lunar Missions

Allison ZUNIGA1#+

¹NASA Ames Research Center

PS01-D1-PM1-304B-006 | PS01-A009

The Lunar Paleomagnetosphere

Andrew POPPE^{1#+}, Ian GARRICK-BETHELL^{2,3}, Shahab FATEMI⁴
¹University of California, Berkeley, ²University of California, Santa
Cruz, ³Kyung Hee University, ⁴Swedish Institute of Space Physics

PS01-D1-PM1-304B-007 | PS01-A007 (Invited)

The Global Fireball Observatory

Phil BLAND^{1,*}, Gretchen BENEDIX^{1,+}
¹Curtin University

PS01-D1-PM1-304B-008 | PS01-A006 (Invited)

Macromega: A Near-Infrared Hyper-Spectral Imaging Camera

for the Martian Moon's Sample Return Mission MMX

Takeshi SAKANOI^{1s+}, Hiromu NAKAGAWA¹, Takahiro IWATA², Tomoki NAKAMURA¹, Jean-Pierre BIBRING³, Cedric PILORGET³, Vincent HAMM³, Sarah CRITES², Takeshi IMAMURA², Shohei AOKI⁴, Takao M. SATO², Naoki TERADA¹, Yasumasa KASABA¹, Atsushi YAMAZAKI²

¹Tohoku University, ²Japan Aerospace Exploration Agency, ³University of Paris-Sud, ⁴Institut d'Aéronomie Spatiale de Belgique

PS10 / Dwarf Planet Ceres After Dawn

Mon - 04 Jun | MR323B

Time 08:30 - 10:30

Chair(s) Jennifer SCULLY, Jet Propulsion Laboratory, California

Institute of Technology

Jian-Yang LI, Planetary Science Institute

Norbert SCHORGHOFER, Planetary Science Institute

PS10-D1-AM1-323B-001 | PS10-A009 (Invited)

Dawn's Exploration of Ceres Reveals a Complex, Active, Icy World

Carol RAYMOND^{1‡+}, Christopher RUSSELL²
¹Jet Propulsion Laboratory, California Institute of Technology,
²University of California, Los Angeles

PS10-D1-AM1-323B-002 | PS10-A004 (Invited)

Regolith Chemistry Provides Insights into Ceres'

Hydrothermal Evolution

Thomas PRETTYMAN^{1,2*}, Naoyuki YAMASHITA¹, Eleonora AMMANNITO³, Julie CASTILLO-ROGEZ⁴, Bethany EHLMANN⁵, Harry MCSWEEN⁶, Simone MARCHI², Carle PIETERS⁵, Michael TOPLIS⁶, Steven JOY¹⁰, Carol POLANSKEY⁴, Marc RAYMAN⁴, Christopher RUSSELL¹⁰, Carol RAYMOND⁴ ¹Planetary Science Institute, ²University of New Mexico, ³Italian Space Agency, ⁴Jet Propulsion Laboratory, California Institute of Technology, ⁵California Institute of Technology, ⁵University of Tennessee at Knoxville, ¬Southwest Research Institute, ®Brown University, °National Centre of Scientific Research, ¹⁰University of California, Los Angeles

PS10-D1-AM1-323B-003 | PS10-A005

Lifetimes of Ice Exposures on Ceres

 $Paul\ HAYNE^{1\sharp *},\ Margaret\ LANDIS^2,\ Shane\ BYRNE^2\\ {}^1University\ of\ Colorado\ Boulder,\ {}^2University\ of\ Arizona$

PS10-D1-AM1-323B-004 | PS10-A001 (Invited)

Production of the Cerean Exosphere: Testing the SEP

Hypothesis

Michaela VILLARREAL^{1#+}, Janet LUHMANN², M. Leila MAYS³, Thomas PRETTYMAN^{4,5}, Naoyuki YAMASHITA⁴, Carol RAYMOND⁶, Julie CASTILLO-ROGEZ⁶, Philippe ROUSSELOT⁷, Yingdong JIA¹, Christina LEE², Christopher RUSSELL¹ ¹University of California, Los Angeles, ²University of California, Berkeley, ³Catholic University of America, ⁴Planetary Science Institute, ⁵University of New Mexico, ⁶Jet Propulsion Laboratory, California Institute of Technology, ⁷Institut UTINAM - UMR 6213

PS10-D1-AM1-323B-005 | PS10-A002

The Formation and Evolution of Ceres' Occator Crater

Jennifer SCULLY¹²⁺, Timothy BOWLING², Caixia BU³, Debra BUCZKOWSKI⁴, Andrea LONGOBARDO⁵, Andreas NATHUES⁶, Adrian NEESEMANN⁷, Ernesto PALOMBA⁵, Lynnae QUICK⁸, Andrea RAPONI⁵, Ottaviano RUESCH⁹, Paul SCHENK¹⁰, Nathan STEIN¹¹, Elena THOMAS¹, Christopher RUSSELL¹², Julie CASTILLO-ROGEZ¹, Carol RAYMOND¹, Ralf JAUMANN¹³

¹Jet Propulsion Laboratory, California Institute of Technology, ²Southwest Research Institute, ³University of Virginia, ⁴The Johns Hopkins University Applied Physics Laboratory, ⁵National Institute for Astrophysics, ⁶Max-Planck Institute for Solar System Research, ⁷Freie Universität Berlin, ⁸National Air and Space Museum, ⁹NASA Goddard Space Flight Center, ¹⁰Universities Space Research Association, ¹¹California Institute of Technology, ¹²University of California, Los Angeles, ¹³German Aerospace Center

PS10-D1-AM1-323B-006 | PS10-A006

Probing the Composition of the Near-Surface of Ceres from

Faulted Terrains in its Nar Sulcus Region

Kynan HUGHSON^{1‡+}, Christopher RUSSELL¹, Hanna SIZEMORE², Britney SCHMIDT³, Debra BUCZKOWSKI⁴, Paul SCHENK⁵, Gilles PELTZER¹, Carol RAYMOND⁶

¹University of California, Los Angeles, ²Planetary Science Institute, ³Georgia Institute of Technology, ⁴The Johns Hopkins University Applied Physics Laboratory, ⁵Universities Space Research Association, ⁶Jet Propulsion Laboratory, California Institute of Technology

PS10-D1-AM1-323B-007 | PS10-A010

Brine Convection in a 2-D Ceres Model

Bryan TRAVIS $^{{\scriptscriptstyle 1\sharp}*}$, William FELDMAN $^{\scriptscriptstyle 1}$, Phil BLAND $^{\scriptscriptstyle 2}$, Mark V. SYKES $^{\scriptscriptstyle 1}$

¹Planetary Science Institute, ²Curtin University

PS16 / Cassini's Grand Finale: Science Highlights and Discoveries

Mon - 04 Jun | MR323B

Time 13:30 - 15:30

Chair(s) Ganna PORTYANKINA, Laboratory for Atmospheric and

Space Physics (LASP), University of Colorado

Scott EDGINGTON, Jet Propulsion Laboratory, Caltech

Wing-Huen IP, National Central University

PS16-D1-PM1-323B-001 | PS16-A008

Cassini's Grand Finale: Exploring Unique Territory

Linda SPILKER^{1#}, Scott EDGINGTON¹⁺

¹Jet Propulsion Laboratory, California Institute of Technology

PS16-D1-PM1-323B-002 | PS16-A014 (Invited)

Gravity Measurements in the Grand Finale Orbits and Their Implications

Luciano IESS¹º+, Daniele DURANTE¹, Mirco MARIANI¹, Paolo RACIOPPA¹, Jonathan FORTNEY², Yohai KASPI³, Burkhard MILITZER⁴, Philip NICHOLSON⁵

¹Sapienza University of Rome, ²University of California, ³Weizmann Institute of Science, ⁴University of California, Berkeley, ⁵Cornell University

PS16-D1-PM1-323B-003 | PS16-A010

Saturn's Magnetic Field from the Cassini Grand Finale Orbits

Michele DOUGHERTY^{1#}, Hao CAO^{2,3}, Krishan KHURANA⁴, Gregory HUNT¹, Gabrielle PROVAN⁵, Marcia BURTON⁶, Stephen KELLOCK¹, Thomas BURK⁶

¹Imperial College London, ²Harvard University, ³California Institute of Technology, ⁴University of California, Los Angeles, ⁵University of Leicester, ⁶Jet Propulsion Laboratory, California Institute of Technology

PS16-D1-PM1-323B-004 | PS16-A003 (Invited)

The Coupling of Saturn's Atmosphere and Ionosphere to the Rings

J. Hunter WAITE, JR. 1²⁺, Mark PERRY², Rebecca PERRYMAN¹, Kelly MILLER¹, Jared BELL³, Donald MITCHELL², William KURTH⁴, Ann PERSOON⁴, Jan-Erik WAHLUND⁵, Michele DOUGHERTY⁶, Gregory HUNT⁶

¹Southwest Research Institute, ²The Johns Hopkins University Applied Physics Laboratory, ³National Institute of Aerospace, ⁴The University of Iowa, ⁵Uppsala Universitet, ⁶Imperial College London

PS16-D1-PM1-323B-005 | PS16-A013 (Invited)

A Dusty Road Connecting Saturn and its Rings - Preliminary Results from Cassini Cosmic Dust Analyser During the Grand Finale Mission

Hsiang-Wen HSU^{1#}, Frank POSTBERG², Sascha KEMPF¹, Georg MORAGAS-KLOSTERMEYER³, Mihaly HORANYI¹, Martin SEISS⁴, Marcia BURTON⁵, Jurgen SCHMIDT⁶, Frank SPAHN⁴, Jeff CUZZI⁷, Sheng-Yi YE⁸, William KURTH⁸, Daniel SCHIRDEWAHN⁴, James O'DONOGHUE⁹, Nozair KHAWAJA², Ralf SRAMA³

¹University of Colorado Boulder, ²University of Heidelberg, ³University of Stuttgart, ⁴University of Potsdam, ⁵Jet Propulsion Laboratory, California Institute of Technology, ⁶University of Oulu, ⁷NASA Ames Research Center, ⁸The University of Iowa, ⁹NASA Goddard Space Flight Center

PS16-D1-PM1-323B-006 | PS16-A002

The Charged Particle Environment in the Inner Saturnian

Magnetosphere: Results of the Cassini MIMI Instrument

Norbert KRUPP^{1,†*}, Elias ROUSSOS¹, Peter KOLLMANN², Donald MITCHELL², Chris PARANICAS², Stamatios KRIMIGIS², Michele DOUGHERTY³, Douglas HAMILTON⁴

¹Max Planck Institute for Solar System Research, ²The Johns Hopkins University Applied Physics Laboratory, ³Imperial College London, ⁴University of Maryland PS16-D1-PM1-323B-007 | PS16-A005 (Invited)

A Field-Aligned Current System Located in the Gap Between Saturn and its Rings

Krishan KHURANA^{1‡+}, Michele DOUGHERTY², Hao CAO^{3,4}, Gregory HUNT², Gabrielle PROVAN⁵
¹University of California, Los Angeles, ²Imperial College London,
³Harvard University, ⁴California Institute of Technology, ⁵University

of Leicester

PS16-D1-PM1-323B-008 | PS16-A011

Gas Transfer from Enceladus to the Atmosphere and Rings of Saturn and its Possible Physical Consequences

Wing-Huen IP^{1#+}, Ian LAI¹
¹National Central University

SE04 / Dynamic System of Earth: Interactions from Surface to Core

Mon - 04 Jun | MR321B

Time 13:30 - 15:30

Chair(s) Eh TAN, Academia Sinica

SE04-D1-PM1-321B-001 | SE04-A011 (Invited)

Observational Neutrino Geosciences

Steve DYE1#+

¹University of Hawaii

SE04-D1-PM1-321B-002 | SE04-A010

Nature of the Crust, West of the Manila Trench, South China Sea (20°N-21.5°N): New Insight from 2D Numerical Modeling

Letian MA¹⁵⁺, Weiwei DING², Jie LIAO³, Lin CHEN⁴, Taras GFRYA³

¹Second Institute of Oceanography, State Oceanic Administration, ²State Oceanic Administration, ³ETH Zurich, ⁴Chinese Academy of Sciences

SE04-D1-PM1-321B-003 | SE04-A009

Diachronic Breakup of the South China Sea and its Influence on Oil and Gas Accumulation in the Northern Passive Margin Yunfan ZHANG¹⁵⁺, Zhen SUN², Jiangyang ZHANG¹
¹Chinese Academy of Sciences, ²South China Sea Institute of Oceanology, Chinese Academy of Sciences

SE04-D1-PM1-321B-004 | SE04-A015

Effects of the Subduction of the Izanagi and the Present Pacific

Plates on the Geology of Eastern China

Jinshui HUANG^{1‡+}, Bingcheng WU¹
¹University of Science and Technology of China

SE04-D1-PM1-321B-005 | SE04-A016

Numeric Models of Arc-Continent Collision in Taiwan - Insight to the Erosion Process and Lower Crust Rheology $Eh\ TAN^{1s+}$

¹Academia Sinica

SE04-D1-PM1-321B-006 | SE04-A005

Numerical Simulation on Initiation of Fold-and-Thrust Belt in Northeast Qinghai-Tibet Plateau

Caibo HU1#+

¹Chinese Academy of Sciences

SE04-D1-PM1-321B-007 | SE04-A008

Low Velocity Layer Above the 410-km Discontinuity Beneath Northwest Pacific Subduction Zone and its Dynamic Implication

Juan LI^{1,2‡+}, Guangjie HAN¹, Wang XIN³, Qi-Fu CHEN¹
¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences, ³Nanyang Technological University

SE04-D1-PM1-321B-008 | SE04-A021

Mantle Melting and Intraplate Volcanism Due to Upwellings from the Stagnant Slab

Xiaogang LONG^{1#}, Maxim BALLMER^{1,2+}, Antonio MANJÓN CABEZA CÓRDOBA¹

¹ETH Zurich, ²Tokyo Institute of Technology

SE10 / Mantle and Core: Structure, Dynamics, Chemistry, and Seismology

Mon - 04 Jun | MR321B

Time 08:30 - 10:30

Chair(s) Murli MANGHNANI, University of Hawaii

Taku TSUCHIYA, Ehime University

SE10-D1-AM1-321B-001 | SE10-A017

High Precision 182W/183W Isotope Analysis Using

MC-ICP-MS and its Application for Terrestrial Samples

Asako TAKAMASA¹, Yusuke FUKAMI¹, Katsuhiko SUZUKI¹‡+¹ Japan Agency for Marine-Earth Science and Technology

SE10-D1-AM1-321B-002 | SE10-A018

First Principles Investigation of the High-Pressure Behavior of the FeOOH-AlOOH-Phase H System

Jun TSUCHIYA¹*-, Taku TSUCHIYA¹, Masayuki NISHI^{1,2}, Yasuhiro KUWAYAMA¹

¹Ehime University, ²Tokyo Institute of Technology

SE10-D1-AM1-321B-003 | SE10-A011

Lattice Thermal Conductivity of the Lower Mantle Minerals

Taku TSUCHIYA1#+, Haruhiko DEKURA1

¹Ehime University

SE10-D1-AM1-321B-004 | SE10-A010

Development of Rotational Diamond Anvil Cell for Ultra-High

Pressure Deformation Experiments

Ryuichi NOMURA $^{1\sharp*}$, Shintaro AZUMA 2 , Kentaro UESUGI 3 , Tetsuo IRIFUNE 1

¹Ehime University, ²Kyushu University, ³Japan Synchrotron Radiation Research Institute (JASRI)

SE10-D1-AM1-321B-005 | SE10-A001

Sound Velocity Measurement of Iron-Nickel Alloy:

Implications for a Unified Earth's Inner Core Model Consistent with Geophysical and Geochemical Observations

Tatsuya SAKAMAKI^{1#+}
¹Tohoku University

SE10-D1-AM1-321B-006 | SE10-A006

Microfabrics of Peridotites from the Mount Melbourne,

Antarctica

Daeyeong KIM¹²⁺, Katsuyoshi MICHIBAYASHI², Yongcheol PARK¹, Junghun SEO³, Mi Jung LEE¹, Kyungtae PARK⁴, Heymee CHO⁴

¹Korea Polar Research Institute, ²Shizuoka University, ³Inha University, ⁴Korea Institute of Industrial Technology

Time 11:00 - 12:30

Chair(s) Maxim BALLMER, ETH

Kenji KAWAI, University of Tokyo

SE10-D1-AM2-321B-007 | SE10-A013

Geodynamic Mechanisms for the Preservation of Large-Scale

Primordial Heterogeneity in the Earth's Mantle

Maxim BALLMER1,2#+

¹ETH Zurich, ²Tokyo Institute of Technology

SE10-D1-AM2-321B-008 | SE10-A005

S-Velocity Structure of the Mantle Transition Zone Beneath the

Northwestern Pacific Inferred from Waveform Inversion and

 $its\ Geophysical\ Interpretation$

Lina YAMAYA $^{\mbox{\tiny 15+}},$ Anselme F. E. BORGEAUD $^{\mbox{\tiny 1}},$ Kenji KAWAI $^{\mbox{\tiny 1}},$ Maxim BALLMER 2,3

¹The University of Tokyo, ²ETH Zurich, ³Tokyo Institute of Technology

SE10-D1-AM2-321B-009 | SE10-A009

Influence of Postcritical Reflection and Refraction on SmKS

Liwei WANG1#+, Fenglin NIU1,2

¹China University of Petroleum-Beijing, ²Rice University

SE10-D1-AM2-321B-010 | SE10-A015

3-D S-Velocity Structure of the Transition Zone Beneath Central America and the Northeastern Pacific from Waveform Inversion

Anselme F. E. BORGEAUD^{1#+}, Kenji KAWAI¹, Robert GELLER¹
¹The University of Tokyo

SE10-D1-AM2-321B-011 | SE10-A019

Effects of Ocean and Crust on Parameter Determination of Mantle Discontinuities

Yong ZHOU^{1#+}, Xiaofei CHEN¹
¹Southern University of Science and Technology

SE10-D1-AM2-321B-012 | SE10-A020

Full-Waveform Inversion for Localized 3-D Shear Velocity Structure in D" Beneath the Western Pacific Using Thai Seismic Array (TSAR) Data

Yuki SUZUKI^{1,5}*, Kenji KAWAI¹, Robert GELLER¹, Satoru TANAKA², Weerachai SIRIPUNVARAPORN³, Songkhun BOONCHAISUKU³, Noisagool SUTTHIPONG³, Yasushi ISHIHARA², Taweoon KIM², Koji MIYAKAWA¹, Nozomu TAKEUCHI¹

¹The University of Tokyo, ²Japan Agency for Marine-Earth Science and Technology, ³Mahidol University

SE18-34-37 / Observations and Implication of Stress Geomechanics Integrations, Slow and Fast Earthquake Source Physics and Triggered and Induced Seismicity

Mon - 04 Jun | MR321A

Time 08:30 - 10:30

Chair(s) Hung-Yu WU, Japan Agency for Marine-Earth Science

and Technology

Chung-Han CHAN, Nanyang Technological University

SE18-34-37-D1-AM1-321A-001 | SE18-34-37-A028

Earthquake Source Processes and Coulomb Stress Estimation in and Around the Source Zone of Past Major Earthquakes of North-Western Himalaya, India

Mahesh PARIJA15+, Sushil KUMAR1, Virendra Mani TIWARI2, Shubhasmita BISWAL3

¹Wadia Institute of Himalayan Geology, ²National Geophysical Research Institute, ³Indian Institute of Technology Kharagpur

SE18-34-37-D1-AM1-321A-002 | SE18-34-37-A007 (Invited)

Local and Global Stress Fields for Cause of Tectonic

Earthquakes

Zhongqi Quentin YUE^{1#+} ¹The University of Hong Kong SE18-34-37-D1-AM1-321A-003 | SE18-34-37-A008

Stress State Vicinity the Nankai Subduction Zone, Estimated from Previous International Ocean Discovery Program Drilling Projects

Hung-Yu WU1#+, Chung-Han CHAN2

¹Japan Agency for Marine-Earth Science and Technology, ²Nanyang Technological University

SE18-34-37-D1-AM1-321A-004 | SE18-34-37-A009 (Invited)

Probing Stress Field on the Chihshang Fault, Taiwan Using Geodetic and Seismic Data

Ya-Ju HSU^{1#+}
¹Academia Sinica

SE18-34-37-D1-AM1-321A-005 | SE18-34-37-A010 (Invited)

Stress State of Fluid Conduits with Different Fluid Sources in the Chingshui Geothermal Area, Ne Taiwan and its Tectonic Implications

En-Chao YEH $^{1s+}$, Yi-Chia LU 2 , Ping-Chuan CHEN 2 , Yoshitaka HASHIMOTO 3 , Chih-Tung CHEN 4 , Tai Tien WANG 5 , Sheng-Rong SONG 2

¹National Taiwan Normal University, ²National Taiwan University, ³Kochi University, ⁴National Central University, ⁵National Taipei University of Technology

SE18-34-37-D1-AM1-321A-006 | SE18-34-37-A014

Spatial and Temporal Stress Evolution Along the Sumatran Subduction Zone Constrained by Decade-Long GPS Time Series

Qiang QIU^{1#+}, Chung-Han CHAN¹
¹Nanyang Technological University

SE18-34-37-D1-AM1-321A-007 | SE18-34-37-A023

Dehydration-Driven Stress Transfer Evidenced Beneath NE Japan

Saeko KITA1#+, Thomas FERRAND2,3

¹International Institute of Seismology and Earthquake Engineering, BRI, ²Laboratoire de Géologie de L'Ecole Normale Supérieure, ³The University of Tokyo

Time 11:00 - 12:30

Chair(s) Roland GRITTO, Array Information Technology

Chung-Han CHAN, Nanyang Technological University

SE18-34-37-D1-AM2-321A-008 | SE18-34-37-A043 (Invited)

Production-Induced Earthquakes in Southern California

During the Early 20th Century

Susan HOUGH¹⁵⁺, Roger BILHAM², Victor TSAI³, Stacey MARTIN⁴, Robert WALKER⁵, Fred AMINZADEH⁵
¹United States Geological Survey, ²University of Colorado, ³California Institute of Technology, ⁴Earth Observatory of Singapore, ⁵University of Southern California

SE18-34-37-D1-AM2-321A-009 | SE18-34-37-A037

The Rise, Collapse, and Compaction of Mt. Mantap from the 3 September 2017, North Korean Nuclear Test

Teng WANG^{1,5+}, Shengji WEI¹, Mehdi NIKKHOO², Qibin SHI¹, Sylvain BARBOT¹, Douglas DREGER³, Roland BURGMANN³, Mahdi MOTAGH², Qi-Fu CHEN⁴

¹Nanyang Technological University, ²GFZ German Research Centre for Geosciences, ³University of California, Berkeley, ⁴Chinese Academy of Sciences

SE18-34-37-D1-AM2-321A-010 | SE18-34-37-A018

Modeling Geomechanical Effects of Injected CO2 Using Finite Element Method on the CCS Project at Gundih Field Central Java, Indonesia

Herdis HAERUSALAM^{1‡+}, David Prambudi SAHARA¹, Fatkhan FATKHAN¹

¹Bandung Institute of Technology

SE18-34-37-D1-AM2-321A-011 | SE18-34-37-A034

Improving Local and Regional Earthquake Locations Using an

Advance Inversion Technique: Grey Wolf Optimizer

Shubham GUPTA1#+, Kusum DEEP1, Sushil KUMAR2, Manish KUMAR1

¹Indian Institute of Technology Roorkee, ²Wadia Institute of Himalayan Geology

SE18-34-37-D1-AM2-321A-012 | SE18-34-37-A004

Numerical Simulation on Rockburst of Deep Buried Tunnel by

Three Dimensional Discrete Element Model

Xiaoyu ZHANG¹+, Chun LIU¹# ¹Nanjing University

SE18-34-37-D1-AM2-321A-013 | SE18-34-37-A005

Time-Dependent Seismic Hazard Assessment for Yangon,

Myanmar: Impact of Stress Perturbation by Recent

Earthquakes

Chung-Han CHAN^{1*}, Hla Hla AUNG², Myo THANT^{2,3}
¹Nanyang Technological University, ²Myanmar Earthquake
Committee, ³Monywa University

Time 13:30 - 15:30

Chair(s) Sushil KUMAR, Wadia Institute of Himalayan Geology

Liqing JIAO, Nanyang Technological University

SE18-34-37-D1-PM1-321A-014 | SE18-34-37-A031

Subsurface Imaging Using Seismic Interferometry

Manish KUMAR $^{{\scriptscriptstyle I}\sharp*}$, Kamal KAMAL $^{\scriptscriptstyle I}$, Sushil KUMAR $^{\scriptscriptstyle 2}$, Shubham GUPTA $^{\scriptscriptstyle I}$

¹Indian Institute of Technology Roorkee, ²Wadia Institute of Himalayan Geology

SE18-34-37-D1-PM1-321A-015 | SE18-34-37-A033

Imaging Crust and Upper Mantle Structure Beneath Kashmir Himalaya: Constraints from Receiver Functions, H-K Stacking and Joint Inversion

Swati SHARMA $^{1+}$, Debarchan POWALI 2 , Supriyo MITRA 2 , Sunil K WANCHOO $^{1+}$, Keith PRIESTLEY 3 , Vinod GAUR 4 , Sushil KUMAR 5 , Mahesh Prasad PARIJA 5

¹Shri Mata Vaishno Devi University, ²Indian Institute of Science Education and Research, ³University of Cambridge, ⁴CSIR Centre for Mathematical Modelling and Computer Simulation, ⁵Wadia Institute of Himalayan Geology

SE18-34-37-D1-PM1-321A-016 | SE18-34-37-A022

Tectonic Implications of the Chishan Transfer Fault Zone, Southwest Taiwan: Revealed by 3D Seismic B-Values and Block Rotation Scenario

Yu-Lien YEH^{1‡+}, Strong WEN¹, Chien-Hsin CHANG²
¹National Chung Cheng University, ²Central Weather Bureau

SE18-34-37-D1-PM1-321A-017 | SE18-34-37-A015

Temporal Variation of the Fault-Zone Anisotropy After a Large Earthquake Revealed from the Taiwan In-Situ

Chelungpu-Fault Borehole Array

Ruei-Jiun HUNG^{1#+}, Kuo-Fong MA¹, Teh-Ru Alex SONG², Yen-Yu LIN³

¹National Central University, ²University College London, ³Academia Sinica

SE18-34-37-D1-PM1-321A-018 | SE18-34-37-A030

Source Parameters and Moment Tensor of Mw 5.7 Earthquake

of February 06, 2017, Garhwal Himalaya, India

Sushil KUMAR¹*, Mahesh PARIJA¹, Shubhasmita BISWAL², Harish C. PANDEY¹, Narendra KUMAR¹, Parveen KUMAR¹, Sandeep CHABAK¹, Chhavi Pant PANDEY¹, Ajay PAUL¹ ¹Wadia Institute of Himalayan Geology, ²Indian Institute of Technology Kharagpur

SE18-34-37-D1-PM1-321A-019 | SE18-34-37-A021

Two Types of Fronts of Macroscopic Slip Between a Block and

a Substrate and Their Propagation Velocities

Takehito SUZUKI^{1‡+}, Hiroshi MATSUKAWA¹
¹Aoyama Gakuin University

SE19 / Characterizing Precambrian Crust and Lithosphere

Mon - 04 Jun | MR302A

Time 08:30 - 10:30

Chair(s) Huaiyu YUAN, Macquarie University

Liang ZHAO, Chinese Academy of Sciences

SE19-D1-AM1-302A-001 | SE19-A023

The Geodynamics of Making Cratons: Where are We Now?

Catherine COOPER¹⁵⁺, Adam BEALL², Louis MORESI³
¹Washington State University, ²Cardiff University, ³The University of Melbourne

SE19-D1-AM1-302A-002 | SE19-A030 (Invited)

Comparing Ancient and Modern Orogenic Processes: Evidence from Present-Day Crustal Structure

Fiona DARBYSHIRE $^{1\sharp*}$, Ian BASTOW², Laura PETRESCU³, Amy GILLIGAN⁴, David THOMPSON⁵

¹Université du Québec à Montréal, ²Imperial College London, ³National Institute for Earth Physics, ⁴University of Aberdeen, ⁵University of Cardiff

SE19-D1-AM1-302A-003 | SE19-A038

Neoproterozoic Initial Amalgamation of the North China Craton and South China Block in the Sulu Orogen: Evidences from the Wulian Complex

Jianhui LIU1#+

¹Institute of Geology Chinese Academy of Geological Sciences

SE19-D1-AM1-302A-004 | SE19-A033 (Invited)

Crustal Structural Characteristics Beneath Cratons and

Tectonic Belts in Eastern Asia

Ling CHEN^{1‡+}, Xu WANG¹, Yuan LING¹, Cheng CHENG² ¹Chinese Academy of Sciences, ²Oilsoft Corporation

SE19-D1-AM1-302A-005 | SE19-A032 (Invited)

Geophysical Characterisation of Geological Processes

Associated with Mineral Systems in Precambrian Lithosphere

Mike DENTITH1#+, Perla VARAS1, Ruth MURDIE2

¹University of Western Australia, ²Geological Survey of Western Australia

SE19-D1-AM1-302A-006 | SE19-A014

Multiple Mid-Lithospheric Discontunuities Beneath the

Archean Western Australian Craton

Weijia SUN¹#+, Liang ZHAO¹

¹Chinese Academy of Sciences

Time 11:00 - 12:30

Chair(s) Liang ZHAO, Chinese Academy of Sciences

Huaiyu YUAN, Macquarie University

SE19-D1-AM2-302A-007 | SE19-A034

Preservation and Reworking of the Precambrian Cores in

Western Canada

Yunfeng CHEN^{1‡}, Yu GU¹⁺, Shu-Huei HUNG²
¹University of Alberta, ²Taiwan National University

SE19-D1-AM2-302A-008 | SE19-A015

On the Destructive Tendencies of Cratons (When Interacting with Slabs)

Catherine COOPER¹, Rebecca FARRINGTON², Meghan MILLER^{3‡+}

¹Washington State University, ²The University of Melbourne, ³Australian National University

SE19-D1-AM2-302A-009 | SE19-A004 (Invited)

Subduction-Induced Deep Hydration and Overriding Cration

Destruction: Numerical Modeling

Zhong-Hai LI1#+

¹University of Chinese Academy of Sciences

SE19-D1-AM2-302A-010 | SE19-A006 (Invited)

Complex Crustal Anisotropy Revealed by Receiver Functions

and Ambient Noise in North China Craton

Huajian YAO¹⁵⁺, Yan YANG¹, Jikun FENG¹, Ling CHEN²
¹University of Science and Technology of China, ²Chinese Academy of Sciences

Time 13:30 - 15:30

Chair(s) Jeffrey GU, University of Alberta

Huaiyu YUAN, Macquarie University

SE19-D1-PM1-302A-011 | SE19-A022

Fragmented But Not Destabilized: When Rifts Met Cratons

Wang-Ping CHEN1#+

¹China University of Geosciences

SE19-D1-PM1-302A-012 | SE19-A020

Lithospheric Structure Underneath the Ordos Block of the

North China Craton, Revisited Using Transdimensional

Inversion of Ambient Noise and Surface Wave Dispersion

Kun WANG^{1‡+}, Tingzi LI², Yuan LING², Xiaobing XU², Liang ZHAO², Huaiyu YUAN³, Thomas BODIN⁴

¹Institute of Geology and Geophysics, Chinese Academy of Sciences, ²Chinese Academy of Sciences, ³Macquarie University, ⁴Université de Lyon

SE19-D1-PM1-302A-013 | SE19-A026

Aeromagnetic Study of the Hengshan-Wutai-Fuping Region: Unraveling a Crustal Profile of the Paleoproterozoic

Trans-North China Orogen

Jian ZHANG Ift, Min SUN², Guochun ZHAO², Sanzhong LI³, Wenlue SHEN4

¹Sun Yat-sen University, ²The University of Hong Kong, ³Ocean University of China, ⁴EGS Earth Sciences

SE19-D1-PM1-302A-014 | SE19-A008

Micro-Structural and Geochronological Study of the Zhujiafang Ductile Shear Zone in the Hengshan Complex: Implications on the Tectonic Evolution of the Trans-North China Orogen

Lingchao HE^{1+} , Jian ZHANG $^{1\pm}$, Shuyun CAO 2 , Chunjing WEI 3 , Changqing YIN 1 , Jiahui QIAN 1 , Jin LIU 1 , Luojuan WANG 1 , Mingfei LIU 1 , Xinyuan YU 1

¹Sun Yat-sen University, ²China University of Geosciences, ³Peking University

SE19-D1-PM1-302A-015 | SE19-A013

A Long Term Accretionary Process During the Amalgamation of the North China Craton: New Insights from the Geochemistry, Geochronology and Hf-O Isotopes of the

Lüliang Complex, Trans-North China Orogen

Xinyuan YU1+, Jian ZHANG1 $^{\sharp}$, Luojuan WANG1, Changqing YIN1, Jin LIU1, Jiahui QIAN1, Mingfei LIU1, Heng LIU1, Lingchao HE1

¹Sun Yat-sen University

SE19-D1-PM1-302A-016 | SE19-A012

The Correlation Between Neoproterozoic Igneous Activities in Korean Peninsula with Those in China

Boyoung LEE^{1#+}, Changwhan OH¹
¹Chonbuk National University

SE19-D1-PM1-302A-017 | SE19-A024

Geochronological and Geochemical Study of Ultramafic Rocks in Zhenghe-Dapu Fault Zone of the Cathaysia Block: Implication for Possible Pan-African Suture Zone in Southeast China

Longming LI^{1#+}
¹Hefei University of Technology

SE20 / Accretionary and Collisional Orogenesis of the Central Asian Orogenic Belt

Mon - 04 Jun | MR319B

Time 08:30 - 10:30

Chair(s) Keda CAI, China University of Geosciences

Ming CHEN, China University of Geosciences

SE20-D1-AM1-319B-001 | SE20-A007 (Invited)

Precambrian Tectonic Evolution of the Tarim Block, Nw China: New Geochronological Insights from the Quruqtagh Domain Liangshu SHU^{1‡+}

¹Nanjing University

SE20-D1-AM1-319B-002 | SE20-A002 (Invited)

A Late Paleoproterozoic Collisional Orogenic Event in the

Northern Tarim Craton

Wenbin $ZHU^{1#+}$, Rongfeng GE^1 , Hailin WU^1 **INanjing University

SE20-D1-AM1-319B-003 | SE20-A001

Age and Provenance of the Early Mesozoic Strata in the NE North China Craton: Constraints on the Final Closure Timing of the Paleo-Asian Ocean

Yini WANG¹+, Wenliang XU¹‡
¹Jilin University

SE20-D1-AM1-319B-004 | SE20-A006

Accretionary Tectonics of Back-Arc Oceanic Basins in the South Tianshan: Insights from Structural, Geochronological, and Geochemical Studies of the Wuwamen Ophiolite Mélange Bo WANG^{1#+}

1 Nanjing University

SE20-D1-AM1-319B-005 | SE20-A008 (Invited)

Kilometer-Scale Conjoined Twins Superposed Fold in Central

Asia, Southern Most Altaids

Zhonghua TIAN¹⁵⁺, Wenjiao XIAO²
¹Chinese Academy of Geological Sciences, ²Chinese Academy of Sciences

SE20-D1-AM1-319B-006 | SE20-A009

Subduction-Induced Crustal Heterogeneity Beneath Yili Block: Insights from Hf Isotopic Mapping of Paleozoic Granitoids He $HUANG^{1s+}$, Tao $WANG^2$

¹Institute of Geology, Chinese Academy of Geological Sciences, ²Chinese Academy of Geological Sciences SE20-D1-AM1-319B-007 | SE20-A011

Contrasting Zircon Water Contents of Carboniferous Igneous Rocks from West Jungger and Chinese Tianshan, Centre Asian Orogenic Belt

Xiaoping XIA1#+, Keda CAI2

¹Chinese Academy of Sciences, ²China University of Geosciences

Time 11:00 - 12:30

Chair(s) Bo WANG, Nanjing University

Kuo-Lung WANG, Institute of Earth Sciences, Academia

Sinica

SE20-D1-AM2-319B-008 | SE20-A010

Tracking the Multi-Stage Exhumation History of the Western Chinese Tianshan by Apatite Fission Track Dating: Implication for the Preservation of Epithermal Deposits in the Ancient Orogenic Belt

Keda CAI^{1#+}, Yannan WANG²

¹China University of Geosciences, ²Chinese Academy of Sciences

SE20-D1-AM2-319B-009 | SE20-A012

Remnants of Eoarchean (~3.7 Ga) Continental Crust in the Tarim Craton Derived from a Subducted Proto-Arc

Rongfeng GE¹⁸⁺, Wenbin ZHU¹, Simon WILDE², Hailin WU¹
¹Nanjing University, ²Curtn University

SE20-D1-AM2-319B-010 | SE20-A013

Geochemistry and U-Pb Detrital Zircon Ages of Late Permian to Early Triassic Metamorphic Rocks from Northern Liaoning, North China: Evidence for the Timing of Final Closure of the Paleo-Asian Ocean

Jin LIU^{1z+}, Zhenghong LIU², Chen ZHAO¹, Chujie WANG³, Qingbin GUAN², Shiyong DOU⁴, Shue SONG⁵, Jian ZHANG¹
¹Sun Yat-sen University, ²Jilin University, ³Liaoning Colored Geology Bureau of 108 Team, ⁴Liaoning Survey Academy of Geology and Mineral Resources, ⁵Liaoning Institute of Geological Experiment

SE20-D1-AM2-319B-011 | SE20-A015

Petrogenesis and Tectonic Implications of Late Carboniferous to Early Permian Post-Collisional Granites in the South

Tianshan Orogenic Belt, NW China

Qie QIN¹⁺, He HUANG², Tao WANG^{3#}
¹Institute of Geology, Chinese Academy of Geological Sciences,
²Institute of Geology, Chinese Academy of Geological Sciences,
³Chinese Academy of Geological Sciences

SE20-D1-AM2-319B-012 | SE20-A020

Review of the Terranes in the Chinese Altai: A Single

Accretionary Complex

Arnaud BROUSSOLLE¹⁵⁺, Min SUN¹, Karel SCHULMANN², Alexandra GUY², Yang YU³, Pavla ŠTÍPSKÁ², Yingde JIANG³
¹The University of Hong Kong, ²Czech Geological Survey, ³Chinese Academy of Sciences

SE20-D1-AM2-319B-013 | SE20-A021

Reverse Thermal Evolutions Since the Middle-Late Jurassic and its Profound Influence on Hydrocarbon Accumulation, Sichuan Basin, China

Lining WANG1#+

¹Research Institute of Petroleum Exploration and Development

Time 13:30 - 15:30

Chair(s) Bo WAN, Chinese Academy of Sciences

Keda CAI, China University of Geosciences

SE20-D1-PM1-319B-014 | SE20-A024 (Invited)

Depleted SSZ Type Mantle Peridotites in Proterozoic

Dunzhugur Ophiolites in the Central Asian Orogenic Belt

Indicating Remnant Ancient Lithospheric Fragments

Kuo-Lung WANG¹^{‡+}, Marina GORNOVA², Victor KOVACH³, Zhuyin CHU⁴, Vasilii BELYAEV², Kuan-Yu LIN⁵, Suzanne O'REILLY⁶

¹Academia Sinica, ²Siberian Branch of the Russian Academy of Sciences, ³Russian Academy of Sciences, ⁴Chinese Academy of Sciences, ⁵National Taiwan University, ⁶Macquarie University

SE20-D1-PM1-319B-015 | SE20-A029 (Invited)

Crustal Recycling and Maturation: Evidence from Zircon Hf-O Isotopes of the Granitoids from the Junggar Intra-Oceanic Arc, Central Asian Orogenic Belt

Gong-Jian TANG^{1‡+}, Qiang WANG¹, Wei DAN¹
¹Chinese Academy of Sciences

SE20-D1-PM1-319B-016 | SE20-A026

Variable Slab-Mantle Interaction in the Nascent
Neoproterozoic Kuznetsk Altai Intra-Oceanic Subduction
System to Generate Boninitic-Tholeiitic Lavas and Magnesian
Andesites

Ming CHEN $^{1\pm}$, Min SUN 2 , Misha BUSLOV 3 , Keda CAI 4 , Jianping ZHENG 4

¹China University of Geosciences (Wuhan), ²The University of Hong Kong, ³Siberian Branch of the Russian Academy of Sciences, ⁴China University of Geosciences

SE20-D1-PM1-319B-017 | SE20-A022

A Synthetic Zircon U-Pb Age and Hf Isotopic Study of the Carboniferous Volcanics in the Chinese Altai and its Tectonic Implications on the Accretionary Process of the Western Central Asia Orogenic Belt

Heng LIU¹⁺, Jian ZHANG^{1±}, Yingde JIANG², Min SUN³, Changqing YIN¹, Jin LIU¹, Mingfei LIU¹
¹Sun Yat-sen University, ²Chinese Academy of Sciences, ³The University of Hong Kong

SE20-D1-PM1-319B-018 | SE20-A016

Carboniferous Volcanic Rocks Associated with Back-Arc Propagation in the Western Chinese Tianshan, Nw China: Insight from Temporal-Spatial Characterization, Petrogenesis and Tectonic Significance

Wenbo SU1#+

¹University of Chinese Academy of Sciences

SE20-D1-PM1-319B-019 | SE20-A017

The Switch from Advancing to Retreating Subduction Margin: Records from Paleozoic Magmatism in the Eastern Tianshan, Central Asian Orogenic Belt

Yunying ZHANG^{1#+}, Min SUN¹, Chao YUAN², Yingde JIANG²
¹The University of Hong Kong, ²Chinese Academy of Sciences

SE22-35 / Earthquakes, Fault Ruptures and Seismic Hazards in Southeast and East Asia and Selected Sedimentary Basins

Mon - 04 Jun | MR314

Time 08:30 - 10:30

Chair(s) Xu Hua SHI, Earth Observatory of Singapore

Noelynna RAMOS, University of the Philippines Diliman

SE22-35-D1-AM1-314-001 | SE22-35-A023

Source Parameters and Simulation of 1604 Quanzhou Earthquake

Yiwun LIAO $^{1\sharp *}$, Ming-Hsuan YEN 1 , Kuo-Fong MA 1 , Shao-Kai WI 1

¹National Central University

SE22-35-D1-AM1-314-002 | SE22-35-A006

An Inversion Method for Stress Drop Based on Earthquake Stress Model and its Application to the 2011 Giant Tohoku-Oki Earthquake

Zhoumin XIE¹, Yongen CAI^{1#+}
¹Peking University

SE22-35-D1-AM1-314-003 | SE22-35-A049

The Rupture Process of 2015 Mw7.8 Gorkha Earthquake and Sensitivity Analysis

Jinlai HAO1#+, Chen JI2, Zhen-Xing YAO1

¹Chinese Academy of Sciences, ²University of California Santa Barbara

SE22-35-D1-AM1-314-004 | SE22-35-A005

Seismicity Before and After the 2016 Qinghai Menyuan Ms 6.4 Earthquake

Min LIU¹+, Hongyi LI¹*, Yafen HUANG¹, Chenchen WANG¹, Shixin LI¹

¹China University of Geosciences

SE22-35-D1-AM1-314-005 | SE22-35-A030

Focal Mechanism Solutions and Seismogenic Structure of the 8 August 2017 M7.0 Jiuzhaigou Earthquake and its Aftershocks, Northern Sichuan, China

Guixi YI^{1#+}, Feng LONG², Huiping ZHANG³, Siwei WANG²
¹Sichuan Earthquake Agency, ²Earthquake Administration of Sichuan Province, ³China Earthquake Administration

SE22-35-D1-AM1-314-006 | SE22-35-A022

Why Did the Other Macro-Epicentre Occur in the Beichuan Area Far from the Hypocenter of the 2008 Wenchuan

Earthquake?: Insights from FEM Simulations

Shoubiao ZHU $^{1,2\#+}$, Jie YUAN 1

¹China Earthquake Administration, ²University of Chinese Acadamy of Sciences

SE22-35-D1-AM1-314-007 | SE22-35-A036

Broadband Ground Motion Simulation of the March 4, 2010 Jiashian, Taiwan Earthquake by Combining Stochastic Green's Function Method with Hybrid K-Squared Slip Model

Cheng-Feng WU^{1#+}, Huey-Chu HUANG¹, Boi-Yee LIAO²
¹National Chung Cheng University, ²National Chi Nan University

Time 11:00 - 12:30

Chair(s) J. Bruce H. SHYU, National Taiwan University

SE22-35-D1-AM2-314-008 | SE22-35-A042

A Revision of the Macroseismic Effects of the Mb 6.5 Bagan Earthquake of 1975, Central Myanmar

Lin Thu AUNG^{1,2±+}, Stacey MARTIN¹, Yu WANG^{1,3}, Soe Thura TUN⁴, Daywa AUNG⁵, Win NAING⁶

¹Nanyang Technological University, ²Myanmar Geosciences Society, ³National Taiwan University, ⁴Myanmar Earthquake Committee,

⁵University of Yangon, ⁶University of Mawlamyine

SE22-35-D1-AM2-314-009 | SE22-35-A052

A Report on Upgraded Seismic Monitoring Stations in

Myanmar: Station Performance and Site Response

Hrin NEI THIAM¹, Yin Myo Min HTWE¹, Tun Lin KYAW¹, Pa Pa TUN¹, Zaw MIN¹, Su Hninn HTWE¹, Tin Myo AUNG¹, Kyaw Kyaw LIN¹, Myat Min AUNG¹, Jason DE CRISTOFARO², Xuyang LIU³, Stefan RADMAN³, Emily WOLIN^{2**}, Susan HOUGH²

¹Department of Meteorology and Hydrology, ²United States Geological Survey, ³Kinemetrics, Incorporated

SE22-35-D1-AM2-314-010 | SE22-35-A048

Structural Deformation of Meiktila Area, Along the

Mandalay-Naypyidaw Express Car Road, Myanmar

Saw Ngwe KHAING^{1,2#+}, Zaw Naing OO³, Soe Thura TUN² ¹Hinthada University, ²Myanmar Earthquake Committee, ³University of Yangon

SE22-35-D1-AM2-314-011 | SE22-35-A043

A Rediscovered Active Fault Beneath Yangon Metropolitan

Area, Myanmar: Constraints from the 2017 Mw 5.1 Teik-Kyi

Earthquake and Historical Earthquake Occurrence

Yu WANG¹.2⁵+, Wang XIN², Shengji WEI², Phyo Maung MAUNG², Lin Thu AUNG².3

¹National Taiwan University, ²Nanyang Technological University, ³Myanmar Geosciences Society

SE22-35-D1-AM2-314-012 | SE22-35-A019

Paleo-Earthquake Events Recorded by Coral Microatolls in the

Western Hengchun Peninsula, Southern Taiwan

Sze-Chieh LIU $^{1\pm}$, J. Bruce H. SHYU 1 , Yuan-Lu TSAI 1 , Chuan-Chou SHEN 1

¹National Taiwan University

SE22-35-D1-AM2-314-013 | SE22-35-A039

Relative Sea Level Changes and Long-Term Deformation in

Cebu Island, Philippines Inferred from Emergent Marine

Terraces and Coastal Notches

Noelynna RAMOS¹*+, Kathrine MAXWELL¹, Regina Martha LUMONGSOD¹, Keanu Jershon SARMIENTO¹, Raul Benjamin MENDOZA¹, Carla DIMALANTA¹

¹University of the Philippines Diliman

Time 13:30 - 15:30

Chair(s) Yu WANG, National Taiwan University

SE22-35-D1-PM1-314-014 | SE22-35-A067

Surface Wave Tomography of Kendeng Basin in Java,

Indonesia, from Ambient Seismic Noise

Sri WIDIYANTORO^{1‡+}, Phil CUMMINS², Agustya MARTHA³, Zulfakriza ZULFAKRIZA¹, Erdinc SAYGIN⁴

¹Bandung Institute of Technology, ²Australian National University, ³Indonesian Agency for Meteorological, Climatological and Geophysics, ⁴Commonwealth Scientific and Industrial Research Organisation

SE22-35-D1-PM1-314-015 | SE22-35-A012

Teleseismic Upper-Mantle Tomography of the Tanlu Fault Zone in East China

Jianshe LEI1#+, Dapeng ZHAO2, Xiwei XU1, Qi MI1, Mofei DU1, Mingwen LU1, Yu YANG1

¹China Earthquake Administration, ²Tohoku University

SE22-35-D1-PM1-314-016 | SE22-35-A034

Depth of the Lower Limit of Crustal Seismogenic Layer
Beneath Japanese Islands on the Japan Sea Side Estimated
from High Resolved Hypocenter Catalog and Heat Flux Data
Makoto MATSUBARA¹⁵⁺, Tomoko YANO¹
¹National Research Institute for Earth Science and Disaster Resilience

SE22-35-D1-PM1-314-017 | SE22-35-A053

Seismic Velocity Structure at the Endpoint of the Fault Rupture of the 2016 Kumamoto Earthquake in Southeast Japan Yasuhira AOYAGI¹⁵⁺, Haruo KIMURA¹

16 (1 P) 1 I (') (CE (') P) I

¹Central Research Institute of Electric Power Industry

SE22-35-D1-PM1-314-018 | SE22-35-A054

Active Backstop Faults in the Mentawai Region of Sumatra, Indonesia, Revealed by Teleseismic Broadband Waveform Modeling

Wang XIN^{1‡+}, Shengji WEI¹, Kyle BRADLEY¹
¹Nanyang Technological University

SE22-35-D1-PM1-314-019 | SE22-35-A058

Interaction Between Tectonic and Gravity-Driven

Deformation: The Case of the Hyper-Extended Liwan Sag

(Mid-Northern Margin of South China Sea)

Cuimei ZHANG¹⁺, Ming SU^{2‡}, Xiong PANG³, Zhen SUN⁴, Gianreto MANATSCHAL⁵

¹Chinese Academy of Sciences, ²Sun Yat-sen University, ³CNOOC Ltd., ⁴South China Sea Institute of Oceanology, Chinese Academy of Sciences, ⁵Université de Strasbourg SE22-35-D1-PM1-314-020 | SE22-35-A024

Multiple-Segment Fault Rupture of the 1935 Hsinchu-Taichung Earthquake, Taiwan, and its Implication on Multiple Faults

Rupture in Taiwan for Hazard Assessment

Ming-Hsuan YEN^{1#+}, Kuo-Fong MA¹, Shiann-Jong LEE²
¹National Central University, ²Academia Sinica

SE22-35-D1-PM1-314-021 | SE22-35-A029

Limit on Slip Rate and Timing of Last Ground-Rupturing Earthquake of the Jinghong Fault, Southeast of the Eastern Himalayan Syntaxis

Xuhua SHI^{1#}, Ray WELDON², Jing LIU³, Yu WANG^{1,4}, Elise WELDON², Kerry SIEH¹, Zhigang LI⁵, Jingyu ZHANG³, Wenqian YAO³, Zhanfei LI⁶

¹Nanyang Technological University, ²University of Oregon, ³China Earthquake Administration, ⁴National Taiwan University, ⁵Sun Yat-sen University, ⁶Beijing Earthquake Agency

ST03 / Wave-Particle Interactions in the Magnetosphere

Mon - 04 Jun | MR323C

Time 08:30 - 10:30

Chair(s) Danny SUMMERS, Memorial University of

Newfoundland

ST03-D1-AM1-323C-001 | ST03-A025 (Invited)

Arase (ERG) Observation of Energetic Electrons in the Inner

Magnetosphere and Roles of Waves

Satoshi KASAHARA¹**, Shoichiro YOKOTA², Takefumi MITANI³, Kazushi ASAMURA³, Masafumi HIRAHARA⁴, Takeshi TAKASHIMA³

¹The University of Tokyo, ²Osaka University, ³Japan Aerospace Exploration Agency, ⁴Nagoya University

ST03-D1-AM1-323C-002 | ST03-A015 (Invited)

Large Amplitude Extremely-Low-Frequency Hiss Waves in Plasmaspheric Plumes

Zhenpeng $SU^{1\#},$ Nigang LIU $^{\!\! 1},$ Guyue DAI $^{\!\! 1},$ Huinan ZHENG $^{\!\! 1},$ Yuming WANG $^{\!\! 1},$ Shui WANG $^{\!\! 1}$

¹University of Science and Technology of China

ST03-D1-AM1-323C-003 | ST03-A019 (Invited)

Dynamics of Energetic Particles in the Inner Magnetosphere and Role of Wave-Particle Interactions

Ioannis DAGLIS1,2#+

¹University of Athens, ²National Observatory of Athens

ST03-D1-AM1-323C-004 | ST03-A009

Prompt Disappearance and Emergence of Radiation Belt Magnetosonic Waves Induced by Solar Wind Dynamic

Pressure Variations

Nigang LIU^{1‡+}, Zhenpeng SU¹
¹University of Science and Technology of China

ST03-D1-AM1-323C-005 | ST03-A034

A New Dayside Energetic Electron Boundary Layer Observed with MMS

Allison JAYNES¹⁸⁺, Drew TURNER², Trevor LEONARD³, Frederick WILDER³, Barry MAUK⁴, Joseph FENNELL², Tai PHAN⁵, Hong ZHAO³, Ian COHEN⁴, Daniel BAKER³, Robert ERGUN³

¹University of Iowa, ²The Aerospace Corporation, ³University of Colorado Boulder, ⁴The Johns Hopkins University Applied Physics Laboratory, ⁵University of California, Berkeley

ST03-D1-AM1-323C-006 | ST03-A002

Possible Particle Precipitation Induced by HF Radio Wave Heating

Xuemin ZHANG^{1#+}

¹China Earthquake Administration

ST03-D1-AM1-323C-007 | ST03-A001

Influence of Kappa Distributions on Whistler Mode Chorus

Wave Generation

Danny SUMMERS^{1#+}

¹Memorial University of Newfoundland

Time 11:00 - 12:30

Chair(s) Yoshiharu OMURA, Kyoto University

Yuto KATOH, Tohoku University

ST03-D1-AM2-323C-008 | ST03-A007

The Strong Role of Wave-Particle Interactions in the Earth's Radiation Belts

Daniel BAKER^{1#+}

¹University of Colorado Boulder

ST03-D1-AM2-323C-009 | ST03-A018

Strong Subpacket Structure in VLF Chorus Rising Tones and

its Effect on Radiation Belt Acceleration

John FOSTER
1#+, Philip ERICKSON¹, Yoshiharu OMURA², Craig KLETZING³

 $^1 Mass a chusetts$ Institute of Technology, $^2 Kyoto$ University, $^3 The$ University of Iowa

ST03-D1-AM2-323C-010 | ST03-A020

Nonlinear Wave Damping of Slightly Oblique Whistler Mode

Waves by Landau Resonance

Yikai HSIEH^{1#+}, Yoshiharu OMURA¹
¹Kyoto University

ST03-D1-AM2-323C-011 | ST03-A035

Linear and Nonlinear Mechanisms for Generating Chorus

Waves in Inner Magnetosphere

Xiangrong FU1#+, S. Peter GARY², Misa COWEE³, Dan WINSKE³, Geoffrey REEVES³

¹New Mexico Consortium, ²Space Science Institute, ³Los Alamos National Laboratory

ST03-D1-AM2-323C-012 | ST03-A022

Observation of Very Oblique Lower Band Chorus Generated

by Nonlinear Three-Wave Interaction

Shangchun TENG^{1#+}, Xin TAO¹

¹University of Science and Technology of China

Time 13:30 - 15:30

Chair(s) Yoshiharu OMURA, Kyoto University

ST03-D1-PM1-323C-013 | ST03-A030 (Invited)

The Role of Wave-Particle Interactions in the Dynamics of

Energetic Particles in the Inner Magnetosphere

Vania JORDANOVA $^{1\sharp +}$, Miles ENGEL 1 , Xiangrong FU 2 , Misa COWEE 1 , Mike HENDERSON 1 , Yiqun YU 3

¹Los Alamos National Laboratory, ²New Mexico Consortium, ³Beihang University

ST03-D1-PM1-323C-014 | ST03-A006 (Invited)

Generation of EMIC Waves in the Hydrogen, Helium and

Oxygen Cyclotron Bands by Fast Magnetosonic Shocks in the

Magnetosphere and in the Solar Wind

Kun-Han LEE1#+, L. C. LEE1

¹Academia Sinica

ST03-D1-PM1-323C-015 | ST03-A038

EMIC Waves Excited Near the Dayside Magnetopause

Yonghua LIU1#+

 $^{1}Polar\ Research\ Institute\ of\ China$

ST03-D1-PM1-323C-016 | ST03-A026

Traveling Ultralow-Frequency Waves and Their Influences

over Plasmaspheric Charged Particles

Xuzhi ZHOU^{1‡+}, Mu YANG¹, Qiugang ZONG¹, Longfei ZHANG¹, Robert RANKIN², Yongfu WANG¹

¹Peking University, ²University of Alberta

ST03-D1-PM1-323C-017 | ST03-A036

The Doppler Shift of ULF Waves in Low Earth Orbit

Jiwon CHOI1#+, Dong-Hun LEE1

¹Kyung Hee University

ST03-D1-PM1-323C-018 | ST03-A021

Super Solitary Waves and its Possible Implications on

Magnetospheric Plasma System

Steffy Sara VARGHESE1#, Suktisama GHOSH1+

¹Indian Institute of Geomagnetism

ST03-D1-PM1-323C-019 | ST03-A033

Excitation of an Electrostatic Instability Driven by Scattered

Electrons in the Development of Electron Firehose Instability

Sang-Yun LEE^{1#+}, Ensang LEE¹, Peter H. YOON²

¹Kyung Hee University, ²University of Maryland

ST06 / Cross-scale Kinetic Processes in Magnetospheric Boundary Layers

Mon - 04 Jun | MR304A

Time 13:30 - 15:30

Chair(s) Keizo FUJIMOTO, Beihang University

Dongsheng CAI, University of Tsukuba

ST06-D1-PM1-304A-001 | ST06-A005 (Invited)

Coupling Large and Small Scales, Fluid and Kinetic Models

Using the Energy Conserving Implicit Method ECSIM

Giovanni LAPENTA^{1#+}, Diego GONZALEZ-HERRERO¹, Elisabetta BOELLA¹, Kirit MAKWANA¹

¹KU Leuven

ST06-D1-PM1-304A-002 | ST06-A003 (Invited)

Formation of Dawn-Dusk Asymmetry in Earth's Magnetotail

Thin Current Sheet

San LU^{1,*}, Philip PRITCHETT¹, Vassilis ANGELOPOULOS¹, Anton ARTEMYEV¹

¹University of California, Los Angeles

ST06-D1-PM1-304A-003 | ST06-A010 (Invited)

Small-Scale Plasma Kinetic Features and Current Distribution

at the Dayside Magnetopause

Malcolm DUNLOP^{1,2±+}, Xiangcheng DONG¹, Tieyan WANG¹
¹Beihang University, ²Rutherford Appleton Laboratory

ST06-D1-PM1-304A-004 | ST06-A008

Oxygen Ions O+ Energized by Kinetic Alfvén Eigenmode

During Dipolarizations of Intense Substorms

Suping DUAN^{1‡+}, Lei DAI², Chi WANG², Zhaohai HE², Chunlin CAI², Yongcun ZHANG², Iannis DANDOURAS³, Henri REME³, Mats ANDRE⁴, Yuri KHOTYAINTSEV⁴

¹National Space Science Center, Chinese Academy of Sciences, ²Chinese Academy of Sciences, ³University of Toulouse, ⁴Swedish Institute of Space Physics

ST06-D1-PM1-304A-005 | ST06-A014

Cross-Scale Wave Modulation Between Whistler Mode Waves and Ion Scale Waves Observed in the Distant Magnetotail

Duo ZHAO1**, Suiyan FU¹, George PARKS², Qiugang ZONG¹, Zuyin PU¹

¹Peking University, ²University of California, Berkeley

ST06-D1-PM1-304A-006 | ST06-A002 (Invited)

The Structure of Low Mach Number, Low Beta,

Quasi-Perpendicular Collisionless Shocks

Lynn WILSON III^{1‡+}, Andriy KOVAL¹, Adam SZABO², Michael STEVENS³, Justin KASPER⁴, Cynthia CATTELL⁵, Vladimir KRASNOSELSKIKH⁶

¹NASA Goddard Space Flight Center, ²National Aeronautics and Space Administration, ³Harvard-Smithsonian Center for Astrophysics, ⁴University of Michigan, ⁵University of Minnesota, ⁶University of Orleans

ST06-D1-PM1-304A-007 | ST06-A009

Ion Heating at the Supercritical and Subcritical

Quasi-Perpendicular Bow Shocks

Hee-Eun KIM $^{1+}$, Ensang LEE $^{1+}$, George PARKS 2 , Naiguo LIN 2 , Khan-Hyuk KIM 1 , Dong-Hun LEE 1

¹Kyung Hee University, ²University of California, Berkeley

ST10-21 / Upper Atmosphere Responses to Lithosphere, Atmosphere and Anthropogenic Disturbances

Mon - 04 Jun | MR317A

Time 13:30 - 15:30

Chair(s) Yang-Yi SUN, China University of Geosciences (Wuhan)

Chi-Yen LIN, National Central University

ST10-21-D1-PM1-317A-001 | ST10-21-A002 (Invited)

Ionosphere Modification Before March 11 2011 Earthquake

Koichiro OYAMA1,2#+

¹National Cheng Kung University, ²Asia Space Environment Research Consortium ST10-21-D1-PM1-317A-002 | ST10-21-A005 (Invited)

Recent Power-Up of North Korean Missiles in 2017 from

Ionospheric Electron Depletion Observed by GNSS-TEC

Kosuke HEKI^{1#+}, Mayumi HASHIMOTO¹
¹Hokkaido University

ST10-21-D1-PM1-317A-003 | ST10-21-A001 (Invited)

Ground Motion Triggered by Typhoons

Chieh-Hung CHEN^{1‡+}, Li-Ching LIN²
¹China University of Geosciences, ²Academia Sinica

ST10-21-D1-PM1-317A-004 | ST10-21-A006

Ionospheric Bow Wave Induced by Moon Shadow Ship

Yang-Yi ${\rm SUN^{\scriptscriptstyle 1\sharp *}}$, Jann-Yenq (Tiger) LIU², Charles LIN³, Chi-Yen LIN²

¹China University of Geosciences, ²National Central University, ³National Cheng Kung University

ST10-21-D1-PM1-317A-005 | ST10-21-A013

FORMOSAT-3/COSMIC Radio Occultation Sounding

Ionospheric Electron Density Fluctuations Induced by the 11

March 2011 M9.0 Tohoku Earthquake and Tsunami

Jann-Yenq (Tiger) LIU^{1‡+}, Chao-Yen CHEN¹, Y. SUN², I-Te LEE^{1,3}
¹National Central University, ²Kyushu University, ³Central Weather
Bureau

ST10-21-D1-PM1-317A-006 | ST10-21-A008

Ionospheric Disturbances Associated with Volcanic Eruptions

Observed by GPS-TEC and HF Doppler Sounding

Aritsugu CHONAN¹, Hiroyuki NAKATA¹**, Hiroyo OHYA¹, Toshiaki TAKANO¹, Ichiro TOMIZAWA², Michi NISHIOKA³, Takuya TSUGAWA³

¹Chiba University, ²University of Electro-Communications, ³National Institute of Information and Communications Technology

ST10-21-D1-PM1-317A-007 | ST10-21-A009

Three-Dimensional Ionospheric Structure Imaged Using

Global Data Assimilation Specification

Chi-Yen LIN^{1#+}, Charles LIN², Jann-Yenq LIU¹

¹National Central University, ²National Cheng Kung University

ST10-21-D1-PM1-317A-008 | ST10-21-A014

Optimal Using of Cosmic Ionospheric Products: Quality

Statistics and Performance Analysis

Iurii CHERNIAK $^{1s+}$, Douglas HUNT 1 , Sergey SOKOLOVSKIY 1 , Irina ZAKHARENKOVA 2,3 , William SCHREINER 1

¹University Corporation for Atmospheric Research, ²University of Warmia and Mazury, ³Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation

ST11 / Use of Nano/microsatellites for Solar-terrestrial Studies

Mon - 04 Jun | MR304A

Time 08:30 - 10:30

Chair(s) Kyoung Wook MIN, Korea Advanced Institute of Science

& Technology

ST11-D1-AM1-304A-001 | ST11-A001 (Invited)

IDEASSat - A 3U CubeSat for Ionospheric Science and

Capacity Building

Loren CHANG¹\$+, Chi-Kuang CHAO¹, Amal CHANDRAN², C. L. KUO¹

¹National Central University, ²Nanyang Technological University

ST11-D1-AM1-304A-002 | ST11-A003

Toward International Collaboration of Satellite Constellation

to Study Ionosphere Disturbance Caused by Earthquake

Koichiro OYAMA1,2#+

¹National Cheng Kung University, ²Asia Space Environment Research Consortium

ST11-D1-AM1-304A-003 | ST11-A007

Need of Nano Satellite Constellation in Realization of

Coupling Roles Between Space Weather -

Plasmasphere-Troposphere

Devi MINAKSHI¹*, Ananda BARBARA¹, Anna DEPUEVA², Victor DEPUEV², Ya Yu RUZHIN²

 1 Gauhati University, 2 Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation

ST11-D1-AM1-304A-004 | ST11-A008

Virtual Reconfiguration of the Satellite Systems

Oleg BREKHOV1#+, Pavel ZHDANOV1

¹National Research University

ST11-D1-AM1-304A-005 | ST11-A009

The Aerocube-6 Mission a Mission to Study the Fine Structure

of Electron Precipitation

Berhard BLAKE1#+, Paul O'BRIEN1, Brian HARDY1

¹The Aerospace Corporation

ST11-D1-AM1-304A-006 | ST11-A014 (Invited)

Miniaturized Solar Extreme Ultraviolet Probe for Cubesat

Missions

Alfred CHEN¹**, Hui-Kuan FANG¹, Tsu-Wei TSAU¹, Wen-Hao CHEN¹, Jyh-Ching JUANG¹, Jiun-Jih MIAU¹
¹National Cheng Kung University

ST11-D1-AM1-304A-007 | ST11-A015 (Invited)

Hydrogen Geocorona Observed by PROCYON/LAICA

Shingo KAMEDA¹⁵⁺, Masaki KUWABARA², Naoya OSADA¹, Go MURAKAMI³, Kazuo YOSHIOKA², Ichiro YOSHIKAWA², Makoto TAGUCHI¹, Ryu FUNASE²

¹Rikkyo University, ²The University of Tokyo, ³Japan Aerospace Exploration Agency

Time 11:00 - 12:30

Chair(s) Koichiro OYAMA, National Cheng Kung University/Asia

Space Environment Research Consortium

Kyoung Wook MIN, Korea Advanced Institute of Science

& Technology

ST11-D1-AM2-304A-008 | ST11-A012

Mini Retarding Potential Analyzer for Cubesat Platforms

Hui-Kuan FANG $^{1s+}$, Ting-Chou WU 1 , Wen-Hao CHEN 1 , Alfred CHEN 1 , Koichiro OYAMA 1,2

¹National Cheng Kung University, ²Asia Space Environment Research Consortium

ST11-D1-AM2-304A-009 | ST11-A017 (Invited)

Micro-Satellite and its Constellation as a New Platform for

Space Remote-Sensing

Yukihiro TAKAHASHI1#+

¹Hokkaido University

ST11-D1-AM2-304A-010 | ST11-A019 (Invited)

Importance of Microsatellite Mission in the Field of Solar

Terrestrial Physics

Yoshifumi SAITO1#+

¹Japan Aerospace Exploration Agency

ST11-D1-AM2-304A-011 | ST11-A020

Nano-Lander and Nano-Orbiter Concept for the Small-Body

Mission Proposed by CAST

JIANGCHUAN HUANG¹#+, Jiangchuan HUANG², Dai TIAN¹, Fan GUO¹, Xiaoyu JIA¹, Tong WANG¹

¹Beijing Institute of Spacecraft System Engineering, ²China Academy of Space Technology

ST20 / Fundamental Physics of the Solar Corona and Inner Heliosphere

Mon - 04 Jun | MR317A

Time 08:30 - 10:30

Chair(s) Chadi SALEM, University of California at Berkeley

ST20-D1-AM1-317A-001 | ST20-A007

Observation of the Kelvin-Helmholtz Instability in the Solar

Prominence

Heesu YANG^{1*+}, Zhi XU², Eun-Kyung LIM¹, Sujin KIM³, Kyungsuk CHO¹, Jongchul Chae CHAE⁴, Kyuhyoun CHO⁴, Yeon-Han KIM¹, Kaifan JI²

¹Korea Astronomy and Space Science Institute, ²Yunnan Astronomical Observatory, ³Kyunghee University, ⁴Seoul National University

ST20-D1-AM1-317A-002 | ST20-A026

Torsional Motions, Oscillations, Waves and Rotational

Displacements in a Chromospheric Jet Formed Due to 3D

Magnetic Reconnection

Viktor FEDUN¹**, Jose GONZALEZ-AVILES², Gary VERTH¹, Francisco GUZMÁN³, Sergiy SHELYAG⁴, Stephane REGNIER⁴, Istvan BALLAI¹

¹The University of Sheffield, ²Universidad Nacional Autonoma de Mexico, ³Universidad Michoacana de San Nicolás de Hidalgo, ⁴University of Northumbria

ST20-D1-AM1-317A-003 | ST20-A024 (Invited)

Parametric Decay Instability and Slow Mode Damping in

Low-Beta Turbulent Solar Wind Plasma

Xiangrong FU $^{1z+}$, Hui LI 2 , Fan GUO 2 , Xiaocan LI 2 , Vadim ROYTERSHTEYN 3

¹New Mexico Consortium, ²Los Alamos National Laboratory, ³University of California at San Diego

ST20-D1-AM1-317A-004 | ST20-A019

Imprints of CMEs on Coronal Structures

Nathalia ALZATE^{1#}, Shadia HABBAL¹⁺

¹University of Hawaii

ST20-D1-AM1-317A-005 | ST20-A022

Speed Measurements of the Fine-Scale Features within CMEs

Hsiu-Shan YU $^{\!\scriptscriptstyle 1\sharp +}$, Bernard JACKSON¹, Andrew BUFFINGTON¹, Paul HICK¹

¹University of California, San Diego

ST20-D1-AM1-317A-006 | ST20-A023 (Invited)

Large-Scale Magnetic Funnels in the Solar Corona

Olga PANASENCO1#+

¹Advanced Heliophysics

ST20-D1-AM1-317A-007 | ST20-A020 (Invited)

Dynamics and Thermodynamics of the Corona from Total

Solar Eclipse Observations

Shadia HABBAL $^{1\pm}$, Adalbert DING 2 , Miloslav DRUCKMULLER 3 , Pavel STARHA 3 , Jana HODEROVA 3 , Enrico LANDI 4

¹University of Hawaii, ²Technische Universitaet, ³Brno University of Technology, ⁴University of Michigan

ST20-D1-AM1-317A-008 | ST20-A015

First Empirical Determination of the Fe 10+ and Fe 13+

Freeze-in Distances in the Solar Corona

Benjamin BOE¹^{‡+}, Shadia HABBAL¹, Miloslav DRUCKMULLER², Ehsan KOURKCHI¹, Enrico LANDI³, Adalbert DING⁴, Pavel STARHA²

¹University of Hawaii, ²Brno University of Technology, ³University of Michigan, ⁴Technische Universitaet

Time 11:00 - 12:30

Chair(s) Olga PANASENCO, Advanced Heliophysics Inc.

ST20-D1-AM2-317A-009 | ST20-A010 (Invited)

Solar Wind Suprathermal Electrons

Linghua WANG^{1#+}
¹Peking University

ST20-D1-AM2-317A-010 | ST20-A006

Wave-Mode Identification in Kinetic-Scale Turbulence in the

Solar Wind at Low and High Beta

Chadi SALEM¹[‡], Catherine LACOMBE², Kristopher KLEIN³, Elizabeth HANSON¹, John BONNELL¹, Olga ALEXANDROVA², Lorenzo MATTEINI², Daniel VERSCHAREN⁴

¹University of California, Berkeley, ²Observatoire de Paris, ³University of Michigan, ⁴University College London

ST20-D1-AM2-317A-011 | ST20-A001

An Approach to Measure the Scale-Dependent Dissipation

Rate Spectrum in Space Plasma Turbulence

Jiansen HE^{1#+}
¹Peking University

ST20-D1-AM2-317A-012 | ST20-A012

Onset and Nonlinear Evolution of Fast Reconnection:

Lundquist Number and Hall Effects

Chen SHI^{1‡+}, Anna TENERANI¹, Marco VELLI¹ ¹University of California, Los Angeles

ST20-D1-AM2-317A-013 | ST20-A016 (Invited)

Dependence of Ion-Scale Spectral Break on Plasma Beta in the

Solar Wind Turbulence

Xin WANG^{1‡+}, Chuanyi TU², Jiansen HE², Linghua WANG² ¹Beihang University, ²Peking University

ST20-D1-AM2-317A-014 | ST20-A005

Combining Radio Receivers and Electrostatic Analyzers for

Accurate Measurements of Solar Wind Electrons: Wind

Observations

Chadi SALEM¹#+, Marc PULUPA¹, Stuart BALE¹ ¹University of California, Berkeley

AS1 Poster Presentations

Mon - 04 Jun, 18:30 - 20:30 | Ballroom B

AS01-D1-EVE-P-005 | AS01-A002

A Nonlinear Prediction Scheme for Tropical Cyclone

Intensity

Xiao-Yan HUANG $^{\mbox{\tiny 1+}},$ Li HE $^{\mbox{\tiny 1+}},$ Ying HUANG $^{\mbox{\tiny 1}},$ Hua-Sheng ZHAO $^{\mbox{\tiny 1}}$

¹Guangxi Research Institute of Meteorological Disasters Mitigation

AS01-D1-EVE-P-006 | AS01-A003

A Genetic Neural Network Prediction Scheme for Tropical

Cyclone Intensity Change over Western North Pacific

Ying HUANG¹+, Hua-Sheng ZHAO¹+, Xiao-Yan HUANG¹, Li $\rm HE^1$

¹Guangxi Research Institute of Meteorological Disasters Mitigation

AS01-D1-EVE-P-007 | AS01-A004

Effectiveness of Different Urban Heat Island Mitigation

Methods and Their Regional Climate Impacts

Ning ZHANG1#+

¹Nanjing University

AS01-D1-EVE-P-008 | AS01-A005

Projected End-of-Century Spring Snowpack Loss over

California's Sierra Nevada by a High-Resolution

Downscaling Technique

Fengpeng SUN1#+

¹University of Missouri - Kansas City

AS01-D1-EVE-P-009 | AS01-A008

Future Climate Simulation for Oahu: A Dynamical

Downscaling Approach

Bo-Yi LU^{1‡+}, Pao-Shin CHU², Pay LIAM³
¹University of Hawaii at Manoa, ²University of Hawaii, ³National Central University

AS01-D1-EVE-P-010 | AS01-A011

Sensitivity Studies for the Cordex Central Asia Domain with

the COSMO-CLM Regional Climate Model

Emmanuele RUSSO^{1#+}, Ingo KIRCHNER¹, Ulrich CUBASCH¹
¹Free University of Berlin

AS01-D1-EVE-P-011 | AS01-A014

Projection of West African Summer Monsoon Rainfall in CORDEX Models

Akintomide Afolayan AKINSANOLA^{1#+}, Wen ZHOU¹
¹City University of Hong Kong

AS01-D1-EVE-P-012 | AS01-A015

Study on the Prediction of Frost Occurrence Using Machine Learning Methods

Yongseok KIM^{1‡+}, Myung-Pyo JUNG¹, Kyo-Moon SHIM¹, Kee-Kyung KANG¹, Eun-Suk JANG¹ ¹National Institute of Agricultural Sciences

AS04-D1-EVE-P-027 | AS04-A005

Constraining East Asian CO2 Emissions with GOSAT

Retrievals: Methods and Policy Implications

Changsub SHIM1#+

¹Korea Environment Institute

AS04-D1-EVE-P-028 | AS04-A006

Analysis of Regional Contribution to PM2.5 in Busan, Korea

Using CAMx PAST - May 2017 Case Study -

Woo-Sik JUNG^{1#+}, W. G. DO²

¹Inje University, ²Busan Metropolitan City Institute of Health and Environment

AS04-D1-EVE-P-029 | AS04-A012

Modeling Study of Sensitivity of Surface Ozone and Fine

Particulate Matter to Meteorology in China

Zhihao SHI¹, Jianlin HU¹*+, Jingyi LI¹, Qi YING², Hongliang ZHANG³

¹Nanjing University of Information Science & Technology, ²Texas A and M University, ³Louisiana State University

AS04-D1-EVE-P-030 | AS04-A019

Study of the Relationship Between Aerosols Diffusion and

Sedimentation Characteristics by Using Scanning LIDAR

and Micro-Sensors

Chih-Wei CHIANG¹*, Hong-Wei CHIANG¹, Huann-Ming CHOU¹, Tien-Ying CHUNG¹, Wen-Ching LIN¹
¹Kun Shan University

AS04-D1-EVE-P-031 | AS04-A024

Source Apportionment and Health Risks of Polycyclic

Aromatic Hydrocarbons (PAHs) in China

Fenglin HAN¹, Jie ZHANG², Jianlin HU³, Qi YING⁴, Hongliang ZHANG¹⁵+

¹Louisiana State University, ²Texas A&M University, ³Nanjing University of Information Science & Technology, ⁴Texas A and M University

AS04-D1-EVE-P-032 | AS04-A025

Dome Effect of Black Carbon and its Key Influencing

Factors: A One-Dimensional Modelling Study

Zilin WANG^{1#+}, Xin HUANG¹, Aijun DING¹
¹Nanjing University

AS04-D1-EVE-P-033 | AS04-A026

Characterization of Ambient Air Pollution and Health

Burden of Fine Particulate Matter in Nanjing

Dongyang NIE^{1‡+}, Mindong CHEN¹, Xinlei GE¹, Yun WU¹ Nanjing University of Information Science & Technology

AS04-D1-EVE-P-034 | AS04-A027

Characteristic Analysis of Precipitation and Wet Removal of

Aerosols in Chengdu

Chao WANG $^{1\sharp *}$, Tiangui XIAO 1 , Luo QIN 2 , Libin WU 2 , Xiaohang WEN 1 , Ding CHEN 1

¹Chengdu University of Information Technology, ²Wenjiang Meteorological Bureau

AS04-D1-EVE-P-035 | AS04-A030

Estimating Ground Level PM2.5 Concentrations and

Associated Health Risk Using Aerosol Optical Depth and

Meteorological Parameters in Indian Cities

Shovan SAHU¹⁺, Venkatesh CHEJARLA¹, Hao GUO², Rishikesh BHARTI¹, Hongliang ZHANG², Jianlin HU³, Qi YING⁴, Sri H. KOTA^{1‡}

¹Indian Institute of Technology Guwahati, ²Louisiana State University, ³Nanjing University of Information Science & Technology, ⁴Texas A and M University

AS04-D1-EVE-P-036 | AS04-A035

Guided Sampling for Volatile Organic Compounds During

Biomass Burning Events in Indochina

Chang-Feng OU-YANG^{1,*}, Chih-Chung CHANG², Jia-Lin WANG¹, Si-Chee TSAY³, Sheng-Hsiang WANG¹, Gang-Jei FAN¹, Kai-Hsien CHI⁴, Somporn CHANTARA⁵, Neng-Huei LIN¹

¹National Central University, ²Academia Sinica, ³NASA Goddard Space Flight Center, ⁴National Yang-Ming University, ⁵Chiang Mai University

AS04-D1-EVE-P-037 | AS04-A036

Urban Heat Island Affected by Fine Particles in Nanjing,

China

Hao WU^{1#+}, Tijian WANG¹
¹Nanjing University

AS04-D1-EVE-P-038 | AS04-A039

Regional Severe Particle Pollution and Associated

Synoptic Weather Patterns over Yangtze River Delta, China

Lei SHU1+, Tijian WANG1#, Min XIE1

¹Nanjing University

AS04-D1-EVE-P-039 | AS04-A040

Regional Source Apportionment of PM2.5 in North India

Using a Source-Oriented Regional Air Quality Model

Hao GUO¹⁺, Shovan SAHU², Sri H. KOTA², Jianlin HU³, Qi YING⁴, Wenye DENG⁵, Hongliang ZHANG^{1‡}

¹Louisiana State University, ²Indian Institute of Technology
Guwahati, ³Nanjing University of Information Science &

Technology, ⁴Texas A and M University, ⁵Xinjiang Academy of Environmental Protection Science

AS04-D1-EVE-P-040 | AS04-A042

Effects of Climate Change and Emission Scenarios on Air

Pollution in Louisiana

Hao GUO¹+, Hongliang ZHANG¹‡
¹Louisiana State University

AS04-D1-EVE-P-041 | AS04-A043

Analysis of Air Qualities Using OMI Satellite and Aircraft

Measurements over Korea

Hyeong-Ahn KWON^{1‡+}, Rokjin J. PARK¹, Gonzalo GONZÁLEZ ABAD², Christopher MILLER³, Kelly CHANCE² ¹Seoul National University, ²Harvard-Smithsonian Center for Astrophysics, ³Harvard University

AS04-D1-EVE-P-042 | AS04-A044

Simulation of Atmospheric Transport of Hazardous

Chemicals from Tianjin Explosion Accident with Flexpart

Hyuckjae LEE¹⁺, Myong-In LEE^{1‡}, Chang-Keun SONG¹
¹Ulsan National Institute of Science and Technology

AS04-D1-EVE-P-043 | AS04-A045

Spatiotemporal Variability of Chemicals and Sources of

Ambient Fine Particles in Korea

Jongbae HEO^{1#+}, Seung-Muk YI¹
¹Seoul National University

AS04-D1-EVE-P-044 | AS04-A051

Heavy Haze Formation During Wintertime in the

Guanzhong Basin, China: A Case Study

Xia LI1,2+, Guohui LI3#, Junji CAO3

¹Institute of Earth Environment,Chinese Academy of Sciences, ²University of Chinese Academy of Sciences, ³Chinese Academy of Sciences

AS04-D1-EVE-P-045 | AS04-A056

Applying the Water Mist Washing Technology to Improve

the Loss of Semi-Volatile Species of the in Situ Aerosol

Composition Measurement

Yu-Chieh CHEN¹⁺, Shih-Yu CHANG^{1#}
¹Chung Shan Medical University

AS04-D1-EVE-P-046 | AS04-A057

The Investigation of Three-Dimensional Characteristics of

Inorganic Soluble Ions in an Urban Micro-Environment

Yu-Chieh CHEN¹⁺, Chih-Chung CHANG², Wei-Nai CHEN², Yu-Chen TSAI¹, Lien-En HUANG¹, Ya-Pang JHUANG¹, Shih-Yu CHANG^{1‡}

¹Chung Shan Medical University, ²Academia Sinica

AS04-D1-EVE-P-047 | AS04-A058

Seasonal Changes in Surface Ozone over South Korea

Hyun-Chae JUNG¹⁺, Byung-Kwon MOON^{1#}
¹Chonbuk National University

AS04-D1-EVE-P-048 | AS04-A061

Reassessing Ozone Incremental Reactivity Scales Using VOC

Data from China

Qi YING^{1‡+}, Yuan CHEN², Jianlin HU³, Hongliang ZHANG⁴
¹Texas A and M University, ²Texas A&M University, ³Nanjing
University of Information Science & Technology, ⁴Louisiana State
University

AS04-D1-EVE-P-049 | AS04-A063

Investigation on the Nonlinear Response of Air Pollution to

Percursor Emissions Under Heavy Pollution Condition

Jia XING^{1#+}, Dian DING¹
¹Tsinghua University

AS04-D1-EVE-P-050 | AS04-A065

Characteristics of Carcinogenic Hazard Air Pollutants

Emitted from Waste Energy Power Plants in South Korea

Yumi KIM1#+

¹Korea Environment Institute

AS04-D1-EVE-P-051 | AS04-A066

Chemical Composition and Sources to Rain Water in

North-East India

Rajyalakshmi GARAGA¹, Shovan SAHU¹, Sri H. KOTA^{1‡+}
¹Indian Institute of Technology Guwahati

AS04-D1-EVE-P-052 | AS04-A068

Study on Monitoring of Black Carbon Concentration in a

Forest Environment

Tsung Ming TSAO^{1*+}, Chiang WEI¹, Ching-Peng CHENG¹
¹National Taiwan University

AS04-D1-EVE-P-053 | AS04-A069

Seasonal Variation of Negative Air Ion Concentration in a

Forest Environment

Ching-Peng CHENG^{1‡+}, Tsung Ming TSAO¹, Chiang WEI¹
¹National Taiwan University

AS04-D1-EVE-P-054 | AS04-A074

Influences of Sea/Land Breeze on the Pollutant Transport

Between the Coastal Urban and Inland Areas

Lien-En HUANG¹*, Ya-Pang JHUANG¹, Yu-Chieh CHEN¹, Yu-Chen TSAI¹, Charles C.K. CHOU², Shih-Yu CHANG¹* ¹Chung Shan Medical University, ²Academia Sinica

AS04-D1-EVE-P-055 | AS04-A077

Ambient PM2.5 Levels and Health Risks in Beijing, China

Xiaohong $XU^{1\#+}$

¹University of Windsor

AS05-D1-EVE-P-034 | AS05-A005

Statistical Characteristics for Temporal and Spatial

Distribution of Regional Rainstorm Processes over the Area

East of 95E in China During 1981-2015

Ruoyun NIU1#+

¹National Meteorological Center

AS05-D1-EVE-P-035 | AS05-A006

Mesoscale Characteristic Analysis on a Short-Time Heavy

Rain Under Northwest Flow in Urumqi

Lianmei YANG1#+

¹China Meteorological Administration

AS05-D1-EVE-P-036 | AS05-A007

Analysis on the Causes of an Extreme Torrential Rainstorm

in the West of Xinjiang

Yong ZENG1#+

¹Institute of Desert Meteorology,China Meteorological Administration

AS05-D1-EVE-P-037 | AS05-A021

Structure Analysis of Heavy Precipitation over the Eastern

Slope of the Tibet Plateau Based on TRMM Data

Baojian WANG1#+

¹Lanzhou Central Meteorological Observatory

AS05-D1-EVE-P-038 | AS05-A027

Dynamic State Index and Precipitation

Ines LANGER^{1#+}, Thomas SCHARTNER¹, Peter NEVIR¹

¹Free University of Berlin

AS05-D1-EVE-P-039 | AS05-A029

Observational Analysis of a Record-Breaking

Rain-Producing Convective Storm Influencing Guangzhou

During SCMREX-2017

Yali LUO1#, Ruoyun MA1+, Mingxuan CHEN2, Da-Lin

ZHANG3, Mengwen WU1

¹Chinese Academy of Meteorological Sciences, ²Institute of Urban

Meteorology, ³University of Maryland

AS05-D1-EVE-P-040 | AS05-A030

Synoptic Analysis of Extreme Hourly Precipitation in China Mainland and Taiwan

Mengwen WU^{1*+}, Yali LUO¹, Chun-Chieh WU²
¹Chinese Academy of Meteorological Sciences, ²National Taiwan University

AS05-D1-EVE-P-041 | AS05-A035

An Extreme Rainfall Event in Coastal South China During

SCMREX-2014: Roles of Rainband and Echo Trainings

Xi LIU $^{\!\scriptscriptstyle 1+}\!$, Yali LUO $^{\!\scriptscriptstyle 2\#}\!$, Zhaoyong GUAN $^{\!\scriptscriptstyle 1}\!$, Da-Lin ZHANG $^{\!\scriptscriptstyle 3}\!$, Yangruixue CHEN $^{\!\scriptscriptstyle 2}\!$

 $^1Nanjing\ University\ of\ Information\ Science\ \&\ Technology,\ ^2Chinese\ Academy\ of\ Meteorological\ Sciences,\ ^3University\ of\ Maryland$

AS05-D1-EVE-P-042 | AS05-A036

Features of Extreme Hourly Rainfall over South China

During Pre-Summer Rainy Season of 2011-2017

Yangruixue CHEN¹+, Yali LUO¹+, Zhenghui LI¹¹Chinese Academy of Meteorological Sciences

AS05-D1-EVE-P-043 | AS05-A040

Sensitivity Study of WRF Numerical Modeling for

Forecasting Heavy Rainfall in Sri Lanka

Channa RODRIGO¹⁺, Sangil KIM^{2,3+}, Yongkuk KIM⁴
¹Hankuk University of Foregin Studies, ²Hankuk University of Foreign Studies, ³Pusan National University, ⁴Kyoungbuk University

AS05-D1-EVE-P-044 | AS05-A056

Simulating the IPOD, East Asian Summer Monsoon and

Their Relationships in CMIP5

Miao YU $^{1\sharp\star}$, Jianping LI 1 , Fei ZHENG 2 , Xiaofan WANG 3 , Jiayu ZHENG 4

¹Beijing Normal University, ²Chinese Academy of Sciences, ³China Meteorological Administration, ⁴Second Institute of Oceanography

AS05-D1-EVE-P-045 | AS05-A057

Sensitivity Study of WRF Simulation to Alternative Grid Spacing and Parametrization for Wet and Dry Seasons over Tanzania

Abubakar Omary LUNGO¹⁺, Sangil KIM^{2,3‡}, Il Hyo JUNG³
¹Tanzania Meteorological Agency, ²Hankuk University of Foreign
Studies, ³Pusan National University

AS05-D1-EVE-P-046 | AS05-A060

Numerical Simulation of Guangzhou Extreme Rainfall Event on 7 May 2017 Based on WRF-EnKF

Hui XIAO1#+

¹China Meteorological Administration

AS05-D1-EVE-P-047 | AS05-A061

Characteristics of the Raindrop Size Distribution in Two Squall Lines Measured by Two-Dimensional Video

Disdrometer at Guangdong

Lu FENG1#+

¹Guangzhou Institute of Tropical and Marine Meteorology

AS05-D1-EVE-P-048 | AS05-A064

Structures of Fine Scale Conveyor Belts in a Simulated

Idealized Extratropical Cyclone

Yi ZHANG1#+

¹Nanjing University

AS05-D1-EVE-P-049 | AS05-A069

Influence of Topography on Annual Maximum Heavy

Rainfalls over Upper Catchments in Japan

Yui TAKEHARA^{1#+}, Tomohito J. YAMADA¹
¹Hokkaido University

AS05-D1-EVE-P-050 | AS05-A070

Operational Radar Data Assimilation for Short-Range

Quantitative Precipitation Forecasting

Ya-Ting TSAI^{1‡+}, Siou-Ying JIANG^{1,2}, Jing-Shan HONG¹, Yan-Ming SHAO¹

¹Central Weather Bureau, ²National Taiwan University

AS05-D1-EVE-P-051 | AS05-A071

Maintenance Conditions of Back-Building MCS in a

Numerical Simulation of a Heavy Rainfall in July 2010 in

Western Japan

Ryuji YOSHIDA^{1,2‡}*, Seiya NISHIZAWA^{1,3}, Hisashi YASHIRO¹, Sachiho ADACHI⁴, Tsuyoshi YAMAURA¹, Hirofumi TOMITA¹, Yoshiyuki KAJIKAWA¹

¹RIKEN Advanced Institute for Computational Science, ²Kobe University, ³Japan Meteorological Agency, ⁴RIKEN Center for Computational Science

AS05-D1-EVE-P-052 | AS05-A073

Convective Instability of Slanted Convection in the East

Asian Summer Monsoon

Hyeon-Seok DO^{1#+}, Hosun RYU¹, Joowan KIM¹
¹Kongju National University

AS05-D1-EVE-P-053 | AS05-A075

Blending with Radar Nowcasting and Numerical Prediction

Dong-In LEE1#+, Yunhee KANG1, Yura KIM1

¹Pukyong National University

AS05-D1-EVE-P-054 | AS05-A078

Application of the Multi-Scale Blending Scheme on

Continuous Cycling Radar Data Assimilation

Siou-Ying $\,\,$ JIANG^{1,2\#+}, Ya-Ting TSAY^1, Jing-Shan HONG^1, Jong-Dao JOU^2 $\,\,$

¹Central Weather Bureau, ²National Taiwan University

AS06-D1-EVE-P-015 | AS06-A002

A WRF Modeling Study of Depositional Growth of Ice

Crystal During the Landfall of Typhoon Fitow (2013)

Xiaofan LI1#+

¹Zhejiang University

AS06-D1-EVE-P-016 | AS06-A007

Moisture and Energy Transports by Tropical Convection:

Contrast Between Deep and Shallow Modes

Yi-Chien CHEN1#+, Jia-Yuh YU1

¹National Central University

AS06-D1-EVE-P-017 | AS06-A012

Sensitivity of US Summer Rainfall to the Selection of

Cumulus Parameterization Schemes in NASA-Unified WRF

Simulation: Overall Characteristics and Diurnal Cycle

Takamichi IGUCHI^{1‡}, Wei-Kuo TAO²⁺, Toshihisa MATSUI^{1,2}
¹University of Maryland, ²NASA Goddard Space Flight Center

AS06-D1-EVE-P-018 | AS06-A016

Impacts of Including Rain-Evaporative Cooling in the Initial

Conditions on the Prediction of a Coastal Heavy Rainfall

Event During TiMREX

Chuan-Chi TU^{1‡+}, Yi-Leng CHEN², Shu-Ya CHEN¹, Bill KUO³, Pay-Liam LIN¹

¹National Central University, ²University of Hawaii at Manoa, ³University Corporation for Atmospheric Research

AS06-D1-EVE-P-019 | AS06-A021

Convective Organization and Moisture Buildup over South

China Sea: A Key Feature for Summer Monsoon Onset

Wei-Ting CHEN $^{1\pm}$, Wei-Ming TSAI 2 , Chien-Ming WU 1 , Kuan-Ting KUO 1 , Peng-Jen CHEN 1

¹National Taiwan University, ²University of Miami

AS06-D1-EVE-P-020 | AS06-A022

Using Connected-Labeling Algorithm to Track the Evolution

of Deep Convection Systems

Wei-Ting $HSIAO^{1z+}$, $Min-Duan\ TZENG^1$, $Jen-Ping\ CHEN^1$, $Tzu-Chin\ TSAI^1$

¹National Taiwan University

AS06-D1-EVE-P-021 | AS06-A024

The Role of Initial Cloud Condensation Nuclei

Concentration in Hail

Xiaofei LI^{1#+}, Qinghong ZHANG¹
¹Peking University

AS06-D1-EVE-P-022 | AS06-A025

Numerical Investigation of Offshore Convective Lines Along

the Eastern Coast of Taiwan

Pay-Liam LIN^{1#+}, Muqun HUANG¹
¹National Central University

AS06-D1-EVE-P-023 | AS06-A027

Impacts of Cumulus Parameterizations on MJO Simulations

with the CWBGFS Model

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AS06-D1-EVE-P-024 | AS06-A032

Thermodynamically and Dynamically Consistent

Atmospheric Forcing Data over the South China

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AS07-D1-EVE-P-019 | AS07-A002

Relative Contributions of Synoptic and Intraseasonal

Variations to Strong Cold Events over Eastern China

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AS07-D1-EVE-P-020 | AS07-A003

The Concurrent Variations of East Asian Summer Monsoon

and Australian Winter Monsoon

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AS07-D1-EVE-P-021 | AS07-A007

Comparison of Moisture Transport Between Siberia and

Northeast Asia on Interannual Time Scale

Jinling PIAO¹⁺, Wen CHEN^{1‡}, Shangfeng CHEN¹
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AS07-D1-EVE-P-022 | AS07-A008

Modulation Effect of East Asian Winter Monsoon on El

Niño-Related Rainfall Anomalies in Southeastern China

Tianjiao MA¹⁺, Wen CHEN^{1‡}, Juan FENG¹, Jinling PIAO¹
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AS07-D1-EVE-P-023 | AS07-A011

Distinguishing Interannual Variations of the Northern and Southern Components of the East Asian Winter Monsoon

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AS07-D1-EVE-P-024 | AS07-A012

Impacts of Two Wave Trains on Intraseasonal Variability over East Asia in Boreal Winter

Yang JIAO^{1#+}, Renguang WU¹ **Chinese Academy of Sciences

AS07-D1-EVE-P-025 | AS07-A013

Climatological Characteristics of the Synoptic Changes Accompanying South China Sea Summer Monsoon Withdrawal

Peng HU¹⁺, Wen CHEN^{1‡}, Debashis NATH¹
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AS07-D1-EVE-P-026 | AS07-A015

The Recovery of East Asian Winter Monsoon and its Link with Arctic Amplification

Sai WANG¹⁺, Wen CHEN^{1‡}, Debashis NATH², Peng HU¹
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AS07-D1-EVE-P-027 | AS07-A019

Relative Contribution of Intra-Seasonal and Extra-Seasonal Components of Tropospheric Temperature to the Interdecadal Change of the South China Sea Summer Monsoon Onset

Maoqiu JIAN^{1#+}

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AS07-D1-EVE-P-028 | AS07-A020

Inter-Annual Variability and Potential Drivers of Late/Early Rainy Season Withdrawal in Monsoon Transitional Zone of China

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AS07-D1-EVE-P-029 | AS07-A021

Interdecadal Change in the Relationship Between the Tropical Easterly Jet and Tropical SST Anomalies During Boreal Summer

Sihua HUANG 1** , Zhiping WEN 1,2 , Zesheng CHEN 3 , Ruidan CHEN 1 , Xiuzhen LI 1 , Yuanyuan GUO 1

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AS07-D1-EVE-P-030 | AS07-A024

The Interdecadal Change in the Intensity of Interannual Variation of Spring Precipitation over Southern China and its Relationship with Sea Surface Temperature Anomaly Yunting QIAO¹⁸⁺, Chao XU¹
¹Sun Yat-sen University

AS07-D1-EVE-P-031 | AS07-A027

Contrasting Temperature Response to ENSO over East Asia and North America in Early and Later Winter

Lijuan WANG¹⁺, Lin WANG², Wen CHEN^{2‡}

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AS07-D1-EVE-P-032 | AS07-A033

Roles of Tropical SST Patterns During Two Types of ENSO in Modulating Wintertime Rainfall over Southern China Kang XU^{1‡+}, Qing-Lan HUANG², Francis TAM³, Weiqiang WANG¹, Sheng CHEN¹, Congwen ZHU⁴
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¹Chinese Academy of Sciences, ²Jiangmen Meteorological Service ³The Chinese University of Hong Kong, ⁴Chinese Academy of Meteorological Sciences

AS07-D1-EVE-P-033 | AS07-A036

Climatology and Spatio-Temporal Variability of Wintertime Total and Extreme Rainfall in Thailand During 1970-2012

Patama SINGHRUCK^{1±+}, Atsamon LIMSAKUL², Sittichai PIMONSREE³, Sirapong SOOKTAWEE^{2,4}, Lin WANG⁵
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AS07-D1-EVE-P-034 | AS07-A042

Technology Thonburi, 5Chinese Academy of Sciences

The Sea Surface Temperature Configuration of Greenland Sea-Subpolar Region of North Atlantic and the Summer Rainfall Anomaly in Low-Latitude Highlands of China Yu Chao DING¹⁺, Jian WANG¹, Jie CAO¹⁺

¹Yunnan University

AS07-D1-EVE-P-035 | AS07-A043

Comparing Study on the Seasonal Variability of Tropical and Subtropical Precipitation over East Asian Monsoon Area Yaodong LI¹³⁺, Xiaokang SHI¹ ¹Beijing Aviation Meteorological Institute

AS18-02-OS-D1-EVE-P-009 | AS18-02-OS-A006

Seasonal Forecasting of Malaria Cases over South Africa

Using Downscaled SINTEX-F Forecasts

Venkata Ratnam JAYANTHI¹⁸⁺, Takayoshi IKEDA¹, Adrian TOMPKINS², Takeshi DOI¹, Swadhin BEHERA¹
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¹Japan Agency for Marme-Earth Science and Technology, ²The Abdus Salam International Centre for Theoretical Physics (ICTP) AS18-02-OS-D1-EVE-P-010 | AS18-02-OS-A008

Impact of Cumulus Parameterization on the Simulation of

Arabian Peninsula Winter Rainfall

Raju ATTADA1+, Ravi Kumar KUNCHALA1, Hariprasad DASARI1, Omar KNIO1, Ibrahim HOTEIT1# ¹King Abdullah University of Science and Technology

AS18-02-OS-D1-EVE-P-011 | AS18-02-OS-A009

Simulation of Long Term Change in Summertime Surface

Air Temperature over Tokyo Metropolitan Area

Masayuki HARA1#+

¹Center for Environmental Science in Saitama

AS18-02-OS-D1-EVE-P-012 | AS18-02-OS-A018

Climate Information-based Water-agriculture Risk

Assessment in Thailand

Boksoon MYOUNG1#+

¹Asia-Pacific Economic Cooperation Climate Center

AS18-02-OS-D1-EVE-P-013 | AS18-02-OS-A019

Climatic Shift of the East Asian Winter Monsoon as a

Mechanism of Extreme Cold Weather in Korea Peninsula

Jae-Seung YOON^{1#+}, Il-Ung CHUNG¹, Sang-Hye SHIN¹ ¹Gangneung-Wonju National University

AS18-02-OS-D1-EVE-P-014 | AS18-02-OS-A022

Is the Initiation Date for Temperature Extremes over China

Becoming Earlier in Last 50 Years?

Yang YANG1+, Zhaohui LIN1#

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AS21-D1-EVE-P-011 | AS21-A005

Prediction for Sub-Seasonal Precipitation Using BCC_CSM

over Eastern China in Summer Monsoon Season

Yaocun ZHANG1#+

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AS21-D1-EVE-P-012 | AS21-A006

The Characteristic of Wave Packet Propagation in Abnormal

Precipitation in Jianghuai Region

Tiangui XIAO1+, Ronghua JIN2, Chao WANG1#, Wan LI1,

Xiaoqing LIU1

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Meterological Administration

AS21-D1-EVE-P-013 | AS21-A007

Development of Application Method of Subseasonal and

Seasonal Forecast Data for Rice Yield Prediction in South

Korea

Yonghee SHIN1#+, Wooseop LEE1, Hyunju LEE1 ¹APEC Climate Center

AS21-D1-EVE-P-014 | AS21-A009

Subseasonal Temperature Prediction over East Asia Using a

Composite-Based Phase Model of Atmospheric

Teleconnections

Changhyun YOO1#+, Nathaniel JOHNSON2, Chueh-Hsin CHANG3, Steven FELDSTEIN4, Young-Ha KIM1

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AS21-D1-EVE-P-015 | AS21-A015

Forecast Verification of Pacific/North American (PNA)

Teleconnection on Sub-Seasonal to Seasonal Timescales

Akio YAMAGAMI1, Mio MATSUEDA1#+

¹University of Tsukuba

AS23-D1-EVE-P-016 | AS23-A002

Assessment of Cumulus Convective Parameterization for

Simulating the Diurnal Cycle of Mei-Yu Rainfall over

Eastern China

Xi LU1#+, Yuexing CAI1, Guixing CHEN1, Song YANG1

¹Sun Yat-sen University

AS23-D1-EVE-P-017 | AS23-A003

An Analysis of Temperature Reduction from Stream

Restoration

Woo-Sik JUNG1#+, W. G. DO2

¹Inje University, ²Busan Metropolitan City Institute of Health and

Environment

AS23-D1-EVE-P-018 | AS23-A011

Variability of Extreme Temperatures in South Korea Using

Generalized Extreme Value Distributions

Min-Ho KWON1#+, Kang-Jin LEE1

¹Korea Institute of Ocean Science & Technology

AS23-D1-EVE-P-019 | AS23-A017

The Taiwan WRF Ensemble Prediction System: Performance

Results on 15 Km Resolution

Chih-Hsin LI1#+, Judith BERNER2, Jing-Shan HONG1,

Chin-Tzu FONG¹, Bill KUO³

¹Central Weather Bureau, ²National Center for Atmospheric Research, ³University Corporation for Atmospheric Research

AS24-25-D1-EVE-P-014 | AS24-25-A002

Water-Soluble Nitrogen in Dry Deposition in a Remote

Island (Dongsha) of the Northern South China Sea

Hung-Yu CHEN1#+, Shih-Zhe HUANG1

¹National Taiwan Ocean University

AS24-25-D1-EVE-P-015 | AS24-25-A004

Use of Stable Isotopic Signatures to Reexamine Historical Changes of Atmospheric Mercury and Lead Deposition over the Himalayas

Jie HUANG1#+

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AS24-25-D1-EVE-P-016 | AS24-25-A013

Characteristics of Trace Metals During Severe Haze Events in Seoul, South Korea

Yumi KIM1#+

¹Korea Environment Institute

AS26-BG-D1-EVE-P-008 | AS26-BG-A003 (Invited)

Impact of Plant Functional Type Change on Isoprene Emission and the Implication for Surface Ozone Simulation over Korea

Hee Soo JANG^{1‡+}, Rokjin J. PARK¹, Hyun Kook KIM², Alex GUENTHER³, Donald BLAKE³, Andrew WEINHEIMER⁴
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AS26-BG-D1-EVE-P-009 | AS26-BG-A005 (Invited)

Contribution of Natural Emissions to Ozone Photochemistry

Louisa EMMONS^{1‡+}, Gabriele PFISTER¹, Benjamin GAUBERT¹, Rebecca BUCHHOLZ¹, Christoph KNOTE², Alex GUENTHER³
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University of Munich, ³University of California, Irvine

AS26-BG-D1-EVE-P-010 | AS26-BG-A008

O3 and PAN enhancement in Taehwa Research Forest

During KORUS-AQ

Rhee HO-JUN¹+, Junsu GIL¹, Meehye LEE¹‡, Lee GANGWOONG², Saewung KIM³, Jun-Young AHN⁴, youngjae LEE⁴

¹Korea University, ²Hankuk University of Foreign Studies, ³University of California, Irvine, ⁴National Institute of Environmental Research

AS26-BG-D1-EVE-P-011 | AS26-BG-A014

Vegetation and Air Pollution Contribution to Aerosol

Formation Observed with a PAM (Potential Aerosol Mass)

Reactor at Taehwa Research Forest

Xiaona SHANG¹, Meehye LEE¹‡+, Eunha KANG², William BRUNE³, Hakyoung KIM⁴, Hyun-Seok KIM⁵, Hyunju PARK6¹Korea University, ²Suwon Research Institute, ³Pennsylvania State University, ⁴Greenhouse Gas Inventory & Research Center of Korea, ⁵Seoul National University, ⁶National Institute of Environmental Research

AS30-D1-EVE-P-013 | AS30-A002

Observations of Dramatic Enhancements to the Mesospheric

K Layer

Jing JIAO1#+

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AS30-D1-EVE-P-014 | AS30-A019

Observations of SuperDARN Global Tides in the MLT and

Their Response to Sudden Stratospheric Warming Events

Robert HIBBINS^{1,2#}, Patrick ESPY^{1,2}, Yvan ORSOLINI³, Varavut LIMPASUVAN⁴

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AS32-D1-EVE-P-014 | AS32-A001

Diagnose of Aircraft Turbulence Based on High-Resolution

Numerical Model Products

Yaodong LI^{1#+}, Xiaokang SHI¹
¹Beijing Aviation Meteorological Institute

AS32-D1-EVE-P-015 | AS32-A005

Automatic Detection of Low-Altitude Wind Shear with Lidar

at Lanzhou Airport, China

lanqian LI¹⁺, Aimei SHAO^{1#}
¹Lanzhou University

AS32-D1-EVE-P-016 | AS32-A007

Verification of Airport Weather Prediction System in

Forecasting Surface Weather Variables at Jeju International

Airport, South Korea

Hee-Wook CHOI^{1#}, Kim GEUN-HOI², Prasanna VENKATRAMAN¹, Lee YOUNG-GON¹, Hyung-Mi KIM¹, Baek-Jo KIM³

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AS32-D1-EVE-P-017 | AS32-A015

Verification of Low Cloud Prediction of Unified Model at

KMA for Aviation Weather Support

Yongjun AHN^{1‡+}, Jiwon JANG¹, Ki-Young KIM¹
¹4D Solution Co., Ltd

AS32-D1-EVE-P-018 | AS32-A022

Validation of the AMI Atmospheric Profile Retrieval

Algorithm Using the Himawari-8 Data

Tae-Myung KIM¹⁺, Su Jeong LEE¹, Myoung-Hwan AHN^{1‡}
¹Ewha Womans University

AS33-D1-EVE-P-017 | AS33-A003

A Study on Evaluation of Collection Efficiencies for

Raindrops Captured by Videosondes in Clouds

Mariko OGAWA^{1#+}, Satoru OISHI^{1,2}, Kenji SUZUKI³, Katsuhiro NAKAGAWA⁴, Kosei YAMAGUCHI⁵, Eiichi NAKAKITA⁵

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AS33-D1-EVE-P-018 | AS33-A004

A Study on Estimation of Vorticity Using Three-Dimentional Variational Method

Kosuke OKAWA¹**, Mariko OGAWA¹, Satoru OISHI¹.²
¹Kobe University, ²RIKEN Advanced Institute for Computational
Science

AS33-D1-EVE-P-019 | AS33-A008

Applying Method of Predicted Precipitation for Localized Torrential Rainfall Involving Displacement Errors to Flood

Simulation of Urban Small-Scale River

Kazuya TAKAMI $^{1 \# *}$, Takaaki FUKUHARA 1 , Yasushi KAMATA 1 , Ryohei KATO 2

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AS33-D1-EVE-P-020 | AS33-A009

Real-Time Flood Hazard Mapping System for Localized Torrential Rainfall in Urban Railway Area

Ryo MANOME^{1#+}, Naoyuki OTA¹, Satoshi WATANABE¹
¹Railway Technical Research Institute

AS33-D1-EVE-P-021 | AS33-A010

Phased Array Weather Radar Observation of a Single-Cell

Storm on 7 August 2015 in the Kinki Region, Japan

Yukie MORODA^{1,2#}, Shinsuke SATOH¹, Katsuhiro NAKAGAWA¹, Tomoo USHIO³, Shingo SHIMIZU⁴, Kazuhisa TSUBOKI²

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AS33-D1-EVE-P-022 | AS33-A012

Cloud Development Analysis Based on Ka-Band Radar and

Multi-Sensor Observation

Tomohiro NIIBO^{1#+}, Eiichi NAKAKITA¹, Kosei YAMAGUCHI¹, Tadayasu OHIGASHI¹, Taro SHINODA², Kazuhisa TSUBOKI² ¹Kyoto University, ²Nagoya University

AS33-D1-EVE-P-023 | AS33-A023

Development of a High-Resolution 1.3 GHz Wind Profiler

Radaı

Masayuki K. YAMAMOTO^{1#}, Seiji KAWAMURA¹, Koji NISHIMURA², Shigeo SUGITANI¹, Jun AMAGAI¹, Kosei YAMAGUCHI³, Eiichi NAKAKITA³

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AS33-D1-EVE-P-024 | AS33-A024

Prediction Experiment of Guerrilla Heavy Rainfall by

Assimilation of Cloud Data at Early Stage of Cumulonimbus

Development

Kazuki UESHIMA^{1#+}, Kosei YAMAGUCHI¹, Yosuke HORIIKE¹, Eiichi NAKAKITA¹
¹Kyoto University

AS33-D1-EVE-P-025 | AS33-A026

Weather Radar Echo Motion Estimation and Nowcasting

Sang Jin KIM¹+, Byung Hyuk KWON¹+, Bernard CAMPISTRON², Parksa KIM¹, Min-Seong KIM¹ ¹Pukyong National University, ²Centre de Recherches Atmospheriques

AS33-D1-EVE-P-026 | AS33-A028

Composite Microphysical Structures of Convective Clouds

by Okinawa Videosonde Observations

Narumi YOKOYA^{1‡+}, Kenji SUZUKI¹, Aritoshi MASUDA², Eiichi NAKAKITA³

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AS33-D1-EVE-P-027 | AS33-A033

The Investigation of Relationship Between Rapid Scan

Observation of Himawari-8 Data and Radar Estimated

Cumulus Life Stage by Using RDCA Concept

Wendi HARJUPA¹**, Eiichi NAKAKITA¹, Yasuhiko SUMIDA², Aritoshi MASUDA³

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AS38-D1-EVE-P-012 | AS38-A001

Influences of Large-Scale Circulation on Intra-Seasonal

Variation of Extreme Cold Events over South Korea

Taewon PARK^{1#+}, Jee-Hoon JEONG¹, Ja-Hyun CHOI¹
¹Chonnam National University

AS38-D1-EVE-P-013 | AS38-A015

Examination of Global Zonal Mean Atmospheric Circulation

Response to Polar Thermal Forcing

Licheng GENG1#+

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AS38-D1-EVE-P-014 | AS38-A019

On the Linkage Between Arctic Sea Ice and Mid-Latitude

Weather: The Situation in East Asia

Sen GU¹, Yang ZHANG^{1#+}, Qigang WU¹
¹Nanjing University

AS38-D1-EVE-P-015 | AS38-A021

Weak Stratospheric Polar Vortex Events Modulated by the Arctic Sea Ice Loss

Kazuhira HOSHI^{1#+}, Jinro UKITA¹, Meiji HONDA¹, Tetsu NAKAMURA², Koji YAMAZAKI², Yasunobu MIYOSHI³, Ralf IAISER⁴

¹Niigata University, ²Hokkaido University, ³Kyushu University, ⁴Alfred Wegener Institute for Polar and Marine Research

AS40-D1-EVE-P-014 | AS40-A002

Characterization of the NO2 Artifact Associated with the

Chemiluminescence Technique Equipped with

Molybdenum Converter During KORUS-AQ Campaign

Jinsang JUNG^{1±+}, Meehye LEE², Seogju CHO³, Jaeyong LEE¹
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University, ³Seoul Research Institute of Public Health and
Environment

AS40-D1-EVE-P-015 | AS40-A005

Assessing How Aerosols Effect OMI NO2 Retrievals During KORUS-AQ

Michal SEGAL ROZENHAIMER^{1‡}, Daniel GOLDBERG², Yohei SHINOZUKA¹, Samuel LEBLANC¹, Connor FLYNN³, Jens REDEMANN⁴, Jay HERMAN⁵, Alexander CEDE⁶, Nader ABUHASSAN⁵, Lok LAMSAL⁷

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AS40-D1-EVE-P-016 | AS40-A006

Introduction of Stray Light Correction Algorithm with the

Characterization of Point Spread Functions for Better

Improvement of GeoTASO Measurements

Mina KANG 1**, Matthew KOWALEWSKI 2, Myoung Hwan AHN 1

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AS40-D1-EVE-P-017 | AS40-A009

Effect of Nitryl Chloride Chemistry on Oxidation Capacity in

Hyeonmin KIM¹**, Rokjin J. PARK¹, Jaein JEONG¹, Daun JEONG², Saewung KIM², Seogju CHO³

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AS40-D1-EVE-P-018 | AS40-A011

Investigating the Contributions of Trans-boundary Transport and Local Emissions to Air Quality in South Korea During KORUS-AQ

Seoyoung LEE $^{1\pm}$, Ja-Ho KOO 1 , Jaemin HONG 1 , Myungje CHOI 1 , Jhoon KIM 1 , Hyunkwang LIM 1 , Brent HOLBEN 2 , Thomas ECK 2 , Jun-Young AHN 3 , Jeong-Hoo PARK 3 , Sang-Kyun KIM 3

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AS40-D1-EVE-P-019 | AS40-A012

Surface NO2 Volume Mixing Ratio Estimated from Total Column Observations of Pandora Spectrometer During KORUS-AQ

Heesung CHONG¹*, Ja-Ho KOO¹*, Jhoon KIM¹, Hana LEE¹, Woogyung KIM², Ukkyo JEONG², Jay HERMAN², Nader ABUHASSAN², Seungun LEE³, Rokjin J. PARK³, Junhong LEE¹, Je-Woo HONG¹, Jinkyu HONG¹, Jun-Young AHN⁴, Jeong-Hoo PARK⁴, Sang-Kyun KIM⁴

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AS40-D1-EVE-P-020 | AS40-A023

Evaluation of a Multi-Constituent Chemical Reanalysis

During KORUS-AQ: Role of Dynamics and Emissions

Kazuyuki MIYAZAKI¹**, Takashi SEKIYA¹, Dejian FU², Kevin BOWMAN², Susan KULAWIK³, Kengo SUDO⁴, Yugo KANAYA¹, Masayuki TAKIGAWA¹, Koji OGOCHI¹, Henk ESKES⁵, Benjamin GAUBERT⁶, Jerome BARRE⁶, Thomas WALKER², Louisa EMMONS⁶

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AS41-D1-EVE-P-020 | AS41-A002

Evaluation and Calibration of the Probabilistic Quantitative Precipitation Forecasts (PQPFs) from WRF Ensemble

Prediction System in Taiwan Area

Hui-Ling CHANG^{1,2#+}, Kuan-Ju CHEN¹, Hochin CHANG¹, Jing-Shan HONG¹, Shu-Chih YANG²
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AS41-D1-EVE-P-021 | AS41-A004

Impacts of Orographic Effects on Tropical Cyclone

Dynamical Initialization

Chuan-Kai WANG^{1#+}, Yi-Leng CHEN¹
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AS41-D1-EVE-P-022 | AS41-A006

Analysis of Conditions for Heavy Rainfall from Afternoon

Thunderstorms in Northern Taiwan

Yun-Ya CHU $^{1\sharp +}$, Jen-Ping CHEN 1 , Tzu-Chin TSAI 1 , Ka-Kit WONG 1

¹National Taiwan University

AS41-D1-EVE-P-023 | AS41-A010

The Evaluation of MJO Simulation in CWBGFS Model

Mei-Yu CHANG^{1‡+}, Pay-Liam LIN², Ming-Dah CHOU², Jen-Her CHEN¹, Ting-Huai CHANG¹, Jia-Ying WU¹
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AS41-D1-EVE-P-024 | AS41-A014

Recovery of the Pressure and Temperature Fields over

 ${\bf Complex\ Terrain\ Using\ Multiple-Doppler\ Radar\ Synthesized}$

Wind Information

Yu-Chieng LIOU 1* , Po-Chien YANG 1 , Yung-Lin TENG 1 , Ju-Yu CHEN 1* , Wen-Yuan WANG 1

¹National Central University

AS41-D1-EVE-P-025 | AS41-A022

Understanding of Taiwan Typhoon Rainfall Erosivity Using

Raindrop Size Distribution

Jayalakshmi JANAPATI¹+, Balaji Kumar SEELA¹-², Pay LIAM¹+, Pao WANG²-³

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AS41-D1-EVE-P-026 | AS41-A024

Impact of Using Multi-Microphysics Ensemble Prediction

System in Radar Data Assimilation at the Convective Scale

Kaoshen CHUNG¹, Ching-Yin KE^{1#+}, Chin-Hung CHEN¹
¹National Central University

AS41-D1-EVE-P-027 | AS41-A026

Interaction Between Orographic Effects and Mei-Yu Front in

Heavy Rainfall Events

Muqun HUANG^{1‡+}, Pay-Liam LIN¹, Yuh-Lang LIN²
¹National Central University, ²North Carolina A&T State
University

AS41-D1-EVE-P-028 | AS41-A031

What Benefit Can be Obtained if Making Decisions Based on

Ensemble Probabilistic Forecasts Instead of Ensemble

Deterministic Forecasts?

Hui-Ling CHANG $^{1,2\sharp *},$ Kuan-Ju CHEN 1, Hochin CHANG 1, Shu-Chih YANG 2, Jing-Shan HONG 1

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AS41-D1-EVE-P-029 | AS41-A032

Influence of Extreme Weather on the Resilience of the Food -

Energy - Water Nexus

Akintayo ABOLUDE^{1#+}, Wen ZHOU¹
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AS42-D1-EVE-P-012 | AS42-A001

Orbit Determination for FY-4 Satellites Using Two-Way

Ranging System

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AS42-D1-EVE-P-013 | AS42-A006

Air-Sea Coupled Data Assimilation for Typhoons Kilo and

Etau and the September 2015 Kanto-Tohoku Heavy Rainfall

with Sea Surface Temperature from the Advanced

Microwave Scanning Radiometer 2

Kozo OKAMOTO^{1#+}, Akiyoshi WADA¹, Hiroshige TSUGUTI¹,

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AS42-D1-EVE-P-014 | AS42-A007

Incorporating Typhoon Forecast in a Landslide Early

Warning System

Shou-Hao CHIANG1#+, Chian-Yi LIU1

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AS42-D1-EVE-P-015 | AS42-A018

Cloud Microphysical Parameters from Himawari-8 and its

Comparison to Active and Passive Sensors

Chian-Yi LIU1#+, Chi-Hao CHIU1, Liu GIN-RONG1,

Tang-Huang LIN¹

¹National Central University

AS43-44-D1-EVE-P-013 | AS43-44-A004

Identify and Understand the Ural Blocking Variability Via

Local Finite-Amplitude Wave Activity Diagnostics

Mengling WANG¹⁺, Yang ZHANG^{1‡}

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AS43-44-D1-EVE-P-014 | AS43-44-A012

Variations of Climate Variables Associated with the North

Pacific Wintertime Blocking

Chan-Yeong SONG^{1#+}, Joong-Bae AHN¹, Jae-Eun YOU²,

Kyo-Moon SHIM3, Myung-Pyo JUNG3

Kyo-Moon Shims, Myung-Pyo Jungs

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AS43-44-D1-EVE-P-015 | AS43-44-A017

Influence of the Improved Ocean Mixed Layer Process in the Earth System Model

Hyejin OK1#+, Yign NOH1, Young Ho KIM2 ¹Yonsei University, ²Korea Institute of Ocean Science and Technology

AS43-44-D1-EVE-P-016 | AS43-44-A019

Improvements in Subgrid Cloud Parameterization for Global Climate Model

Chia-Jung PI1#+, Jen-Ping CHEN1, Chein-Jung SHIU2 ¹National Taiwan University, ²Academia Sinica

AS45-D1-EVE-P-026 | AS45-A001

Classifying the Tropospheric Precursor Patterns of Sudden Stratospheric Warmings

Ming BAO1#+, Xin TAN1, Dennis HARTMANN2, Paulo CEPPI3 ¹Nanjing University, ²University of Washington, ³University of Reading

AS45-D1-EVE-P-027 | AS45-A002

The Role of Synoptic Waves in the Formation and

Maintenance of the Western Hemisphere Circulation Pattern

Xin TAN1#+, Ming BAO1, Dennis HARTMANN2, Paulo CEPPI3 ¹Nanjing University, ²University of Washington, ³University of Reading

AS45-D1-EVE-P-028 | AS45-A004

Impact of the East-West Phase of South Asia High on Water Vapor Distribution Near Tropopause over the Asian

Monsoon Region

Hongying TIAN1#+ ¹Lanzhou University

AS45-D1-EVE-P-029 | AS45-A007

A Closer Look at the Relationships Between Meridional

Mass Circulation Pulses in the Stratosphere and Cold Air

Outbreak Patterns in Northern Hemispheric Winter

Yueyue YU1#+, Ming CAI2, Rongcai REN3

¹Nanjing University of Information Science & Technology, ²Florida State University, 3Chinese Academy of Sciences

AS45-D1-EVE-P-030 | AS45-A011

Ozone Variability Related to the Madden-Julian Oscillation in the Upper Troposphere and Lower Stratosphere

Yuli ZHANG1#+, Yi LIU2, Chuanxi LIU2

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AS45-D1-EVE-P-031 | AS45-A013

Is There a Stratospheric Pacemaker Controlling the Daily

Cycle of Tropical Rainfall?

Takatoshi SAKAZAKI^{1#+}, Kevin HAMILTON², Chunxi ZHANG3, Yuqing WANG3

¹Kyoto University, ²International Pacific Research Center, ³University of Hawaii at Manoa

AS45-D1-EVE-P-032 | AS45-A014

Relationship Between the Boreal Summer Intra-Seasonal

Oscillation and the Stratospheric Quasi-Biennial Oscillation

Yayoi HARADA1#+

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AS45-D1-EVE-P-033 | AS45-A019

Variation of Tropopause Temperature and Height in

1990-2010 and Correlation with Global Warming Effects

Jan Bai NEE1#+

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AS45-D1-EVE-P-034 | AS45-A022

Primary Results of the Ozone Variability and the

Dehydration Process in the UTLS During YMC-Sumatra 2017

Field Campaign

Junko SUZUKI1#+, Shin-Ya OGINO1,2, Ryuichi SHIROOKA1, Takenari KINOSHITA1, Shuichi MORI1, Suginori IWASAKI3, Urip HARYOKO4, Kunio YONEYAMA1

¹Japan Agency for Marine-Earth Science and Technology, ²Kobe University, 3National Defense Academy, 4Indonesian Agency for Meteorology, Climatology and Geophysics

AS45-D1-EVE-P-035 | AS45-A025

Understanding the Biases of CESM1(WACCM4) in

Simulating the Winter Stratospheric Circulation and its

Recurrent Oscillations

Xin XIA1+, Rongcai REN1#, Jian RAO1 ¹Chinese Academy of Sciences

AS45-D1-EVE-P-036 | AS45-A027

Study of Gravity Waves in the MLT Region from a Meteor

Radar Chain in China

Yun ZHANG^{1,2#}, Weixing WAN², You YU^{2,3+} ¹China Transport Telecommunications & Information Center, ²Chinese Academy of Sciences, ³University of Chinese Academy of Sciences

AS45-D1-EVE-P-037 | AS45-A028

Pole-To-Pole Mapping of MLT Tides from a Meteor Radar

Campaign

You YU1,2#+, Weixing WAN1

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AS45-D1-EVE-P-038 | AS45-A031

Characteristics of Convective Gravity Waves in the Stratosphere and Their Contribution to the Quasi-Biennial Oscillation (QBO)

Min-Jee KANG¹, Hye-Yeong CHUN¹♯+, Young-Ha KIM² ¹Yonsei University, ²Ewha Womans University

AS45-D1-EVE-P-039 | AS45-A033

Ablation Model Analysis of Meteor Radar Data from King Sejong Station, Antarctica

Wonseok LEE¹, Yongha KIM¹‡+, Changsup LEE², Jeong-Han KIM²

¹Chungnam National University, ²Korea Polar Research Institute

AS45-D1-EVE-P-040 | AS45-A037

Seasonal Winter Forecasts of the Northern Stratosphere and

Troposphere: Results from JMA Seasonal Hindcast

Experiments

Masakazu TAGUCHI1#+

¹Aichi University of Education

AS45-D1-EVE-P-041 | AS45-A040

Validation of Satellite Ozone Vertical Profile Using Ozonesonde Measurements at Jangbogo Station in the

Antarctica

Hana LEE1*, Taejin CHOI², Dha Hyun AHN¹, Jaeill YOO², Jhoon KIM¹, Ja-Ho KOO¹*

¹Yonsei University, ²Korea Polar Research Institute

AS45-D1-EVE-P-042 | AS45-A044

Investigation of Atmospheric Composition Around the

Antarctica Using Satellite Observations

Ja-Ho KOO¹^{*}, Dha Hyun AHN¹, Taejin CHOI², Jhoon KIM¹, Sang Seo PARK³

¹Yonsei University, ²Korea Polar Research Institute, ³Seoul National University

AS45-D1-EVE-P-043 | AS45-A059

Gravity Waves in the Stratosphere Observed by a Mobile

Doppler Wind and Temperature Lidar

Yan ZHAOAI1#+

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AS45-D1-EVE-P-044 | AS45-A060

Dynamics in the Mesopaus Region Observed by a Sodium

Doppler Lidar at Langfang Site, China

Xiong HU1#+

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AS47-D1-EVE-P-015 | AS47-A002

An Evaluation of Global Solar Radiation in NHRCM Against

Surface Station Observations

Nobuhiko ENDO1#+, Motoki NISHIMORI1

¹National Agriculture and Food Research Organization

AS47-D1-EVE-P-016 | AS47-A005

Impact of Horizontal Resolution on Regional Climate

Simulation over South Korea

Gayoung KIM1+, Dong-Kyou LEE2,3, Dong-Hyun CHA1+, Changyong PARK1, Gil LEE1

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AS47-D1-EVE-P-017 | AS47-A008

Evaluation and Projection of Climate Extremes in China by

RMIP Models

Xiaorui NIU1#+

¹Nanjing University

AS47-D1-EVE-P-018 | AS47-A011

Introduction of Quantile-Mapping to a Regression-Based

Regional Probabilistic Climate Projection Method Using

Multi-Model Ensemble

Noriko ISHIZAKI¹, Koji DAIRAKU^{1‡+}, Genta UENO²
¹National Research Institute for Earth Science and Disaster
Resilience, ²The Institute of Statistical Mathematics

AS47-D1-EVE-P-019 | AS47-A013

Regression-Based Statistical Downscaling for Multi

Agro-Climatic Elements - Validations and Future Projections

Motoki NISHIMORI1#+, Nobuhiko ENDO1

¹National Agriculture and Food Research Organization

AS47-D1-EVE-P-020 | AS47-A016

Future Decadal Change in Tropical Cyclone Activity over the

Western North Pacific

Hyeonjae LEE¹⁺, Chun-Sil JIN¹, Dong-Hyun CHA^{1*}, Dong-Kyou LEE^{2,3}, Song-You HONG⁴, Hyun-Suk KANG⁵, Joong-Bae AHN⁶, Seung-Ki MIN⁷

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AS47-D1-EVE-P-021 | AS47-A018

The Impact of Model Physics on Simulating the Hot Summer

over CORDEX-EA-II Region

Linyun YANG¹+, Shuyu WANG¹+, Jianping TANG¹, Xiaorui NIU¹

¹Nanjing University

AS47-D1-EVE-P-022 | AS47-A029

Hybrid Downscaling Using High-Resolution RCM Information and Rainfall-Runoff-Inundation Model Simulations

Yasutaka WAKAZUKI $^{1,2\pi_{+}}$, Yousuke NAKAMURA 3 , Shiori ABE 4

¹Ibaraki University, ²Japan Agency for Marine-Earth Science and Technology, ³Public Works Research Institute, ⁴Mitsui Consultants Co., Ltd.

AS50-D1-EVE-P-013 | AS50-A001

Impacts of the Tropical Pacific Cold Tongue Mode on El Niño Diversity Under Global Warming

Quan-Liang CHEN^{1#+}, Li YANG¹

¹Chengdu University of Information Technology

AS50-D1-EVE-P-014 | AS50-A008

Indo-Pacific Climate During the Decaying Phase of the 2015/16 El Niño: Role of Southeast Tropical Indian Ocean Warming

Zesheng CHEN1+, Yan DU1*, Zhiping WEN2-3, Renguang WU1, Chunzai WANG4

¹Chinese Academy of Sciences, ²Sun Yat-sen University, ³Fudan University, ⁴South China Sea Institute of Oceanology

AS50-D1-EVE-P-015 | AS50-A011

The Impact of the Radiosonde Observations of Cold Surge over the Philippine Sea on the Analysis of the Tropics and the Southern Hemisphere

Miki HATTORI^{1‡+}, Akira YAMAZAKI¹, Shin-Ya OGINO^{1,2}, Pei-Ming WU¹, Jun MATSUMOTO^{1,3}

¹Japan Agency for Marine-Earth Science and Technology, ²Kobe University, ³Tokyo Metropolitan University

AS50-D1-EVE-P-016 | AS50-A017

Simulating the IPOD, East Asian Summer Monsoon and Their Relationships in CMIP5

Miao YU $^{1\sharp\star}$, Jianping LI 1 , Fei ZHENG 2 , Xiaofan WANG 3 , Jiayu ZHENG 4

¹Beijing Normal University, ²Chinese Academy of Sciences, ³China Meteorological Administration, ⁴Second Institute of Oceanography

AS50-D1-EVE-P-017 | AS50-A019

A Moving Updated Statistical Prediction Model for Summer Rainfall in the Middle-Lower Reaches of the Yangtze River Valley

Yan GUO^{1#+}, Jianping LI¹, Jiangshan ZHU²
¹Beijing Normal University, ²Chinese Academy of Sciences

AS50-D1-EVE-P-018 | AS50-A020

The Principal Modes of the Indian Ocean Shallow Meridional Overturning Circulation

Yao-Kun LI^{1#+}, Jianping LI¹
¹Beijing Normal University

AS50-D1-EVE-P-019 | AS50-A025

The Relationship Between Indo-Pacific Convection Oscillation and Summer Surface Air Temperature in Southern Asia

Jiayu ZHENG^{1#+}, Yanjie LI¹, Jianping LI², Jiaqing XUE¹
¹Chinese Academy of Sciences, ²Beijing Normal University

AS51-D1-EVE-P-007 | AS51-A006

A Clear-Sky Hyperspectral Closure Study for Merra-2 and

Era-Interim Reanalyses

Xiuhong CHEN¹, Xianglei HUANG^{1‡+}, Norman LOEB², Xiquan DONG³, Baike XI⁴, Erica K DOLINAR⁴, Michael G BOSILOVICH⁵, Seiji KATO², William L. SMITH JR.², Paul STACKHOUSE, JR.²

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AS51-D1-EVE-P-008 | AS51-A007

Development of GeoKompsat-2A/AMI Land Surface Temperature Retrieval Algorithm Using Himawari-8/AHI Data

Youn-Young CHOI¹⁺, Myoung-Seok SUH¹⁺
¹Kongju National University

AS51-D1-EVE-P-009 | AS51-A012

Enhancing the Fast Radiative Transfer Model for Geostationary Advanced Infrared Sounder by Using Local Training Profiles

Di DI^{1±+}, Jun LI², Wei HAN³, Wenguang BAI¹
¹National Satellite Meteorological Center, ²University of
Wisconsin-Madison, ³Numerical Weather Prediction Center of
Chinese Meteorological Administration

AS51-D1-EVE-P-010 | AS51-A013

Native Error Diagnostics Reveal Sources of Aerosol

Radiative Forcing Error in Earth System Models

Daniel FELDMAN^{1#+}, Alexandra JONES², David PAYNTER², Stuart FREIDENREICH², William COLLINS¹
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¹Lawrence Berkeley National Laboratory, ²NASA Geophysical Fluid Dynamics Laboratory

AS52-D1-EVE-P-010 | AS52-A002

Sources and Potential Photochemical Roles of Formaldehyde in an Urban Atmosphere in South China

Ling-Yan HE1#+

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AS52-D1-EVE-P-011 | AS52-A003

Volatility Measurement of Atmospheric Submicron Aerosols

in an Urban Atmosphere in Southern China

Liming CAO¹, Xiaofeng HUANG^{1#+}

¹Peking University Shenzhen Graduate School

AS52-D1-EVE-P-012 | AS52-A004

Influences of El Niño Southern Oscillation (ENSO) on

Tropospheric Ozone at Mauna Loa Observatory, Hawaii

Lian XUE¹⁺, Aijun DING^{1‡}, Wuke WANG¹, Xin HUANG¹
¹Nanjing University

AS52-D1-EVE-P-013 | AS52-A005

Influence of the Western North Pacific Subtropical High on

Summer Surface Ozone Concentrations in the Korean

Peninsula

Jieun WIE^{1#+}, Byung-Kwon MOON¹
¹Chonbuk National University

AS52-D1-EVE-P-014 | AS52-A006

The Relationship Between ENSO and Surface PM10 over the

Korean Peninsula

Jieun WIE^{1#+}, Byung-Kwon MOON¹
¹Chonbuk National University

AS52-D1-EVE-P-015 | AS52-A007

Climate Simulation with a New Coupled Chemistry-Climate

Model (GRIMs-CCM): Model Evaluation and

Inter-Comparison with CCMI-1 Models

Seungun LEE $^{1\sharp+}$, Rokjin J. PARK 1 , Sang-Woo KIM 1 , Seok-Woo SON 1 , Jae-Jin KIM 2 , Byung-Gon KIM 3 , Byung-Kwon MOON 4 , Sang-Wook YEH 5

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³Gangneung-Wonju National University, ⁴Chonbuk National University, ⁵Hanyang University

AS52-D1-EVE-P-016 | AS52-A010

Modelling of Aerosol Feedback Effects Using Two-Way

Coupled WRF-CMAQ Model System over East Asia

Yoon-Hee KANG $^{1\sharp *}$, Ju-Hee JEONG 1 , Hye Yeon AN 1 , Yoo-Keun KIM 1

¹Pusan National University

AS52-D1-EVE-P-017 | AS52-A011

Source Apportionment of PM2.5 Light Extinction in an

Urban Atmosphere in China

Liwu ZENG¹#+, Zijuan LAN², Xiaofeng HUANG¹, Ling-Yan HE¹

¹Peking University Shenzhen Graduate School, ²Shenzhen Academy of Environmental Sciences

AS52-D1-EVE-P-018 | AS52-A012

Chemistry-Climate Model Simulations of Anthropogenic

Sulfate Aerosols Impact on East Asian Climate

Sungjae HONG¹+, Byung-Kwon MOON¹+, Rokjin J. PARK², Seungun LEE²

¹Chonbuk National University, ²Seoul National University

AS52-D1-EVE-P-019 | AS52-A019

Development of an On-Line Measurement System for Water-Soluble Organic Matter in PM2.5 and its Application

in China

Xiaofeng HUANG1#+

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AS56-D1-EVE-P-022 | AS56-A001

Source Apportionment of Size-Fractionated Particles During

the 2013 Asian Youth Games and the 2014 Youth Olympic

Games in Nanjing, China

Pulong CHEN¹⁺, Tijian WANG^{1#}, Bingliang ZHUANG¹, Min

 XIE^{1}

¹Nanjing University

AS56-D1-EVE-P-023 | AS56-A004

Physical, Optical, and Modeling Insights Gained by Using

the Decadal Vertical Distribution of Aerosols over Asia as

Measured by CALIOP and Other Satellites

Zhao WAN1#+, Jason COHEN1

¹Sun Yat-sen University

AS56-D1-EVE-P-024 | AS56-A014

Investigation of Short-Term Effective Radiative Forcing of

Fire Aerosols over North America Using Nudged Hindcast

Ensembles

Yun QIAN1#+

¹Pacific Northwest National Laboratory

AS56-D1-EVE-P-025 | AS56-A015

Spatio-Temporal Variability of Aerosol Optical Depth in

Northern Hemisphere Mid-Latitudes and its Teleconnection

with the Arctic Near Surface Air Temperature

Yuyang CHEN1+, Chuanfeng ZHAO1#

¹Beijing Normal University

AS56-D1-EVE-P-026 | AS56-A020

PM10 Sampling and AOD Trends in Islamabad City During

the 2016 Winter Fog Season

Farrukh CHISHTIE1#+

¹SERVIR-Mekong Asian Disaster Preparedness Center Bangkok

AS56-D1-EVE-P-027 | AS56-A022

Modeling Study of Source Contributions and Emergency Control Effects During a Haze Episode in Jinan City Wenyi $YANG^{1s+}$

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AS56-D1-EVE-P-028 | AS56-A024

Temporal Variation and Cause Analysis of Fog Days in Xi'an City

Hongyan GAO1#+

¹Shaanxi meteorological service center.

AS56-D1-EVE-P-029 | AS56-A032

Winter Fog in the Indo-Gangetic Plain: Physcial Processes

Bhaskar GUNTURU^{1,2#+}, Vinay KUMAR³

¹King Abdullah University of Science and Technology, ²Massachusetts Institute of Technology, ³Texas A&M University Corpus Christi

AS56-D1-EVE-P-030 | AS56-A035

Improved Representations of Missing Aerosol Sources,
Long-Range Transport, and Extreme Conditions Using a New
Multi-Satellite High Frequency Constrained Global
Emissions Database

Jason COHEN1#+

¹Sun Yat-sen University

IG Poster Presentations

Mon - 04 Jun, 18:30 - 20:30 | Ballroom B

IG01-D1-EVE-P-007 | IG01-A005

An Inspection of Spherical Wave Image vs. Plane Wave

Image

Chih-Hsiung CHANG^{1s+}, Young-Fo CHANG², Jia-Wei LIU², Chao-Ming LIN³, Cheng-Kuo CHANG⁴

¹National Chaiyi University, ²National Chung Cheng University, ³Hsiuping University of Science and Technology, ⁴Nan Jeon University of Science and Technology

IG01-D1-EVE-P-008 | IG01-A006

Quantitative and Consistent Coastline Length Calculation

Method Based on Fractal Theory

Heesook WOO^{1‡+}, Kwon KWANG SEOK¹, Kim BYUNG GUK¹
¹Inha University

IG01-D1-EVE-P-009 | IG01-A008

An Analysis of Fineness Number and Moisture Content of Namdae-Cheon Estuary for Tendency of Breaching Seulki LEE¹⁺, Sungjae PARK¹, Changwook LEE^{1‡} ¹Kangwon National University

IG01-D1-EVE-P-010 | IG01-A012

The Study on Characteristics of Weathered Mudstone Soil Mixed with Dyeing Sludge

Jae-Hyeung JEOUNG¹⁺, Woo-Seok KIM^{1*}

¹Korea Institute of Civil Engineering and Building Technology

IG01-D1-EVE-P-011 | IG01-A013

Analysis of Occurrence Probability in Risk Event Scenario for Ground Subsidence Risk Assessment in Ground Excavation Construction

Dong-Min KIM^{1‡+}, Yong BAEK¹, Woo-Seok KIM¹, Oil KWON¹
¹Korea Institute of Civil Engineering and Building Technology

IG01-D1-EVE-P-012 | IG01-A015

Frequency and Spatial Domain Insar Orbital Error

Corrections

Xin TIAN^{1‡+}, Haoping QI¹, Yuxiao MA¹
¹Southeast University

IG01-D1-EVE-P-013 | IG01-A016

Heavy Metal Adsorption Experiment on Powder Filter Using Zeolite and Porous Feldspar

Sung-Wook KIM^{1±+}, Eun-Kyeong CHOI¹, Woori LIM², Se-Yeong HAMM², Myoung Hak OH³, Seung-Nam SEO³, Ki-Young JO⁴, Kyu-Hwan LEE⁵, Chang-Yong KIM⁶

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IG02-D1-EVE-P-020 | IG02-A003

Pinatubo Volcanic Eruption Exacerbated an Abrupt Coral

Mortality Event in 1991 Summer

Chung-Che WU¹+, Chuan-Chou SHEN¹‡, Ching-Chih CHANG², Ke-Fu YU³, Yu-Min CHOU⁴, John PALLISTER⁵, George BURR², Li LO¹

¹National Taiwan University, ²University of Arizona, ³Guangxi University, China, ⁴Southern University of Science and Technology, ⁵United States Geological Survey

IG02-D1-EVE-P-021 | IG02-A006

High-Resolution Stalagmite Records from Northeast China for Late Holocene Paleoclimate and Environmental

Reconstruction

Jui-Lin WANG¹⁺, Hong-Chun LI^{1,2‡}, Horng-Sheng MII³
¹National Taiwan University, ²Northeast Normal University,
³National Taiwan Normal University

IG02-D1-EVE-P-022 | IG02-A016

Relationship Between the Northern Pacific Gyre Oscillation

and Tree-Ring Oxygen Isotopes in Northeastern Japan

Wataru SAKASHITA^{1#}, Yusuke YOKOYAMA²⁺, Hiroko MIYAHARA³, Takahiro AZE², Stephen OBROCHTA⁴, Takeshi NAKATSUKA⁵

¹University of Tsukuba, ²The University of Tokyo, ³Humanities and Sciences/Musashino Art University, ⁴Akita University, ⁵Research Institute for Humanity and Nature

IG02-D1-EVE-P-023 | IG02-A018

Climate Changes Reconstructed from a Glacial Lake in High

Central Asia over the Past Two Millennia

Jianghu LAN $^{1s+}$, Hai XU 2 , Enguo SHENG 1 , Keke YU 3 , Huixian WU 1 , Kangen ZHOU 1 , Dongna YAN 1 , Yuanda YE 1 , Tianli WANG 1

¹Chinese Academy of Sciences, ²Tianjin University, ³Baoji University of Arts and Sciences

IG02-D1-EVE-P-024 | IG02-A031

Indian Summer Monsoon Variability Since the Last Glacial Maximum

Mahjoor Ahmad LONE^{1*}, Joyanto ROUTH², Chuan-Chou SHEN¹, Kalpana M. SINGAMSHETTY³, Vikash KUMAR⁴, Yi-Hong GUO¹, Masood AHMAD³, Carme HUGUET⁵, Susanne FIETZ⁶, Augusto MANGINI⁷, Ravi RANGARAJAN⁸, Prosenjit GHOSH⁸, Horng-Sheng MII⁹, Yongjin WANG¹⁰, Shaohua YANG¹⁰

¹National Taiwan University, ²Linköping University, ³National Geophysical Research Institute, ⁴National Centre for Antarctic and Ocean Research, ⁵Universidad de los Andes, ⁶Stellenbosch University, ⁷Heidelberg Academy of Sciences, ⁸Indian Institute of Sciences, ⁹National Taiwan Normal University, ¹⁰Nanjing Normal University

IG03-D1-EVE-P-023 | IG03-A007

Comprehensive Probabilistic Tsunami Hazard Assessment

Along Nankai Trough - Assessment of Conditional

Exceedance Probability -

Kenji HIRATA¹**, Hiroyuki FUJIWARA¹, Hiromitsu NAKAMURA¹, Masaki OSADA¹, Tsuneo OHSUMI¹, Yuji DOHI², Nobuyuki MORIKAWA¹, Shin'ichi KAWAI¹, Takahiro MAEDA¹, Hisanori MATSUYAMA³, Nobuhiko TOYAMA³, Tadashi KITOH³, Kenji OHSHIMA³, Yoshihiro MURATA⁴, Ryu SAITO⁴, Shi'ichi AKIYAMA⁵, Mariko KORENAGA⁵, Yuta ABE⁵, Tomoya HAKAMATA⁵

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IG03-D1-EVE-P-024 | IG03-A012

Application of a Fast Tsunami Simulation System to Japan

Sea Tsunami

Yusuke YAMANAKA^{1‡}*, Shinji SATO¹, Takenori SHIMOZONO¹, Yoshimitsu TAJIMA¹

¹The University of Tokyo

IG03-D1-EVE-P-025 | IG03-A015

Numerical Simulation of a Tsunami Generated by the 7.3 Ka

Caldera-Forming Eruption of the Kikai Volcano, Japan

Masaki YAMADA^{1#}, Yuchen WANG¹, Fukashi MAENO¹, Shigehiro FUJINO², Kenji SATAKE¹

¹The University of Tokyo, ²University of Tsukuba

IG03-D1-EVE-P-026 | IG03-A016

Sediment Transport Numerical Modeling for the 2011

Tohoku Tsunami Deposits at the Coastal Lowland in

Fukushima Prefecture, Japan

Satoshi KUSUMOTO¹⁵⁺, Aditya GUSMAN¹, Kenji SATAKE¹

¹The University of Tokyo

IG03-D1-EVE-P-027 | IG03-A018

Numerical Simulation of Large Later Phases Observed Along the Coast of Hokkaido Generated by the 2011 Tohoku Earthquake

Mizuho SHIBATA^{1#}, Yuichiro TANIOKA¹, Aditya GUSMAN², Yusuke YAMANAKA²

¹Hokkaido University, ²The University of Tokyo

IG03-D1-EVE-P-028 | IG03-A022

Spatial Distribution and Sedimentary Characteristics of Buried Sand Layers in Coastal Marshes, West Aceh, Indonesia

Katrin MONECKE^{1‡}, Ella MEILIANDA², Jessica PILARCZYK³, Ibnu RUSYDY⁴, Abudzar MOENA⁴, Tempestt MORGAN¹, Harris MUZHAFFAT⁴, Ahmad RAIS⁴, Irvan YOLANDA⁴ ¹Wellesley College, ²Tsunami and Disaster Mitigation Research Center, ³University of Southern Mississippi, ⁴Syiah Kuala University

IG03-D1-EVE-P-029 | IG03-A023

Fault Model Estimation of the 12th Century Southwestern

Hokkaido Earthquake Using Tsunami Deposits Data

Kei IOKI^{1#}, Yuichiro TANIOKA², Gentaro KAWAKAMI³, Yoshihiro KASE³, Kenji NISHINA³, Wataru HIROSE³
¹National Institute of Advanced Industrial Science and Technology,
²Hokkaido University, ³Hokkaido Research Organization

IG03-D1-EVE-P-030 | IG03-A030

Rapid Determination of Source Models for Tsunami Early Warning Using a Depth Dependent Rigidity Curve: Case Studies for the 2007 Bengkulu and 2010 Mentawai Tsunami Earthquakes

Rinda Nita RATNASARI $^{1\sharp *}$, Yuichiro TANIOKA 1 , Aditya GUSMAN 2

¹Hokkaido University, ²The University of Tokyo

IG04-D1-EVE-P-014 | IG04-A004

A Preliminary Risk Assessment of Major Ports in Taiwan

Based on Tsunamis from Manila Trench

An Chi CHENG¹, Anawat SUPPASRI¹♯+, Fumihiko IMAMURA¹

¹Tohoku University

IG04-D1-EVE-P-015 | IG04-A006

Impact of Tsunami on Global Economic Losses Due to

Potential Nankai Trough Earthquake Based on the

Inter-Regional-Input-Output Modeling

Kwanchi PAKOKSUNG^{1#+}, Anawat SUPPASRI¹, Panon LATCHAROTE², Fumihiko IMAMURA¹

¹Tohoku University, ²Thammasat University

IG04-D1-EVE-P-016 | IG04-A008

Research for Quantitative Evaluation of Tsunami Damage

Reduction of Buildings by Coastal Forest

Akihiro HAYASHI $^{1\pm}$, Kei YAMASHITA $^{1+}$, Fumihiko IMAMURA 1

¹Tohoku University

IG04-D1-EVE-P-017 | IG04-A013

Proposal of New Disaster Education Method Using Stamp Rally Method

Mari YASUDA^{1‡+}, Rui NOUCHI¹, Hiromi TOMINAGA² ¹Tohoku University, ²Shachihata Inc.

IG04-D1-EVE-P-018 | IG04-A019

Numerical Simulation of Tsunami-Induced Sediment

Transport Considering Saturation Concentration in

Suspension with Strong Unsteady Flow

Kei YAMASHITA^{1*}, Daisuke SUGAWARA², Taro ARIKAWA³, Yoshinori SHIGIHARA⁴, Tomoyuki TAKAHASHI⁵, Fumihiko IMAMURA¹

¹Tohoku University, ²Museum of Natural and Environmental History, ³Chuo University, ⁴National Defense Academy, ⁵Kansai University

IG04-D1-EVE-P-019 | IG04-A022

A Study on the Potential of Science Monitoring and Reliable

Telecommunications (SMART) Cable Measurements for

Tsunami Early Warning in Indonesia

Natalja RAKOWSKY^{1#+}, Sven HARIG¹, Antonia IMMERZ¹, Alexey ANDROSOV¹, Tri HANDAYANI²

¹Alfred Wegener Institute, ²Badan Meteorologi, Klimatologi dan Geofisika

IG06-D1-EVE-P-007 | IG06-A012

Wildfire Monitoring in South Korea Using Himawari-8

Geostationary Meteorological Satellite Data

Eunna JANG¹, Jungho IM¹⁵⁺, Yoojin KANG¹, Seonyoung PARK¹, Haemi PARK¹

¹Ulsan National Institute of Science and Technology

IG07-D1-EVE-P-007 | IG07-A008

Air Quality Modeling of Mt. Baek-du Eruption Impact on the

Korean Peninsula

Young SUNWOO¹*+, Hyerim KIM¹, Doyoon KIM¹ ¹Konkuk University

IG08-D1-EVE-P-016 | IG08-A002

Preliminary Study on the Data Quality of Strong Motion

Records

Baofeng ZHOU1**, Jinjun HU1, Zhanxuan ZUO1, Yefei REN1, Jindong SONG1

¹China Earthquake Administration

IG08-D1-EVE-P-017 | IG08-A003

Correlation Analysis of Tunnel Overbreak Considering

Geological Characteristics

Jaehong HWANG1#+

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IG08-D1-EVE-P-018 | IG08-A004

Quantitative Analysis of Anomalies of Atmospheric Radon

Concentration and Earthquakes

Daichi IWATA¹⁵⁺, Hiroyuki NAGAHAMA¹, Jun MUTO¹, Yumi YASUOKA²

¹Tohoku University, ²Kobe Pharmaceutical University

IG08-D1-EVE-P-019 | IG08-A013

Data-Adaptive Harmonic Analysis and Stochastic Modeling of Sea Level Change

Dmitri KONDRASHOV1#+

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IG08-D1-EVE-P-020 | IG08-A020

Local Translation Error Analysis for Lorenz 96 Model

Kazuyuki NAKAMURA1,2#+

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IG09-D1-EVE-P-009 | IG09-A002

Comprehensive Assessment of Residential Area Living

Quality from the Perspective of Resources Spatialization

Xin QIAO1#+, Lele LI1, Dan LI2, Anye HOU2

¹Ocean University of China, ²Qingdao Geotechnical Investigation and Surveying Research Institute

IG09-D1-EVE-P-010 | IG09-A003

Global Survey of Photovoltaic Power Plants from

Multi-Spectral Satellite Imagery

Hiroki MIYAMOTO $^{1\pm}$, Ryosuke NAKAMURA 1 , Motoki KIMURA 1 , Atsushi ODA 1

¹National Institute of Advanced Industrial Science and Technology

IG09-D1-EVE-P-011 | IG09-A008

Architecture Design of the Geoscience Research Data

Platform

Jong-Gyu HAN1#+

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IG09-D1-EVE-P-012 | IG09-A011

Characteristics of Coseismic and Rainfall-Induced

Landslides at ASO Volcano, Japan, Differentiated by UAS

and SFM-MVS Photogrammetry

Hitoshi SAITO^{1,2‡+}, Shoichiro UCHIYAMA³, Yuichi S. HAYAKAWA², Hiroyuki OBANAWA⁴

¹Kanto Gakuin University, ²The University of Tokyo, ³National Research Institute for Earth Science and Disaster Prevention, ⁴VisionTech Inc.

IG11-D1-EVE-P-006 | IG11-A007

Relationship Between Ocean Bottom Pressure Changes and Oceanic Baroclinic Eddy Off Kushiro-Tokachi During 2004-2013

Takuya HASEGAWA¹**, Akira NAGANO¹, Hiroyuki MATSUMOTO¹, Keisuke ARIYOSHI¹

¹Japan Agency for Marine-Earth Science and Technology

IG11-D1-EVE-P-007 | IG11-A008 (Invited)

GPS/Acoustic Seafloor Geodesy Study in Eastern Taiwan

Horng-Yue CHEN $^{1#+}$, Ryoya IKUTA 2 , Masataka ANDO 2 , Cheng-Horng LIN 1

¹Academia Sinica, ²Shiizuoka University

IG11-D1-EVE-P-008 | IG11-A010 (Invited)

Monitoring the Deep Western Boundary Current in the

Western North Pacific by Lowered Acoustic Doppler Current

Profiler Echo Intensity

Kanae KOMAKI1, Akira NAGANO2#+

¹University of Washington, ²Japan Agency for Marine-Earth Science and Technology

IG11-D1-EVE-P-009 | IG11-A011

Deep-Sea Environmental Changes on the Continental Shelf

Off Sanriku, Japan, After the 2011 Tohoku Earthquake

Masahide WAKITA¹⁵⁺, Shuichi WATANABE¹, Kazumasa OGURI¹, Hidetaka NOMAKI¹, Shinsuke KAWAGUCCI¹, Jun YOSHINO², Akira NAGANO¹, Keisuke ARIYOSHI¹

¹Japan Agency for Marine-Earth Science and Technology, ²Tohoku Environmental Science Services Corporation

IG11-D1-EVE-P-010 | IG11-A012

In-Situ and Experimental Observations of Bottom Pressure

Recorders

Hiroyuki MATSUMOTO^{1#+}, Keisuke ARIYOSHI¹, Akira NAGANO¹, Takuya HASEGAWA¹

¹Japan Agency for Marine-Earth Science and Technology

IG12-D1-EVE-P-012 | IG12-A005

Geological Characterization and Structural Risk Assessment of an Onshore Subsurface CO₂ Storage in the Early Miocene Janggi Basin, Se Korea

Youngseok SONG1+, Min-Cheol KIM1, Rae-Yoon JEONG1, Moon SON1+

¹Pusan National University

IG12-D1-EVE-P-013 | IG12-A008

The Effect of Flow Rate on the Process of Immiscible

Displacement in Porous Media

Jinkyun LEE¹, Sookyun WANG^{1#+}, Minhee LEE¹, Jeong-Gi UM¹ ¹Pukyong National University

IG12-D1-EVE-P-014 | IG12-A009

Carbon Dioxide Storage Capacity Estimation for Aquifers in

Korea Based on the Measurement of Supercritical Carbon

Dioxide Displacement in Pore Spaces

Taehyoung KIM $^{1+}$, Minhee LEE $^{1\#}$, Jeongpil AN 1 , Sookyun WANG 1 , Seonok KIM 1

¹Pukyong National University

IG12-D1-EVE-P-015 | IG12-A010

Does China Have Environmentally-Friendly Areas for the

Geological Storage of Anthropogenic Carbon Dioxide?

Qi LI1#+, Guizhen LIU1, Bofeng CAI2

¹Chinese Academy of Sciences, ²Chinese Academy for Environmental Planning

IG12-D1-EVE-P-016 | IG12-A011 (Invited)

Breakthrough Pressure and Permeability in Partially

Water-Saturated Shales Using Methane-Carbon Dioxide Gas

Mixtures: An Experimental Study of the Carboniferous

Shales from the Eastern Qaidam Basin, China

Lu XIA¹⁺, Cheng ZHANG¹, Qingchun YU^{1‡}
¹China University of Geosciences

IG12-D1-EVE-P-017 | IG12-A012

Field Experiments on the Effect of Carbonate Dissolution on

Rock's Sealing Performance

Masao SORAI1#+

¹National Institute of Advanced Industrial Science and Technology

IG12-D1-EVE-P-018 | IG12-A015

Evaluation of Hydrochemical Parameters to Monitor the

Migration and Reaction of CO2-Saturated Water in Shallow

Aquifer: Results from a Controlled CO2 Injection Test

Hyun-Kwon DO1+, Seung-Wook HA2, Dae-Han HWANG1, Seong-Sun LEE2, Seong-Taek YUN1#

¹Korea University, ²Seoul National University

IG12-D1-EVE-P-019 | IG12-A016

Evaluation of CO2 Leakage Related to Underground CO2

Storage Using Geological and Geophysical Methods

Woo-Ri LIM¹⁺, Se-Yeong HAMM¹⁺, Hak-Soo HWANG², Sung-Wook KIM³, Hangtak JEON¹

¹Pusan National University, ²Tomory Co. Ltd, ³GI Co. Ltd.

IG13-D1-EVE-P-006 | IG13-A004

Unravel the Possible Sources of Two Historical Tsunami

Events in the South China Sea

Linlin LI^{1#+}, Adam SWITZER¹

¹Nanyang Technological University

IG13-D1-EVE-P-007 | IG13-A005

The 1897 Predecessor to 2013s Typhoon Haiyan: How do

They Compare?

Adam SWITZER1#+

¹Nanyang Technological University

IG13-D1-EVE-P-008 | IG13-A010

Late Holocene Sea-Level Change Along the Coast of the Noto

Peninsula in Central Japan

Wataru KOBAYASHI^{1‡+}, Masaaki HAMADA¹, Susumu YOSHIDA¹, Hiroyuki YAMAGUCHI², Toshinori SASAKI³
¹Hokuriku Electric Power Company, ²Natural Consultant Co., Ltd.,
³Central Research Institute of Electric Power Industry

IG15-D1-EVE-P-003 | IG15-A003

Palaeolimnological Records of Southeast Asia - A Review

Christos GOURAMANIS1#+

¹National University of Singapore

IG15-D1-EVE-P-004 | IG15-A008

Lacustrine Sediments: Assessment of Source, Processes and

Productivity Around Larsemann Hills Region of East

Antarctica

Shabnam CHOUDHARY $^{1\sharp*}$, Ganapati NAYAK 1 , Anoop TIWARI 2 , Neloy KHARE 3

¹Goa University, ²National Centre For Antarctic and Ocean research, ³Ministry of Earth Sciences

IG16-BG-D1-EVE-P-014 | IG16-BG-A021

Ecosystem Services Changes and Trade-Offs in China's

Yangtze River Economic Belt from 2000 to 2015

Xibao XU^{1#+}, Guishan YANG¹

¹Chinese Academy of Sciences

IG16-BG-D1-EVE-P-015 | IG16-BG-A023

Quantifying Aeolian Sediment Provenance Using Multiple

Composite Fingerprints

Guanglei GAO¹⁺, Guodong DING¹⁺, Zhao YANG¹
¹Beijing Forestry University

IG16-BG-D1-EVE-P-016 | IG16-BG-A026

Analyzing the Relationship Between Sentiment of Tweets and Satisfaction of Forecast Users

In-Gyum KIM1**, Seung-Wook LEE1, Hye-Min KIM1, Byunghwan LIM1

¹National Institute of Meteorological Sciences

IG16-BG-D1-EVE-P-017 | IG16-BG-A027

The Pitfalls of Utilising a Linear Approach in Climate Change Information Dissemination as Evidenced in

Alaminos, Laguna, Philippines

Ryanne Stephanie CO^{1#+}, Anthony AGUILLO¹, June SY¹

¹Ateneo de Manila University

IG16-BG-D1-EVE-P-018 | IG16-BG-A029

The Spiral Approach: A Study on a Community Centered Communication Approach of the Local Climate Change Action Plan of the Municipality of Pagsanjan, Laguna, Philippines

June SY¹⁸⁺, Ryanne Stephanie CO¹, Anthony AGUILLO¹

**Ateneo de Manila University

IG17-D1-EVE-P-008 | IG17-A002

Exploring the Educational Value of Korean Traditional Science Knowledge in a Science Museum

Jihye LEE1**, Donghee SHIN², Yonghyun YUN¹, Jongyeob PARK³

¹National Science Museum, ²Ewha Womans University, ³Korea Astronomy and Space Science Institute

IG17-D1-EVE-P-009 | IG17-A008

Volcanology Classes in Japanese Geoparks: Application of

Magma Formation Experiments

Masaya MIYOSHI^{1‡+}, Kabuto HAMADA¹, Junko FUJII¹, Hirofumi YAMAMOTO¹
¹University of Fukui

IG20-D1-EVE-P-008 | IG20-A003

Rapid Tsunami Source and Maximum Tsunami Height
Forecasting Based on Interseismic Coupling Patterns: A Case

Study of the 2011 Tohoku Tsunami

Bruno ADRIANO¹⁵⁺, Shunichi KOSHIMURA¹, Risa NAKANO¹, Erick MAS¹
¹Tohoku University

IG20-D1-EVE-P-009 | IG20-A004

Fusion of Sensing and Simulation of Tsunami Damage
Assessment Towards Innovation of Disaster Medical System
Shunichi KOSHIMURA^{1#+}, Erick MAS¹

¹Tohoku University

IG20-D1-EVE-P-010 | IG20-A010

Agent Based Modeling of Disaster Response Teams After the 2011 Tohoku Tsunami in Ishinomaki Area

Erick MAS¹², Kouta ABE¹, Shinichi EGAWA¹, Hiroyuki SASAKI¹, Shunichi KOSHIMURA¹ ¹Tohoku University

IG21-D1-EVE-P-006 | IG21-A005

A Comparative Pilot Study of Flood Mapping Using ALOS-2 Data in Japan

Young-Joo KWAK^{1‡+}, Sang-Ho YUN²
¹International Centre for Water Hazard and Risk Management (ICHARM)/ UNESCO, ²NASA Jet Propulsion Laboratory

IG21-D1-EVE-P-007 | IG21-A007

A Densified Sentinel-1 in Time Series in Taiwan

Jui-Chi LEE^{1‡+}, Kuo-Hsin TSENG¹, Yu-Nung Nina LIN², Chung-Pai CHANG¹

¹National Central University, ²Nanyang Technological University

IG22-D1-EVE-P-008 | IG22-A003

Exact Short-Imminent Prediction of Strong M8.2 Earthquakes in Chile

Huirong ZHANG^{1‡+}, Weisheng CHEN¹
¹Beijing University of Technology

IG22-D1-EVE-P-009 | IG22-A007

Spatial and Temporal Variations of the Microseismicity

Preceding the 2016 Ml 6.6 Meinong Earthquake in Southern

Taiwan

Hsin-Chieh PU^{1#+}
¹Central Weather Bureau</sup>

IG22-D1-EVE-P-010 | IG22-A010

Multi-Channel Singular Spectrum Analysis of Atmospheric

Parameter Data to Understand

Lithosphere-Atmosphere-Ionosphere Coupling at Asahi

Station, Boso Peninsula, Japan

Chie YOSHINO 1* , Jumpei OMURA 1 , Peng HAN 2 , Katsumi HATTORI 1 , Michikuni SHIMO 3 , Toshiharu KONISHI 4 , Ryuichi FURUYA 5

¹Chiba University, ²Southern University of Science and Technology, ³Fujita Health University, ⁴Ohyo Koken Kogyo Co. Ltd., ⁵Com System Inc.

IG24-D1-EVE-P-010 | IG24-A002

A Real Time Monitoring System of Freshwater-Saltwater

Transition Zone in the Eastern Coast of Jeju Island, Korea

Jehyun SHIN^{1‡+}, Seho HWANG¹, Jongman KIM², Yongcheol KIM¹

¹Korea Institute of Geoscience and Mineral Resources, ²Smart Korea Co., Ltd.

IG24-D1-EVE-P-011 | IG24-A004

Direction of Disaster and Safety-Related Data Classification System for National Disaster and Safety Status Control Center in Korea

Insu JUNG1#+, Yongsoo LEE1

¹Korea Institute of Civil Engineering and Building Technology

IG24-D1-EVE-P-012 | IG24-A006

The Debris-Flow Disaster Preparedness and Emergency

Action Countermeasures in the Southwest Taiwan

Guei-Lin FU¹, Jui-Jen LIN¹, Yi-Ting LI² $^{\sharp *}$, Ming-Lung SHIH¹, Chun-Chia CHEN³, Li-Hsin CHEN⁴

¹Soil and Water Conservation Bureau, ²Taiwan Integrated Disaster Prevention of Technology Engineering Consulting Co., Ltd., ³Integrated Disaster Prevention of Technology Engineering Consulting Co., Ltd., ⁴National Cheng Kung University

IG24-D1-EVE-P-013 | IG24-A010

Spatial and Temporal Gravity Change and Mass

Redistribution at the Wandan Mud Volcano in Taiwan

Kai-Chien CHENG^{1‡+}, Ling-Ho CHUNG², Yuan-Hsi LEE¹, Ricky KAO³

¹National Chung Cheng University, ²National Museum of Natural Science, ³University of Calgary

IG24-D1-EVE-P-014 | IG24-A011

Implementation of Roadmap of Disaster Safety Data Code System for National Disaster and Safety Status Control Center in Korea

Yongsoo LEE1#+, Insu JUNG1

¹Korea Institute of Civil Engineering and Building Technology

IG24-D1-EVE-P-015 | IG24-A012

Building a Precise Surface Data and Probabilistic Analysis for Slope Hazard Map

Sung-Wook KIM¹^{‡+}, Eun-Kyeong CHOI¹, Jin-Hyeok LEE¹, Khil-Ha LEE², Seung-Hyun KIM³, Ho-Bon KOO³

¹GI Co. Ltd., ²Daegu University, ³Korea Institute of Civil Engineering and Building Technology

IG24-D1-EVE-P-016 | IG24-A017

A Field-Specific Early Warning System of

Agrometeorological Hazard for Risk Management in

Agricultural Sector of Korea

Myung-Pyo JUNG¹*, Kyo-Moon SHIM¹*, Yongseok KIM¹, Kee-Kyung KANG¹

¹National Institute of Agricultural Sciences

IG24-D1-EVE-P-017 | IG24-A028

Resilience-Based Risk Assessment of Hazardous and

Noxious Substances Maritime Spill in the Sea Around Korea

Peninsular

Jinho KIM^{1‡+}, Junyeong KIM², Hyungi BAE², Woo-Ri KIM²
¹Chungbuk National University, ²Cuber Solution Ltd

IG24-D1-EVE-P-018 | IG24-A034

GIS-based Risk Assessment of HNS spill accident in the

Korean seas

Junyeong KIM^{1#+}, Dong-Hyun LEE¹
¹Cuber Solution Ltd

IG25-D1-EVE-P-009 | IG25-A002

Revisiting the Spatial-Seasonal Patterns in Precipitation and

its Oxygen Isotope Ratios Across the Asian Summer

Monsoon Region: Local or Large-Scale Effects

Zhongyin CAI^{1‡+}, Lide TIAN², Nai CAO³, Gabriel BOWEN⁴
¹Chinese Academy of Sciences, ²Yunnan University, ³China
University of Petroleum, ⁴University of Utah

IG25-D1-EVE-P-010 | IG25-A003

Impact of Precipitation and Environment on the Water Stable

Isotope in Taozi Lake in Southern China

Xinping ZHANG¹**, Minquan HUA¹, Huade GUAN², Tianci YAO³

¹Hunan Normal University, ²Flinders University, ³Chinese Academy of Sciences

IG25-D1-EVE-P-011 | IG25-A007

Development and Evaluation of a Spectral Analysis Method

to Eliminate Organic Interference with Cavity Ring-Down

Measurements of Water Isotope Ratios

Zhiwei LIN^{1‡+}, David KIM-HAK², Thomas GOTTSCHALK² ¹Picarro Inc., ²Picarro, Inc.

IG25-D1-EVE-P-012 | IG25-A008

A Holocene Summer Temperature Record from the Altai

Mountaincs, Central Asia

Zhiguo RAO1#+

¹Hunan Normal University

PS Poster Presentations

Mon - 04 Jun, 18:30 - 20:30 | Ballroom B

PS01-D1-EVE-P-009 | PS01-A001

Identification of NEO Orbits Containing Debris

Christopher RUSSELL^{1#+}, Hairong LAI¹
¹University of California, Los Angeles

PS01-D1-EVE-P-010 | PS01-A003

The Lunar Lander Neutron & Dosimetry (LND) Experiment on Chang'E4

Robert WIMMER-SCHWEINGRUBER^{1#+}, Shenyi ZHANG², Christine HELLWEG³, Jia YU¹, Jingnan GUO¹, Henning LOHF¹, Thomas BERGER³, Stephan BÖTTCHER¹, Sönke BURMEISTER¹, Alke KNAPPMANN¹, Violetta KNIERIM¹, Björn SCHUSTER¹, G. SHEN², B. YUAN²

¹University of Kiel, ²Chinese Academy of Sciences, ³German Aerospace Center

PS01-D1-EVE-P-011 | PS01-A004

Ground-Based Experimental Imaging Simulations of

Hayabusa2 Observations

Keiichi MOROI¹*+, Shingo KAMEDA¹, Seiji SUGITA²¹Rikkyo University, ²The University of Tokyo

PS01-D1-EVE-P-012 | PS01-A005

Flying a Spacecraft Through a Lunar Magnetic Anomaly:

Measurement Requirements as Defined by Fully Kinetic

Modelling

Jan DECA^{1‡+}, Andrey DIVIN², Charles LUE³, Bertrand LEMBEGE⁴, Mihaly HORANYI¹

¹University of Colorado Boulder, ²St. Petersburg State University, ³University of Iowa, ⁴National Centre for Scientific Research

PS02-D1-EVE-P-006 | PS02-A001

Titan's Major Geomorphological Units: Their Spectral and

Morphological Nature

Anezina SOLOMONIDOU1#+

¹Jet Propulsion Laboratory, California Institute of Technology

PS02-D1-EVE-P-007 | PS02-A005

$Interior \hbox{-} Surface \hbox{-} Atmosphere \ Interactions in the \ Earth's$

Magma Ocean Stage

Gianluigi ORTENZI^{1‡}, Nisha KATYAL¹, Athanasia NIKOLAOU¹, Sabrina SCHWINGER¹, Frank SOHL¹⁺ ¹German Aerospace Center

PS02-D1-EVE-P-008 | PS02-A006

Global Geomorphology Map of Titan: A Look at the North and South Poles

Ashley SCHOENFELD^{1‡+}, Tiffany VERLANDER², Rosaly LOPES³, Michael MALASKA³, Samuel BIRCH⁴
¹UCLA, ²University of Oklahoma, ³Jet Propulsion Laboratory, California Institute of Technology, ⁴Cornell University

PS03-D1-EVE-P-022 | PS03-A002

Hardware Development Status of the Submm Wave

Instrument on JUICE

Paul HARTOGH1#+

¹Max Planck Institute for Solar System Research

PS03-D1-EVE-P-023 | PS03-A003

The Chirp Transform Spectrometer on JUICE-SWI

Paul HARTOGH1#+

¹Max Planck Institute for Solar System Research

PS03-D1-EVE-P-024 | PS03-A004

Investigation on Interference Between Active Microwave

Remote Sensors on Earth Observation Satellites

Yaying XIONG^{1*+}, Wei ZUO¹, Chun-Lai LI¹, Jianjun LIU¹, Xiaoxia ZHANG¹, Wenrui WANG¹
¹Chinese Academy of Sciences

PS03-D1-EVE-P-025 | PS03-A012

A Hidden Terrain in Western Lunar Farside Revealed by CE-2 CELMS Data

Zhiguo MENG¹⁵+, Shuo HU¹, Jinsong PING², Lilin XING¹, Yangang WU¹ ¹Jilin University, ²Chinese Academy of Sciences

PS03-D1-EVE-P-026 | PS03-A015

Herschel/HIFI Continuum Intensity Repeatability from Mars

Observations

 $Miriam \; RENGEL^{1,2\#+}\text{, David TEYSSIER}^2$

¹Max Planck Institute for Solar System Research, ²European Space Astronomy Centre

PS03-D1-EVE-P-027 | PS03-A018

Development of Calibration Hot Load of Terahertz

Explorer-1 for Mars Atmospheric Observation

Yuki UCHIYAMA^{1,2s+}, Toshiyuki NISHIBORI³, Shigeru SATO¹, Satoshi OCHIAI¹, Yukio NAKANO², Yasuko KASAI¹
¹National Institute of Information and Communications Technology, ²Tokyo Gakugei University, ³Japan Aerospace Exploration Agency

PS03-D1-EVE-P-028 | PS03-A019

Correlation of CCD Aperture Photometry and Herschel

Photometry of 29P/Schwassmann-Wachmann from the

Herschel Catalogue of Solar System Object Observations

Mark KIDGER^{1#+}, Miriam RENGEL^{1,2}, Cristina ROMERO³
¹European Space Astronomy Centre, ²Max Planck Institute for Solar System Research, ³Technische Universität Berlin

PS03-D1-EVE-P-029 | PS03-A020

Radiative Transfer Simulation Including a Non-LTE Model

for Terahertz Observations of Ganymede's Atmosphere

Takayoshi YAMADA^{1,2#}, Ladislav REZAC³, Richard LARSSON⁴, Paul HARTOGH³, Naohiro YOSHIDA², Yasuko

¹National Institute of Information and Communications Technology, ²Tokyo Institute of Technology, ³Max Planck Institute for Solar System Research, ⁴Mac Planck Institute for Solar System Research

PS03-D1-EVE-P-030 | PS03-A021

Feasibility Study for Terahertz Sensor on Martian Lander

Richard LARSSON¹^{‡+}, Yasuko KASAI², Takeshi KURODA^{2,3}, Shigeru SATO², Takayoshi YAMADA^{2,4}, Hiroyuki MAEZAWA⁵

¹Mac Planck Institute for Solar System Research, ²National Institute of Information and Communications Technology, ³Tohoku University, ⁴Tokyo Institute of Technology, ⁵Osaka Prefecture University

PS03-D1-EVE-P-031 | PS03-A024

Surface Properties of Comet 67P/Churyumov-Gerasimenko

from MIRO and VIRTIS

David MARSHALL^{1#+}

¹Max Planck Institute for Solar System Research

PS03-D1-EVE-P-032 | PS03-A034

Submillimeter Spectral Observations of the Smallest

Galilean Moon

Yi-Jehng KUAN $^{1\pm}$, Wei-Ling TSENG 1 , Yo-Ling CHUANG 1 , Chien-Hsun LI 2 , Ming-Chi CHUNG 1 , Yu-Fu YEH 1

¹National Taiwan Normal University, ²National Central University

PS03-D1-EVE-P-033 | PS03-A036

Middle Infrared Heterodyne Spectrometer Based on Fiber

Optics for Planetary Atmospheres Observations

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PS03-D1-EVE-P-034 | PS03-A037

Ground-Based Observations of Zeeman Effect with Tunable

Sub-Millimeter Sensor

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PS05-D1-EVE-P-007 | PS05-A006

Impact Velocity Between Particles in Saturn's Rings and

Implications for the Minimum Particle Size

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PS05-D1-EVE-P-008 | PS05-A008

The Formation of Spokes: The Role of Cohesion

Naoyuki HIRATA^{1#+}, Hiroshi KIMURA², Keiji OHTSUKI¹ ¹Kobe University, ²Chiba Institute of Technology

PS05-D1-EVE-P-009 | PS05-A009

Classification of Aggregated Structures in Saturn's Rings via

Image Texture Analysis

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PS06-D1-EVE-P-015 | PS06-A001

An Empirical Model of Titan's Magnetic Environment

During the Cassini Era: Evidence for Seasonal Variability Sven SIMON $^{15+}$

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PS06-D1-EVE-P-016 | PS06-A002

Influence of Asymmetries in the Magnetic Draping Pattern at

Titan on the Emission of Energetic Neutral Atoms

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PS06-D1-EVE-P-017 | PS06-A004

A Comprehensive Picture of Callisto's Magnetic and Cold

Plasma Environment During the Galileo Era: Implications

for JUICE

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PS06-D1-EVE-P-018 | PS06-A005

The Saturn Probe Interior and Atmosphere Explorer

(SPRITE) Entry Probe Mission Concept

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PS06-D1-EVE-P-019 | PS06-A009

Co-Rotating Magnetic Reconnection Site in Saturn's

Magnetosphere

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PS06-D1-EVE-P-020 | PS06-A010

Magnetospheric Particle Precipitation at Titan

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PS06-D1-EVE-P-021 | PS06-A012

Responses of the Jovian Magnetospheric Plasma Circulation

to IO's Volcanic Activity: The Hisaki Satellite Observation

Fuminori TSUCHIYA^{1;*}, Kazuo YOSHIOKA², Tomoki KIMURA³, Ryouichi KOGA¹, Go MURAKAMI⁴, Atsushi YAMAZAKI⁴, Masato KAGITANI¹, Chihiro TAO⁵, Hajime KITA¹, Ichiro YOSHIKAWA², Fumiharu SUZUKI², Reina HIKIDA², Yasumasa KASABA¹, Hiroaki MISAWA¹, Takeshi SAKANOI¹

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PS06-D1-EVE-P-022 | PS06-A019

Light Curves Analysis on Jupiter and Implications for Brown

Dwarfs and Exoplanets

Huazhi GE^{1#+}, Xi ZHANG¹, Leigh FLETCHER², Glenn ORTON³, James SINCLAIR³, Josh FERNANDES³, Yasumasa KASABA⁴, Takao M. SATO⁵, Thomas MOMARY³, Takuya FUJIYOSHI⁶, Ari WARREN¹

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Photochemistry in Saturn's Ring-Shadowed Atmosphere:

Photochemical and Haze Production

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PS06-D1-EVE-P-024 | PS06-A029

Ices in the Atmospheres of the Outer Solar System

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PS07-D1-EVE-P-021 | PS07-A004

Non-Thermal Radio Sources of Jupiter's Magnetosphere as

Identified by JUNO/MWR

Daniel SANTOS-COSTA^{1‡+}, Steven LEVIN², Samuel GULKIS², Michael JANSSEN², Paul STEFFES³, Amadeo BELOTTI³, Fabiano OYAFUSO², Shannon BROWN², Virgil ADUMITROAIE², Scott BOLTON¹, John CONNERNEY⁴

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PS07-D1-EVE-P-022 | PS07-A007

Predicting the Location of Io's Auroral Footprint from a

Voyager-Based Model and Comparing with Juno's

Observations

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Retrieval of Jovian Constituent Profiles Using Data from the Juno MWR

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PS07-D1-EVE-P-024 | PS07-A015

Fine-Scale Gravity Waves in Jupiter's Atmosphere Detected

by JunoCam

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PS07-D1-EVE-P-025 | PS07-A017

Electron Acceleration via Whistler-Mode Wave-Particle

Interactions by Juno in the Jovian Auroral and Polar Regions

Sadie ELLIOTT^{1;+}, Donald GURNETT¹, William KURTH¹, Barry MAUK², Philip VALEK³, Frederic ALLEGRINI^{3,4}, John CONNERNEY⁵, Scott BOLTON³

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PS07-D1-EVE-P-026 | PS07-A018

A History of Radio Science Investigations at Jupiter

Dustin BUCCINO^{1#+}, Marzia PARISI¹
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Gravity Detection of Jupiter's Great Red Spot with the Juno

Mission

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PS07-D1-EVE-P-028 | PS07-A025

The Galilean satellites as seen by Juno/JIRAM

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PS07-D1-EVE-P-029 | PS07-A029

Juno Observations of Energetic Charged Particles Associated

with Jupiter's Aurora

Abigail RYMER^{1#}, Barry MAUK¹, Peter KOLLMANN¹, Dennis HAGGERTY¹, George CLARK¹, Chris PARANICAS¹, William KURTH², Sadie ELLIOTT², Frederic ALLEGRINI^{3,4}, Robert EBERT³, John CONNERNEY⁵, Scott BOLTON³

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PS07-D1-EVE-P-030 | PS07-A031

High Energy Particle Fluxes of Jupiter Measured by the

Magnetometer Investigation's Advanced Stellar Compass

John JORGENSEN^{1,*}, Peter JORGENSEN¹, Julia SUSHKOVA¹, José MERAYO¹, Troelz DENVER¹, Matija HERCEG¹, Finn JOERGENSEN¹, J. E. P. CONNERNEY², Scott BOLTON³, Steven LEVIN⁴

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Juno and the New Renaissance

Theodore CLARKE^{1#+}
¹Iuno

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Towards an Improved Model of Jovian Synchrotron

Emissions Using Juno's MWR Observations

Virgil ADUMITROAIE^{1‡+}, Steven LEVIN¹, Fabiano OYAFUSO¹, Michael JANSSEN¹, Samuel GULKIS¹, Shannon BROWN¹, Daniel SANTOS-COSTA², Scott BOLTON²

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PS07-D1-EVE-P-033 | PS07-A039

Jupiter's Moment of Inertia and Evolution of the Its Spin

Ryan PARK $^{1\#}$, William FOLKNER 2 , Valery LAINEY 1 , Robert JACOBSON 1 , James WILLIAMS 1

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PS07-D1-EVE-P-034 | PS07-A040

Analysis of Eddy Current Generation on the Juno Spacecraft

in Jupiter's Magnetosphere

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PS07-D1-EVE-P-035 | PS07-A041

Evidence of Field-Aligned Currents in Jupiter's Polar

Magnetosphere

Stavros KOTSIAROS^{1‡+}, J. E. P. CONNERNEY¹, Barry MAUK², George CLARK², William KURTH³, Frederic ALLEGRINI^{4,5}, Scott BOLTON⁴, Steven LEVIN⁶

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PS07-D1-EVE-P-036 | PS07-A042

Juno Mission Supporting Observations of Jupiter with the Gemini Telescope

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PS08-D1-EVE-P-008 | PS08-A002

Photopolarimetric Properties of Irregular Dust Particles

Modeled Using Sh-Matrix Method

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PS08-D1-EVE-P-009 | PS08-A005

Particle Size Evolution of the Lunar Regolith

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PS08-D1-EVE-P-010 | PS08-A014

Observing Oceans in Tightly Packed Planetary Systems: Perspectives from Polarization Modeling of the Trappist-1 System

Pushkar KOPPARLA^{1#+}, Vijay NATRAJ¹, David CRISP², Kimberly BOTT³, Mark SWAIN², Yuk YUNG¹
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PS08-D1-EVE-P-011 | PS08-A015

Exploring Jupiter's Atmosphere Using Polarimetry

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PS09-04-D1-EVE-P-024 | PS09-04-A008

The Global Variation of Venus Cloud Observed by IR1 Onboard Akatsuki

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PS09-04-D1-EVE-P-025 | PS09-04-A015

Waves in the Upper Atmosphere and Ionosphere of Mars as seen by the Radio Science Experiment MaRS on Mars Express

Silvia TELLMANN¹⁵⁺, Martin PÄTZOLD¹, Bernd HÄUSLER², David P. HINSON³, Kerstin PETER⁴, G. Leonard TYLER³
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PS09-04-D1-EVE-P-026 | PS09-04-A017

Interactions Between Photochemistry and Condensation in the Venusian Atmosphere

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Berkley

PS09-04-D1-EVE-P-027 | PS09-04-A018

Scale Height Computation of MAVEN NGIMS Neutral Data and Variations Between Exobase and Homeopause Scale Heights and Temperatures

Meredith ELROD^{1#+}, Marek SLIPKSI², Kali ROETEN³, Stephan W. BOUGHER³, Sonal JAIN², Hayley WILIAMSON⁴

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PS09-04-D1-EVE-P-028 | PS09-04-A022

The Response of the Martian Ionosphere to the 10.

September 2017 Solar Event

Christy LENTZ^{1‡+}, Dan BAKER¹, Trevor LEONARD¹, Laila ANDERSSON¹, Christopher FOWLER¹
¹University of Colorado Boulder

PS09-04-D1-EVE-P-029 | PS09-04-A024

Temperature Deviation at the Cloud-Top Level of Venus Obtained by Close-Up Observations of LIR on Board Akatsuki

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PS09-04-D1-EVE-P-030 | PS09-04-A030

Upper Atmospheric and Ionospheric Impacts of Global-Scale Dust Storms on Mars

Dylan DEMPSTER^{1‡+}, Christopher RUSSELL¹, Y.J. MA¹, Janet LUHMANN², Stephan W. BOUGHER³, David KASS⁴

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PS09-04-D1-EVE-P-031 | PS09-04-A032

New Strategy for Lightning Hunt in Venus by Akatsuki Spacecraft

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PS09-04-D1-EVE-P-032 | PS09-04-A034

Physical Heights for Telluric Planets

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University of New Brunswick

PS09-04-D1-EVE-P-033 | PS09-04-A040

Testing Formation Hypotheses for the Hypanis Deposit at the Edge of the Chryse Basin, Mars: Is it a Delta? Jacob ADLER^{1#+}, James BELL¹

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PS10-D1-EVE-P-008 | PS10-A003

A Geomorphological and Experimental Investigation of

Volatiles on Ceres and Vesta

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PS10-D1-EVE-P-009 | PS10-A007

Impact Gardening on Ice-Rich Ceres

Norbert SCHORGHOFER¹, Shane BYRNE², Emily COSTELLO³, Rebecca GHENT¹, Henry H. HSIEH^{1,4}, Margaret LANDIS², Hanna SIZEMORE¹, Thomas PRETTYMAN^{1,5}, Julie CASTILLO-ROGEZ⁶, Christopher RUSSELL⁷, Carol RAYMOND⁶

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PS10-D1-EVE-P-010 | PS10-A008

The Opposition Effect on Ceres Observed by the Dawn

Framing Cameras

Jian-Yang LI¹⁺, Stefan E. SCHRÖDER², Marc RAYMAN³, Steven JOY⁴, Carol POLANSKEY³, Uri CARSENTY², Julie CASTILLO-ROGEZ³, Ralf JAUMANN², Lucy A. MCFADDEN⁵, Stefano MOTTOLA², Mark V. SYKES¹, Carol RAYMOND³, Christopher RUSSELL⁴

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PS10-D1-EVE-P-011 | PS10-A011

Floor-Fractured Craters on Ceres

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PS11-D1-EVE-P-020 | PS11-A008

Current Status (2018s) of Development of Active X-Ray

Generators for X-Ray Fluorescence Spectroscopy in Future

Lunar and Planetary Landing Missions

Hiroshi NAGAOKA^{1‡+}, Naomichi TANAKA², Shintaro KIGA², Masayuki NAITO², Nobuyuki HASEBE², Haruyoshi KUNO², Kyeong Ja KIM³

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PS11-D1-EVE-P-021 | PS11-A012

Localization of Dark Mantle Deposit on the Lunar Surface

with Shadow Masked Multiband Imager Data

Riho ITO¹⁸⁺, Hiroka INOUE², Makiko OHTAKE², Yoshiaki ISHIHARA², Hisashi OTAKE², Ryosuke NAKAMURA¹
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PS11-D1-EVE-P-022 | PS11-A013

Automatical Crater Extraction by Generative Adversarial

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PS11-D1-EVE-P-023 | PS11-A021

Implications of the Young Lunar Crater Population for Regolith Evolution

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PS11-D1-EVE-P-024 | PS11-A035

Preliminary Result of Unsupervised Classification for Reflectance Spectra of Mercury's Surface Obtained by MESSENGER/MDIS

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PS11-D1-EVE-P-025 | PS11-A036

An Ultraviolet Examination of Global Lunar Regolith Maturation

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PS12-D1-EVE-P-008 | PS12-A003

From Grain Formation to Dust Aggregation in the Solar Protoplanetary Disk

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PS12-D1-EVE-P-009 | PS12-A004

Did Mars Witness the Birth of Jupiter?

Ramon BRASSER^{1#+}, Nicolas DAUPHAS², Stephen MOJZSIS³ ¹Earth Life Science Institute, ²University of Chicago, ³University of Colorado Boulder

PS12-D1-EVE-P-010 | PS12-A010

Nb-Zr Chronometer and its Application to Early Silicate

Differentiation of Earth and Mars

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⁴University of Maryland, ⁵Université du Québec à Montréal

PS12-D1-EVE-P-011 | PS12-A011

Modeling the Parent Body of the Acapulco-lodran Clan: An Insight into Partially Differentiated Asteroids

Wladimir NEUMANN $^{1,2\sharp*}$, Doris BREUER 2 , Tilman SPOHN 2 , Stephan HENKE 3 , Hans-Peter GAIL 3 , Winfried SCHWARZ 3 , Mario TRIELOFF 3 , Jens HOPP 3

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PS12-D1-EVE-P-012 | PS12-A013

Chromium Isotope Systematics of Chondrules

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PS13-D1-EVE-P-008 | PS13-A007

Reliability of Non-Heating Paleointensity Methods on Fe-Ni Alloy Samples: Implications for Meteorite Paleointensity Study

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PS13-D1-EVE-P-009 | PS13-A010

Modelling the Geomagnetic Field in China in Recent Satellite Era

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PS14-D1-EVE-P-013 | PS14-A004

Archive Data Management Plans and Planning for Scientists in the Earth and Space Sciences

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PS14-D1-EVE-P-014 | PS14-A006

New Spice Tools Supporting Planetary Data Research

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PS14-D1-EVE-P-015 | PS14-A009

Preliminary Unsupervised Classification of 4 Vesta's Surface Using Multiband Reflectance Data Obtained by Dawn

Framing Camera

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PDS Data Sets as Refereed Publications

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PS14-D1-EVE-P-017 | PS14-A017

Database Development of Global Jovian Magnetosphereic

MHD Simulations for Collaboration with Observations

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PS14-D1-EVE-P-018 | PS14-A018

Data Collection, Archive and Crowdsourcing in Pro-Am

Observing Campaigns in Planetary Sciences

Padma A YANAMANDRA-FISHER^{1#+}, Tavi GRIENER², Christina FELICIANO³, Tony ANGEL⁴, Efrain MORALES⁵ ¹Space Science Institute, ²Astronomy FN, ³Slooh.com, ⁴The Harlingten Observatory, ⁵The PACA Project

PS16-D1-EVE-P-009 | PS16-A001

The Induced Magnetic Field at Titan

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PS16-D1-EVE-P-010 | PS16-A004

New Plasma Waves Observed at Saturn During Cassini's

Proximal Orbits

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PS16-D1-EVE-P-011 | PS16-A006

Constraints on Titan Lake Origin Using Outline-Based

Shape and Size Analysis

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The Complete Set of Cassini's UVIS Occultation

Observations of Enceladus Jets: DSMC Model

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PS16-D1-EVE-P-013 | PS16-A015

Interior Models that Explain Saturn's Unusual Gravity Field

Burkhard MILITZER^{1;*}, William HUBBARD², Sean WAHL¹, Luciano IESS³, Jonathan FORTNEY⁴

¹University of California, Berkeley, ²University of Arizona, ³Sapienza University of Rome, ⁴University of California, Santa Cruz

PS16-D1-EVE-P-014 | PS16-A016

Characterization of the Composition of Saturn Ring Material

Measured by Cassini Ion and Neutral Mass Spectrometer

Bryce BOLTON1#+, Kelly MILLER2, J. Hunter WAITE, JR.2, Rebecca PERRYMAN2

¹Artistic Sciences, Inc., ²Southwest Research Institute

PS17-D1-EVE-P-029 | PS17-A002

A New Mars Coupled Ionosphere-Thermosphere Model in

IGGCAS: First Results

Zhipeng REN¹*, Weixing WAN¹, Yunbo LIU¹, Yong WEI¹
¹Chinese Academy of Sciences

PS17-D1-EVE-P-030 | PS17-A003

Species-Dependent Ion Escape on Titan

Fayu JIANG^{1#+}, Jun CUI^{1,2}, Rong LI¹, Jiyao XU¹
¹Chinese Academy of Sciences, ²Sun Yat-sen University

PS17-D1-EVE-P-031 | PS17-A005

The Impact of Crustal Magnetic Fields on the Thermal

Structure of the Martian Upper Atmosphere

Jun CUI^{1,2±+}, Roger YELLE³, Lingling ZHAO⁴, Meijuan YAO¹, Shane STONE³, Fayu JIANG², Yutian CAO², Tommi KOSKINEN³, Yong WEI²

¹Sun Yat-sen University, ²Chinese Academy of Sciences, ³University of Arizona, ⁴University of Chinese Academy of Sciences

PS17-D1-EVE-P-032 | PS17-A010

The Mars' Induced Magnetosphere When the Crustal Field is on the Dayside

Xiaojun XU1#+

¹Macau University of Science and Technology

PS17-D1-EVE-P-033 | PS17-A012

Size of the Mercury's Magnetosphere: Seasonal Variations and IMF Dependence

Jun ZHONG $^{1\pi+}$, Qiugang ZONG 2 , Jih-Hong SHUE 3 , Yong WEI 4 , Weixing WAN 4

¹Institute of Geology and Geophysics, Chinese Academy of Sciences, ²Peking University, ³National Central University, ⁴Chinese Academy of Sciences PS17-D1-EVE-P-034 | PS17-A020

Correlating Solar Wind Modulation with Ionospheric

Variability at Mars from MEX and MAVEN Observations

Andrew KOPF¹^{‡+}, David D. MORGAN¹, Yuki HARADA², Jasper HALEKAS¹, Donald GURNETT¹

¹The University of Iowa, ²Kyoto University

PS17-D1-EVE-P-035 | PS17-A023

Electron Precipitation Control of the Mars Nightside

Robert LILLIS¹, Zachary GIRAZIAN², David MITCHELL³, Mehdi BENNA², Meredith ELROD², Christopher FOWLER⁴, Laila ANDERSSON⁴

¹University of California Berkeley, ²NASA Goddard Space Flight Center, ³University of California, Berkeley, ⁴University of Colorado Boulder

PS17-D1-EVE-P-036 | PS17-A028

Solar Cycle Dynamic of the Martian Induced

Magnetosphere. Planetary Ions Acceleration Zones and

Escape

Andrey FEDOROV¹**, Ronan MODOLO², Riku JARVINEN³, Stas BARABASH⁴

¹University of Toulouse, ²University of Versailles Saint Quentin, ³Finnish Meteorological Institute, ⁴Swedish Institute of Space Physics

PS17-D1-EVE-P-037 | PS17-A030

Ionization of the Martian Atmosphere Due to High Energy Particles

Patrick DUNN^{1,*}, Ali RAHMATI¹, Janet LUHMANN¹, Davin LARSON¹, Robert LILLIS²

¹University of California, Berkeley, ²University of California Berkeley

PS17-D1-EVE-P-038 | PS17-A031

The Solar Wind Interaction with Mercury

Mats HOLMSTRÖM^{1#+}, Shahab FATEMI¹

¹Swedish Institute of Space Physics

PS17-D1-EVE-P-039 | PS17-A036

Spectral Analysis of the Accelerated Electron Distributions

in the Nightside Ionosphere of Mars

Hassanali AKBARI¹⁵⁺, Laila ANDERSSON¹, Christopher FOWLER¹, David MITCHELL²

¹University of Colorado Boulder, ²University of California, Berkeley

PS17-D1-EVE-P-040 | PS17-A043

Influence of Magnetic Topology on Mars Ionospheric

Structure

Danica ADAMS¹⁵⁺, Shaosui XU¹, David MITCHELL¹, Laila ANDERSSON², Christopher FOWLER², Meredith ELROD³, Mehdi BENNA³, J. E. P. CONNERNEY³, Robert LILLIS⁴, Matthew FILLINGIM¹, Marissa VOGT⁵, Zachary GIRAZIAN³¹University of California, Berkeley, ²University of Colorado Boulder, ³NASA Goddard Space Flight Center, ⁴University of California Berkeley, ⁵Boston University

PS17-D1-EVE-P-041 | PS17-A044

Impact Ionization of Neutrals by Foreshock Electrons at Mars

Christian MAZELLE^{1‡+}, Karim MEZIANE², David MITCHELL³, Philippe GARNIER⁴, Jared ESPLEY⁵, Abelhaq HAMZA², Jasper HALEKAS⁶, Bruce JAKOSKY⁷

¹IRAP / CNRS - University of Toulouse - UPS - CNES, ²University of New Brunswick, ³University of California, Berkeley, ⁴University of Toulouse, ⁵NASA Goddard Space Flight Center, ⁶The University of Iowa, ⁷University of Colorado Boulder

PS18-D1-EVE-P-009 | PS18-A002

Habitability Potential of Icy Moons Around Giant Planets and Future Exploration

Athena COUSTENIS^{1#}, Anezina SOLOMONIDOU²⁺
¹Paris Observatory, ²Jet Propulsion Laboratory, California Institute of Technology

PS18-D1-EVE-P-010 | PS18-A003

Sea-Ice Melting Rates During the Snowball Earth

Deglaciation

Zhouqiao ZHAO^{1#+}, Yonggang LIU¹
¹Peking University

PS18-D1-EVE-P-011 | PS18-A004

Orbital Evolution of Saturn's Mid-Sized Moons and Tidal

Heating of Enceladus

Ayano NAKAJIMA $^{1\pm *},$ Shigeru IDA $^{1},$ Ramon BRASSER $^{2},$ Jun KIMURA 3

 $^{1} Tokyo$ Institute of Technology, $^{2} Earth$ Life Science Institute, $^{3} Osaka$ University

PS18-D1-EVE-P-012 | PS18-A006

The Geology of the Rocky Interiors of Enceladus, Europa,

Titan, and Ganymede

Paul BYRNE^{1‡+}, Paul REGENSBURGER¹, Christian KLIMCZAK², DelWayne BOHNENSTIEHL¹, Steven HAUCK³, Andrew DOMBARD⁴, Douglas HEMINGWAY⁵

¹North Carolina State University, ²University of Georgia, ³Case Western Reserve University, ⁴The University of Illinois at Chicago, ⁵University of California, Berkeley

PS18-D1-EVE-P-013 | PS18-A007

Evolution of Subsurface Ocean and Constraint for the

Interior in Pluto

Jun KIMURA^{1#+}, Shunichi KAMATA²
¹Osaka University, ²Hokkaido University

PS18-D1-EVE-P-014 | PS18-A008

Young Surface of Pluto's Sputnik Planitia Caused by Viscous

Relaxation

Qiang WEI^{1,2#+}, Yonggang LIU² ¹California Institute of Technology, ²Peking University

PS18-D1-EVE-P-015 | PS18-A010

Thermo-Chemical Evolution of Icy Bodies: From Dust

Aggregates to Ocean Worlds

Wladimir NEUMANN^{1,2#+}

¹University of Münster, ²German Aerospace Center

PS18-D1-EVE-P-016 | PS18-A015

The Europa Clipper Mission, Exploring the Habitability of an Icy Ocean World

Steven VANCE^{1#+}, Robert PAPPALARDO², David SENSKE², Haje KORTH³, Kate CRAFT³, Rachel KLIMA³, Cynthia PHILLIPS², Christina RICHEY²

¹Jet Propulsion Laboratory, Caltech, ²Jet Propulsion Laboratory, California Institute of Technology, ³The Johns Hopkins University Applied Physics Laboratory

PS18-D1-EVE-P-017 | PS18-A018

Possible Non-Synchronic Spin States for Warm Jupiters in

Multiple Exoplanetary Systems

Yuan-Yuan CHEN^{1‡+}, Yuhui ZHAO², Alice QUILLEN³
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³University of Rochester

PS19-D1-EVE-P-015 | PS19-A003

Electron Impact Excitation of Water Relevant for Comet

Comae

Juraj ORSZAGH^{1‡+}, Dennis BODEWITS², Stefan MATEJCIK¹ ¹Comenius University Bratislava, ²University of Maryland

PS19-D1-EVE-P-016 | PS19-A004

The Detection of Crystalline Water Ice in Comet P/2010 H2 Bin YANG^{1,2‡+}

¹Yunnan observatories, Chinese Academy of Sciences, ²European Southern Observatory

PS19-D1-EVE-P-017 | PS19-A007

The Mass Loss of Comet 67P/Churyumov-Gerasimenko and Implications

Martin PÄTZOLD¹⁵+, Tom ANDERT², Jean-Pierre BARRIOT³, Matthias HAHN⁴, Michael K. BIRD⁵, Bernd HAEUSLER², Silvia TELLMANN¹

¹Rhenish Institute for Environmental Research, ²Universität der Bundeswehr München, ³Université de la Polynésie Française, ⁴University of Cologne, ⁵University of Bonn

PS19-D1-EVE-P-018 | PS19-A008

On the Origin of Internal Layers in Comet

67P/Churyumov-Gerasimenko

Jian-Yang LI1**, Michael J.S. BELTON2-3, Xiao-Duan ZOU1, Erik ASPHAUG4

¹Planetary Science Institute, ²Belton Space Exploration Initiatives, LLC, ³Kitty Peak National Observatory, ⁴University of Arizona

PS19-D1-EVE-P-019 | PS19-A011

A Fully Kinetic Perspective of Electron Acceleration Around a Weakly Outgassing Comet: Ohm's Law

Jan DECA^{1#}, Andrey DIVIN², Pierre HENRI³, Anders ERIKSSON⁴, Vyacheslav OLSHEVSKY⁵, Stefano MARKIDIS⁶, Mihaly HORANYI¹

¹University of Colorado Boulder, ²St. Petersburg State University, ³National Center for Scientific Research, ⁴Swedish Institute of Space Physics, ⁵KU Leuven, ⁶KTH Royal Institute of Technology

PS19-D1-EVE-P-020 | PS19-A014

Deep Search for Cometary Activity at Asteroid (3200)

Phaethon

Michael KELLEY^{1‡+}, Matthew KNIGHT¹, Nick MOSKOVITZ², Annika GUSTAFSSON³, Dave SCHLEICHER²

¹University of Maryland, ²Lowell Observatory, ³Northern Arizona University

PS19-D1-EVE-P-021 | PS19-A016

Main-Belt Comets: A Status Report

Henry H. HSIEH1,2#+

¹Planetary Science Institute, ²Academia Sinica

PS19-D1-EVE-P-022 | PS19-A017

Upper Limits for Emission in the Coma of Comet

67P/Churyumov-Gerasimenko Near Perihelion as Measured

by Rosetta's Alice Ultraviolet Spectrograph

Brian KEENEY^{1‡}*, S. Alan STERN¹, Ronald VERVACK², John NOONAN³, Joel PARKER¹, Jean-Loup BERTAUX⁴, Lori FEAGA⁵, Paul FELDMAN², Matthew KNIGHT⁵, Andrew STEFFL¹, Harold WEAVER²

¹Southwest Research Institute, ²Johns Hopkins University, ³Lunar and Planetary Laboratory, ⁴University of Versailles Saint-Quentin-en-Yvelines, ⁵University of Maryland

PS19-D1-EVE-P-023 | PS19-A026

Chemical Evolution of Complex Organics in Ices, from

Interstellar Ice to Comets

Daniel PAARDEKOOPER $^{1,2\sharp*}$, Gudipati MURTHY 1 , Bryana HENDERSON 1

¹Jet Propulsion Laboratory, California Institute of Technology, ²Universities Space Research Association

PS20-D1-EVE-P-017 | PS20-A011

The First Science Results of HSC-SSP in Solar System

Science

Ying-Tung CHEN $^{1*+}$, Tsuyoshi TERAI 2 , Hsing-Wen LIN 3 , Fumi YOSHIDA 4 , Shiang-Yu WANG 1

¹Academia Sinica, ²National Astronomical Observatory of Japan, ³University of Michigan, ⁴Chiba Institute of Technology and Kobe University

PS20-D1-EVE-P-018 | PS20-A012

The Castalia mission to a Main Belt Comet

Neil BOWLES $^{1\pm}$, Henry H. HSIEH 2,3 , Colin SNODGRASS 4 , Geraint JONES 5

¹University of Oxford, ²Planetary Science Institute, ³Academia Sinica, ⁴The Open University, ⁵University College London

PS20-D1-EVE-P-019 | PS20-A021

OKEANOS - The Solar Power Sail Mission to Jupiter Trojan

Asteroid

Tatsuaki OKADA^{1#+}, Takahiro IWATA¹, Jun MATSUMOTO¹, Yoko KEBUKAWA², Motoo ITO³, Jun AOKI⁴, Hajime YANO¹, Makoto YOSHIKAWA¹, Toshihiro CHUJO¹, Osamu MORI¹
¹Japan Aerospace Exploration Agency, ²Yokohama National University, ³Japan Agency for Marine-Earth Science and Technology, ⁴Osaka University

PS20-D1-EVE-P-020 | PS20-A022

Solar System Science with the Large Synoptic Survey

Telescope

Chad TRUJILLO¹⁵⁺, Henry H. HSIEH^{2,3}, Megan SCHWAMB⁴, David TRILLING¹, Dennis BODEWITS⁵, Larry DENNEAU⁶, Michael KELLEY⁵, Lynne JONES⁷, Mario JURIC⁷, LSST SOLAR SYSTEM COLLABORATION⁸

¹Northern Arizona University, ²Planetary Science Institute, ³Academia Sinica, ⁴Gemini, ⁵University of Maryland, ⁶University of Hawaii, ⁷University of Washington, ⁸LSST Solar System

PS21-D1-EVE-P-006 | PS21-A002

Asteroid Family Associations of Active Asteroids

Henry H. HSIEH^{1,2#+}, Bojan NOVAKOVIC³, Yoonyoung KIM⁴, Ramon BRASSER⁵

¹Planetary Science Institute, ²Academia Sinica, ³University of Belgrade, ⁴Seoul National University, ⁵Earth Life Science Institute PS21-D1-EVE-P-007 | PS21-A006

Rapid Evolution of the Spin State of Comet

41P/Tuttle-Giacobini-Kresak

Dennis BODEWITS 15+, Tony FARNHAM 1, Michael KELLEY 1, Matthew KNIGHT 1

¹University of Maryland

PS22-D1-EVE-P-016 | PS22-A003

Multispectral Polarization Measurements of Eight Lunar Soils

Paul LUCEY^{1#+}, Casey HONNIBALL², Lingzhi SUN¹, Macey SANDFORD¹, Emily COSTELLO¹, Liliane BURKHARD¹, Reilly BRENNAN¹

¹University of Hawaii at Manoa, ²University of Hawaii

PS22-D1-EVE-P-017 | PS22-A004

Linking Aqueous Mineralogy with Infrared Reflectance Spectroscopy of Carbonaceous Chondrites: Inferring the

History of C-Complex Asteroids

Helena BATES¹[‡], Ashley KING¹, Kerri DONALDSON HANNA², Neil BOWLES², Sara RUSSELL¹, Tristram WARREN²+

¹Natural History Museum, ²University of Oxford

PS22-D1-EVE-P-018 | PS22-A006

Laboratory Analysis on HED Meteorite Samples in Support to Remote-Sensed Spectral Data from the NASA/Dawn Visible and Infrared Mapping Spectrometer on Asteroid Vesta

Melissa MIRINO^{1‡+}, Alessandro FRIGERI², Maria Cristina DE SANCTIS², Cristian CARLI², Fabio BELLATRECCIA³
¹Open University, ²National Institute for Astrophysics, ³Università Roma Tre

PS22-D1-EVE-P-019 | PS22-A010

Characterization of Miyake-Jima and Hachijo-Jima

Anorthites as Lunar Analogues

Kerri DONALDSON HANNA^{1‡+}, Stephen ELARDO², Emily BAMBER¹, Benjamin GREENHAGEN³, Joshua CAHILL³, Alfredo PETROV⁴, Neil BOWLES¹

¹University of Oxford, ²Carnegie Institution of Washington, ³The Johns Hopkins University Applied Physics Laboratory, ⁴Mindat

PS22-D1-EVE-P-020 | PS22-A012

Integrating Crystal Chemistry with Laboratory Analysis to

Model Bound and Adsorbed Water and Hydroxyl Rachel KLIMA^{1‡+}, Andy RIVKIN¹

¹The Johns Hopkins University Applied Physics Laboratory

PS22-D1-EVE-P-021 | PS22-A013

Investigating Thermal Emission from the Lunar Epiregolith

Benjamin GREENHAGEN^{1,*}, Parvathy PREM¹, Kerri DONALDSON HANNA², Neil BOWLES², Paul LUCEY³

¹The Johns Hopkins University Applied Physics Laboratory,

 2 University of Oxford, 3 University of Hawaii at Manoa

PS22-D1-EVE-P-022 | PS22-A015

Off-Plane Polarimetry of Lunar Regolith Materials in

Laboratory

Sungsoo KIM^{1#+}, Il Hoon KIM¹
¹Kyung Hee University

PS22-D1-EVE-P-023 | PS22-A023

Ultraviolet Characterization of Fe-Impregnated Silica Gels as

Analogues for Lunar Space Weathering

Karen CAHILL $^{1\#+}$, Joshua CAHILL 2 , Charles HIBBITTS 2 , Anna WIRTH 2 , Ken LIVI 2

¹Planetary Science Institute, ²The Johns Hopkins University Applied Physics Laboratory

PS22-D1-EVE-P-024 | PS22-A025

Determining Modal Mineralogy of Fine-Particulate Surfaces on Bennu Using Partial Least Squares (PLS) Analyses of OSIRIS-REX OTES and OVIRS Spectra

Deanne ROGERS^{1‡+}, Timothy GLOTCH¹, Dylan MCDOUGALL¹, Alexander KLING¹, Victoria HAMILTON², Dante LAURETTA³

¹Stony Brook University, ²Southwest Research Institute, ³University of Arizona

PS22-D1-EVE-P-025 | PS22-A028

Micro-FTIR Spectroscopy of Experimentally Shocked Basalts

Melissa SIMS18+, Jeffrey R. JOHNSON2, Steven JARET1, Timothy GLOTCH1

¹Stony Brook University, ²The Johns Hopkins University Applied Physics Laboratory

Presentations 5 JUN, 2018 TUESDAY

Day 2 - 05 Jun 2018, Tuesday Program Overview

05 Jun 2018, Tuesday				
Time / Room	AM1	AM2	PM1	PM2
	08:30 - 10:30	11:00 - 12:30	13:30 - 15:30	16:00 - 18:00
MR301	HS23 (p138)	KL-HS (p10), DL-HS (p6)		HS32 (p138)
MR302A	PS09-04 (p149)	PS05 (p149)	PS09-04 (p150)	PS09-04 (p151)
MR302B	AS08 (p118)	AS08 (p118)	AS08 (p118)	AS35 (p131)
MR303A	AS16-53 (p122)	AS16-53 (p122)	AS54 (p133)	AS54 (p133)
MR303B	AS34 (p129)	AS34 (p130)	AS34 (p130)	AS37 (p131)
MR304A	PS14 (p153)	PS14 (p154)	PS22 (p155)	PS22 (p156)
MR304B	BG05-SE (p134)	BG06-AS (p135)	BG06-AS (p135)	BG06-AS (p136)
MR314	SE11-13 (p159)	SE11-13 (p160)	SE22-35 (p162)	SE22-35 (p163)
MR315	AS31 (p127)	AS31 (p128)	AS31 (p128)	AS31 (p129)
MR317A	ST17 (p168)		SS03 (p165)	ST17 (p168)
MR317B	OS12 (p144)	OS12 (p144)	OS25-BG (p147)	OS25-BG (p147)
MR318A	HS34 (p139)			HS05 (p136)
MR318B	HS18 (p137)			HS11 (p137)
MR319A	AS20 (p123)	AS20 (p123)	AS20 (p124)	AS29 (p127)
MR319B	SE31-07 (p163)	SE31-07 (p164)	SE31-07 (p164)	SE31-07 (p165)
MR321A	SE21 (p161)	SE21 (p162)	SE02 (p156)	SE02 (p157)
MR321B	SE04 (p158)	SE03 (p157)	SE03 (p158)	SE16 (p160)
MR322A	OS18 (p145)	OS16 (p145)	OS18 (p146)	OS18 (p146)
MR322B	IG06 (p141)	IG22 (p142)	IG12 (p141)	IG12 (p142)
MR323A	IG01 (p139)		IG04 (p140)	IG04 (p140)
MR323B	PS18 (p154)	PS11 (p151)	PS11 (p152)	PS11 (p152)
MR323C	ST13 (p166)	KL-ST (p12), DL-ST (p8)	SS09 (p166)	ST13 (p167)
MR324	OS04 (p143)	OS05 (p143)	OS27 (p148)	OS27 (p148)
MR325A	AS11 (p119)	AS11 (p119)	AS11 (p120)	AS11 (p120)
MR325B	AS03 (p116)	AS03 (p116)	AS03 (p117)	AS03 (p117)
MR326A	AS13 (p121)	AS13 (p121)	AS49 (p132)	AS49 (p132)
MR326B	AS27 (p126)	AS27 (p126)	AS22 (p124)	AS22 (p125)
Ballroom B			ST Posters (p184)	
			HS Posters (p170)	

Sessions & Conveners

* Main Convener

AS03-Multi-scale Climate Variability Over Asia and Surrounding Oceans

*Tim LI University of Hawaii, Renhe ZHANG Fudan University, Tomoe NASUNO Japan Agency for Marine-Earth Science and Technology, Jong-Seong KUG Pohang University of Science and Technology, Song YANG Sun Yat-sen University

AS08-Madden-Julian Oscillation and Its Global Impacts

*Ziniu XIAO Chinese Academy of Sciences, Jian LING Chinese Academy of Sciences, Xiu-Qun YANG Nanjing University, Joshua-Xiouhua FU Fudan University, Shuguang WANG Columbia University

AS11-Impacts of Haze and Dust in East Asia: Mechanism, Observations, and Model Assessments

*Yuan WANG California Institute of Technology, Jianping GUO Chinese Academy of Meteorological Sciences, Chuanfeng ZHAO Beijing Normal University, Yong-Sang CHOI Ewha Womans University, Daizhou ZHANG Prefectural University of Kumamoto

AS13-11th Sasaki Symposium on Data Assimilation for

Atmospheric, Oceanic, and Hydrologic Applications

*Seon Ki PARK Ewha Womans University, Liang XU Naval Research Laboratory, Ibrahim HOTEIT King Abdullah University of Science and Technology, Takemasa MIYOSHI RIKEN Advanced Institute for Computational Science

AS16-53-Exploration and Science of the Earth's Lower and Middle Atmosphere: Past, Present and Future Perspectives

*Som Kumar SHARMA Physical Research Laboratory, Shikha RAIZADA Arecibo Observatory, D. V. PHANIKUMAR Aryabhatta Research Institute of Observational Sciences, Tai-Yin HUANG Penn State Lehigh Valley, Cheng-Ling KUO National Central University

AS20-High-resolution Simulation, Prediction, and Projection of High-impact Weather Events and Climate Change

*Huang-Hsiung HSU Academia Sinica, Malcolm ROBERTS Met Office Hadley Centre, Songyou HONG Korea Institute of Atmospheric Prediction Systems (KIAPS), Masaki SATOH The University of Tokyo, Shian-Jiann LIN National Oceanic and Atmospheric Administration

AS22-Remote Sensing of Ocean Color and Aerosols

*Pengwang ZHAI University of Maryland, Baltimore County, Feng XU Jet Propulsion Laboratory, California Institute of Technology

AS27-Changes in Cryosphere and Its Climate Impacts:

Observation and Modeling

*Chenghai WANG Lanzhou University, Jing ZHANG North Carolina A, Zong-Liang YANG The University of Texas at Austin, Zhaoxia PU University of Utah

AS29-Precipitation Extremes - Observations, Modelling,

Projections

*Akiyo YATAGAI Hirosaki University, Tosiyuki NAKAEGAWA Japan Meteorological Agency, Akio KITOH Japan Meteorological Business Support Center, Patama SINGHRUCK Chulalongkorn University, Vinay KUMAR Texas A&M University

AS31-The Science and Prediction of Tropical Cyclones

*Chun-Chieh WU National Taiwan University, Yuqing WANG University of Hawaii at Manoa, Kosuke ITO University of the Ryukyus, Zhuo WANG University of Illinois at Urbana-Champaign, Jeff KEPERT Centre for Australian Weather and Climate Research

AS34-El Niño Complexity and Change

*Malte STUECKER University of Washington, Fei-Fei JIN University of Hawaii, Hong-Li REN China Meteorological Administration, Jong-Seong KUG Pohang University of Science and Technology, Masahiro WATANABE The University of Tokyo

AS35-Mountain and Island Effects on Airflow, Precipitation,

Weather, and Climate

*Cheng-Ku YU National Taiwan University, Yuh-Lang LIN North Carolina A&T State University, Yileng CHEN University of Hawaii at Manoa, United States, Tetsuya TAKEMI Kyoto University

AS37-Earth System Models: Development, Validation and Uncertainties

*Xiaohong LIU University of Wyoming, Zhaohui LIN Chinese Academy of Sciences, Shaocheng XIE Lawrence Livermore National Laboratory, Yi MING National Oceanic and Atmospheric Administration, Huang-Hsiung HSU Academia Sinica

AS49-Mesoscale Meteorology and High-impact Weather

*Gyu Won LEE Kyungpook National University, Michael BELL Colorado State University, Taro SHINODA Nagoya University

AS54-Aerosols, Clouds, Radiation, Precipitation, and Their Interactions

*Xiquan DONG University of Arizona, Teri NAKAJIMA Japan Aerospace Exploration Agency, Byung-Ju SOHN Seoul National University, C.G. CUI China Meteorological Administration

BG05-SE-New Results from Advanced Spectroscopic and Thermal Infrared Measurements in North America, Hawaii, and South Asia

*Florian M. SCHWANDNER Jet Propulsion Laboratory, California Institute of Technology, Eric HOCHBERG Bermuda Institute of Ocean Sciences, Vincent REALMUTO Jet Propulsion Laboratory, California Institute of Technology

$BG06\text{-}AS\text{-}From\ GHG\ Observations\ to\ Fluxes:\ Top-down$

Measurements of the Carbon Cycle

*Christopher O'DELL Colorado State University, Andrew SCHUH Colorado State University, Makoto SAITO National Institute for Environmental Studies, Abhishek CHATTERJEE NASA Goddard Space Flight Center, Dongxu YANG Institute of Atmospheric Physics, Chinese Academy of Sciences

HS05-Remote Sensing and Data Assimilation in Hydrology

*Dawei HAN *University of Bristol*, Jeanne Jinhui HUANG Nankai University, Ben JARIHANI *University of the Sunshine* Coast

HS11-Dealing with Hydrological Extremes: Theory,

Simulation, and Practice

*Ke-Sheng CHENG National Taiwan University, Hidetaka CHIKAMORI Okayama University, Kwan Tun LEE National Taiwan Ocean University, Yasuto TACHIKAWA Kyoto University

HS18-Individual and Compound Extremes in Hydrology:

Observations and Models

*Zengchao HAO Beijing Normal University, Vijay SINGH Texas A&M University, Bellie SIVAKUMAR University of New South Wales

HS23-Hydrological Processes in Agricultural Lands

*Jun NIU China Agricultural University, Yiping WU Xi'an Jiaotong University, Ji CHEN The University of Hong Kong, Bellie SIVAKUMAR University of New South Wales

HS32-Hydrometeorological Analysis of Natural Hazards

*Hung Soo KIM Inha University, Ji CHEN The University of Hong Kong, Bellie SIVAKUMAR University of New South Wales

HS34-Monitoring and Modelling SPAC Hydraulic Gradient to Improve Estimation of Plant Transpiration and Water Stress

*Huade GUAN Flinders University, Hailong WANG The University of Aberdeen, Hugo GUTIERREZ The University of Texas at El Paso

IG01-General Session

*Kazuhisa GOTO Tohoku University, Fiona WILLIAMSON National University of Singapore

IG04-Interdisciplinary Research on Tsunamis and Practical

Applications for Disaster Risk Reduction

*Anawat SUPPASRI Tohoku University, Natt LEELAWAT Chulalongkorn University, Volker ROEBER University of Hawaii, Shaun WILLIAMS National Institute of Water and Atmospheric Research

IG06-Advanced Remote Sensing and Big Data Analysis for

Disaster Risk Reduction

*Young-Joo KWAK International Centre for Water Hazard and Risk Management (ICHARM)/ UNESCO, A.W. JAYAWARDENA The University of Hong Kong, Biswajeet PRADHAN University of Technology Sydney, Sang-Ho YUN NASA Jet Propulsion Laboratory

IG12-Carbon dioxide sequestration and utilization (CCUS) in energy geosciences

*Qi LI Chinese Academy of Sciences, Masao SORAI National Institute of Advanced Industrial Science and Technology, Tip MECKEL The University of Texas at Austin

IG22-Pre-earthquake Anomalies, Earthquake Predictability,

10 Years Commemoration 2008 M8.0 Wehchuan Earthquake,

Kickoff Chinese Seismo-electromagnetic Satellite

*Jann-Yenq (Tiger) LIU National Central University, Katsumi HATTORI Chiba University, Dimitar OUZOUNOV Chapman University

OS04-Cold, Wet, and Wild: Ocean and Atmospheric

Dynamics in the Southern Ocean and Antarctic

*Robin ROBERTSON Xiamen University, Jiping LIU University of Albany, Wenju CAI Ocean University of China and Qingdao National Laboratory for Marine Science and Technology, Agus SANTOSO University of New South Wales, Sheeba Nettukandy CHENOLI University of Malaya

OS05-Continuing the Tidal Tale: the Story of Tides and

Their Impacts

*Robin ROBERTSON Xiamen University, Adam DEVLIN The Chinese University of Hong Kong

OS12-Estuarine and Coastal Oceanography

*Atsushi FUJIMURA University of Guam, Sung Yong KIM Korea Advanced Institute of Science and Technology

OS16-Seasonal Climate Predictability and Applicability

*Takeshi DOI Japan Agency for Marine-Earth Science and Technology, Wenju CAI Ocean University of China and Qingdao National Laboratory for Marine Science and Technology, Zhaoyong GUAN Nanjing University of Information Science & Technology, Tim LI University of Hawaii, Swadhin BEHERA Japan Agency for Marine-Earth Science and Technology

OS18-Ocean Circulation and Air-sea Interaction Over the

Maritime Continent and Surrounding Waters

*Lei ZHOU Shanghai Jiao Tong University, Dongxiao WANG South China Sea Institute of Oceanology, Chinese Academy of Sciences, R. Dwi SUSANTO University of Maryland, Wen ZHOU City University of Hong Kong

OS25-BG-Carbon Sequestration in Marginal Seas:

Regulation and Response to Global Change

*Bangqin HUANG Xiamen University, Guangxing LIU Ocean University of China, Chin-Chang HUNG National Sun Yat-sen University

OS27-General Oceanography

*Charles LEMCKERT *University of Canberra*, Taira NAGAI *The University of Tokyo*, Vethamony P *IIT*, *Mumbai*

PS05-Ring Systems of the Solar System Objects and

Exoplanets

*Wing-Huen IP National Central University, Larry ESPOSITO University of Colorado Boulder, Keiji OHTSUKI Kobe University

PS09-04-Science and Exploration of Mars and Venus

*Varun SHEEL Physical Research Laboratory, Shuanggen JIN Chinese Academy of Sciences, Joseph MICHALSKI University of Hong Kong, Deanne ROGERS Stony Brook University, Timothy GLOTCH Stony Brook University

PS11-Science and Exploration of the Moon and Mercury

*Jorn HELBERT German Aerospace Center, Makiko OHTAKE Japan Aerospace Exploration Agency, Kyeong Ja KIM Korea Institute of Geoscience and Mineral Resources, Gordon CHIN NASA Goddard Space Flight Center, Long XIAO China University of Geosciences

PS14-Planetary Data in the Big Data Era

*Jian-Yang LI Planetary Science Institute, Ludmilla KOLOKOLOVA University of Maryland, Sebastien BESSE European Space Agency

PS18-Understanding Icy Worlds, Ocean Worlds, and Habitability

*Steven VANCE Jet Propulsion Laboratory, Caltech, Frank SOHL German Aerospace Center, Athena COUSTENIS Paris Observatory, Mathieu CHOUKROUN Jet Propulsion Laboratory, California Institute of Technology, Jun KIMURA Osaka University

PS22-Field and Laboratory Studies in Support of Planetary Infrared Remote Sensing

*Benjamin GREENHAGEN The Johns Hopkins University Applied Physics Laboratory, Kerri DONALDSON HANNA University of Oxford, Neil BOWLES University of Oxford, Timothy GLOTCH Stony Brook University, Paul LUCEY University of Hawaii at Manaa

SE02-Seismic Modelling and Imaging: from Global to Local Scales

*Ping TONG Nanyang Technological University, Shengji WEI Nanyang Technological University, Xu YANG University of California, Santa Barbara, Chin-Wu CHEN National Taiwan University

SE03-Imaging the Earth: from Data to Interpretation

*Nori NAKATA University of Oklahoma, Fan-Chi LIN University of Utah, Hsin-Hua HUANG Academia Sinica

SE04-Dynamic System of Earth: Interactions from Surface to

*Takashi NAKAGAWA Japan Agency for Marine-Earth Science and Technology, Weijia KUANG NASA Goddard Space Flight Center, Daoyuan SUN University of Science and Technology of China, Eh TAN Academia Sinica, Xiaodong SONG U of Illinois Urbana-Champaign / Wuhan U

SE11-13-Nankai Trough Seismogenic Zone Experiment and Related Studies of Tectonics in the Western Pacific

*Kyuichi KANAGAWA Chiba University, Keir BECKER University of Miami, Masataka KINOSHITA The University of Tokyo, Yi-Ching YEH National Central University

SE16-Recent Advances in Understanding Mountain Building Processes: Methodology, Observations, Models and Implications

*Chih-Tung CHEN National Central University, Kazuaki OKAMOTO Saitama University, Jon LEWIS Indiana University of Pennsylvania, Hai Thanh TRAN Hanoi University of Mining and Geology, Xi-Bin TAN China Earthquake Administration

SE21-Bridging Observations from Geology and Geodesy to

Understand Tectonic Deformation Over Multiple Timescales

*Aron MELTZNER Nanyang Technological University, Ya-Ju HSU Academia Sinica, Yu-Nung Nina LIN Nanyang Technological University, Emma HILL Earth Observatory of Singapore / NTU, Tadafumi OCHI National Institute of Advanced Industrial Science and Technology

SE22-35-Earthquakes, Fault Ruptures and Seismic Hazards in

Southeast and East Asia and Selected Sedimentary Basins

*Yu WANG National Taiwan University, Noelynna RAMOS University of the Philippines Diliman, Myo THANT Monywa University, Phil CUMMINS Australian National University, Sri WIDIYANTORO Bandung Institute of Technology

SE31-07-Cenozoic Crustal Deformation, Surface Processes, and Earthquake Hazards of the Qinghai-Tibetan Plateau and Adjacent Regions, with a 10-year Review of the 2008

Wenchuan Earthquake

*J. Bruce H. SHYU National Taiwan University, Xiwei XU China Earthquake Administration, Kirby ERIC Oregon State University, Fuqiong HUANG China Earthquake Network Center, Zhongqi Quentin YUE The University of Hong Kong

SS03-Science Driven E-infrastructures and Data Management in Support of Geosciences Research

*Ming-Hsu LI National Central University, Tsair-Fuh LIN National Cheng Kung University, Mustapha MOKRANE ICSU-WDS International Programme Offices, Yue-Gau CHEN National Taiwan University

SS09-Volcanoes: Nature, Influence, Impact

*Kazuhisa GOTO Tohoku University, Florian M. SCHWANDNER Jet Propulsion Laboratory, California Institute of Technology, Fiona WILLIAMSON National University of Singapore

ST13-Advances in Ionospheric Irregularity and Scintillation Studies

*Guozhu LI Chinese Academy of Sciences, Yuichi OTSUKA Nagoya University, Amit PATRA National Atmospheric Research Laboratory, Brett CARTER Royal Melbourne Institute of Technology University

ST17-Geospace System Response to Impulse Space Weather

Event

*Jing LIU National Center for Atmospheric Research, Wenbin WANG National Center for Atmospheric Research, Shunrong ZHANG Massachusetts Institute of Technology, Libo LIU Chinese Academy of Sciences, Jiuhou LEI University of Science and Technology of China

AS03 / Multi-scale Climate Variability Over Asia and Surrounding Oceans

Tue - 05 Jun | MR325B

Time 08:30 - 10:30

Chair(s) Tim LI, University of Hawaii

AS03-D2-AM1-325B-001 | AS03-A017 (Invited)

Role of Air-Sea Interaction in the 30–60 Day Boreal Summer

Intraseasonal Oscillation over Western North Pacific

Tianyi WANG¹, Xiu-Qun YANG¹‡+, Jiabei FANG¹, Xu-Guang SUN¹, Xuejuan REN¹

¹Nanjing University

AS03-D2-AM1-325B-002 | AS03-A019

The Weakened Intensity of Atmospheric Quasi-Biweekly

Oscillation over the Western North Pacific During Late

Summer Around the Late 1990s

Zhiqing XU1+, Tim LI2, Ke FAN1#

¹Chinese Academy of Sciences, ²University of Hawaii

AS03-D2-AM1-325B-003 | AS03-A026

Characteristics of the Quasi-Biweekly Oscillation over the Asian Monsoon Region

Yan XIN¹⁺, Teng WANG¹, Shaorou DONG¹, Song YANG^{1‡}
¹Sun Yat-sen University

AS03-D2-AM1-325B-004 | AS03-A062

Forecast Skill of Intraseasonal Oscillation Events over the Maritime Continent in a Global Cloud-System-Resolving Model

Tomoe NASUNO^{1‡+}, Masuo NAKANO¹, Kazuyoshi KIKUCHI², Tim LI³

¹Japan Agency for Marine-Earth Science and Technology, ²University of Hawaii at Manoa, ³University of Hawaii

AS03-D2-AM1-325B-005 | AS03-A079

Future Changes in the Intraseasonal Variability and Typhoon

Activity in a Nonhydrostatic Global Atmospheric Model

Masuo NAKANO $^{1\sharp *}$, Kazuyoshi KIKUCHI², Tomoe NASUNO 1 , Yohei YAMADA 1 , Masaki SATOH 3 , Masato SUGI 4

¹Japan Agency for Marine-Earth Science and Technology, ²University of Hawaii at Manoa, ³The University of Tokyo, ⁴Japan Meteorological Agency

AS03-D2-AM1-325B-006 | AS03-A029

The Impact of Different Types of ENSO on MJO Activities over the Maritime Continent

Yuqin DA^{1#+}, Tim LI²

¹Nanjing University of Information Science & Technology, ²University of Hawaii

AS03-D2-AM1-325B-007 | AS03-A036

The Interaction of Madden Julian Oscillation and High

Frequency Wave in Maritime Continent in Boreal Winter

Yan ZHU^{1#+}, Tim LI¹
¹University of Hawaii

AS03-D2-AM1-325B-008 | AS03-A046 (Invited)

Regional Patterns of Interannual Variations of Summer

Precipitation over the Maritime Continent and Their Relations with Different Anomalous Circulations in Indo-Pacific Sector

Zhaoyong GUAN^{1#+}, Qi XU²

¹Nanjing University of Information Science & Technology, ²Nanjing University of Information Science

Time 11:00 - 12:30

Chair(s) Song YANG, Sun Yat-sen University

J.-S. KUG, POSTEC

AS03-D2-AM2-325B-009 | AS03-A053 (Invited)

Intraseasonal Variability of Eurasian Summer Subtropical Wavetrain Modulated by the AMO and its Connection with Indian Summer Rainfall

Shuanglin LI^{1,2*}, Xueqian SUN³, Jilin SUN⁴, Xiaowei HONG¹
¹Chinese Academy of Sciences, ²China University of Geosciences,
³Chinese Academy of Sciences/ University of Chinese Academy of Sciences, ⁴The Ocean University of China

AS03-D2-AM2-325B-010 | AS03-A032 (Invited)

Low-Frequency Variability and the Unusual Indian Ocean Dipole Events in 2015 and 2016

Yan DU^{1s+}, Lianyi ZHANG¹, Wenju CAI^{2,3}
¹Chinese Academy of Sciences, ²Ocean University of China and Qingdao National Laboratory for Marine Science and Technology, ³Commonwealth Scientific and Industrial Research Organisation

AS03-D2-AM2-325B-011 | AS03-A068

On the Budget of Local Available Potential Energy of Intra-Seasonal Eddies

Xianglin DAI¹⁺, Yang ZHANG^{1‡}
¹Nanjing University

AS03-D2-AM2-325B-012 | AS03-A041 (Invited)

Lack of Westerly Wind Bursts in Unmaterialized El Niño Years

Ayako SEIKI $^{1s+}$, Yukari TAKAYABU 2 , Takuya HASEGAWA 1 , Kunio YONEYAMA 1

¹Japan Agency for Marine-Earth Science and Technology, ²The University of Tokyo

AS03-D2-AM2-325B-013 | AS03-A043

Mechanisms for Generation and Development of Ningaloo Niño

Lei ZHANG^{1#+}, Weiqing HAN¹
¹University of Colorado Boulder

AS03-D2-AM2-325B-014 | AS03-A021

Asymmetry of Two Types of ENSO in the Transition Between the East Asian Winter Monsoon and the Ensuing Summer Monsoon

Jian SHI^{1#+}, Weihong QIAN¹
¹Peking University

Time 13:30 - 15:30

Chair(s) Zhaoyong GUAN, Nanjing University of Information

Science & Technology

Yan DU, Institute of South China Sea Oceanography

AS03-D2-PM1-325B-015 | AS03-A072

Predictable Patterns of Rainfall and Atmospheric Circulation over the Maritime Continent and Adjacent Regions: Role of Air-Sea Interaction and Seasonal Dependence

Song YANG^{1#+}, Tuantuan ZHANG¹, Bohua HUANG²
¹Sun Yat-sen University, ²George Mason University

AS03-D2-PM1-325B-016 | AS03-A006 (Invited)

Southern Hemisphere Origins for Interannual Variations of Tibetan Plateau Snow Cover in Boreal Summer Zhiwei $WU^{1\pm}$

¹Fudan University

AS03-D2-PM1-325B-017 | AS03-A076

Different Role of Sea Surface Temperature over the South China Sea and Philippine Sea on South China Sea Summer Monsoon Onset

Yoshiyuki KAJIKAWA^{1‡+}, Atsushi HIGUCHI² ¹Kobe University, ²Chiba University

AS03-D2-PM1-325B-018 | AS03-A077

Why Rainfall Response to El Niño over Maritime Continent is Weaker and Non-Uniform in Boreal Winter than in Boreal Summer

Leishan JIANG1#+

¹University of Hawaii at Manoa

AS03-D2-PM1-325B-019 | AS03-A074

On the Dynamics of the Interannual Variability of East Asian Jet Stream

Duo CHAN^{1#+}, Yang ZHANG², Xianglin DAI²
¹Harvard University, ²Nanjing University

AS03-D2-PM1-325B-020 | AS03-A081

Impact of the Air-Sea Interaction on the East Asian Summer

Monsoon in AGCM Simulation

Yumi KIM¹⁺, Eun-Chul CHANG^{1‡}
¹Kongju National University

AS03-D2-PM1-325B-021 | AS03-A064 (Invited)

Simulation of the Central Indian Ocean Mode in CESM:

Implications for the Indian Summer Monsoon System Lei ZHOU^{1‡+}, Raghu MURTUGUDDE², Richard NEALE³, Markus JOCHUM⁴

¹Shanghai Jiao Tong University, ²University of Maryland, ³National Center for Atmospheric Research, ⁴University of Copenhagen

Time 16:00 - 18:00

Chair(s) Xiuqun YANG, Nanjing University

AS03-D2-PM2-325B-022 | AS03-A008

Distinct Influences of the ENSO-Like and PMM-Like SST
Anomaly on the TC Genesis Location in the Western North
Pacific: The 2015 Summer as an Extreme Example
Chi-Cherng HONG¹⁵⁺

¹University of Taipei

AS03-D2-PM2-325B-023 | AS03-A003

Inter-Decadal Change of the Inter-Annual Relationship

Between the Frequency of Intense Tropical Cyclone over the

Western North Pacific and ENSO

Li TAO¹#+, Yufeng LAN¹

¹Nanjing University of Information Science & Technology

AS03-D2-PM2-325B-024 | AS03-A007

Satellite Air-Sea Heat Fluxes Associated with Non-Developing and Developing Tropical Disturbances over the Western North Pacific

Si GAO^{1‡+}, Shengbin JIA², Yanyu WAN², Tim LI³, Shunan ZHAI²
¹Nanjing University of Information Science and Technology, ²Nanjing
University of Information Science & Technology, ³University of Hawaii

AS03-D2-PM2-325B-025 | AS03-A060

Land-Falling Typhoons are Controlled by the Meridional Oscillation of the Kuroshio Extension

Shih-Ming HUANG^{1#+}, Leo OEY¹

¹National Central University

AS08 / Madden-Julian Oscillation and Its Global Impacts

Tue - 05 Jun | MR302B

Time 08:30 - 10:30

Chair(s) Ziniu XIAO, Chinese Academy of Sciences

Xiu-Qun YANG, Nanjing University

AS08-D2-AM1-302B-001 | AS08-A014 (Invited)

SVD Versus RMM Index in the Study of MJO Effects on East

Asian Winter Weather

Yun-Lan CHEN¹, Chung-Hsiung SUI², Chih-Pei CHANG^{2,3‡+}
¹Central Weather Bureau, ²National Taiwan University, ³Naval
Postgraduate School

AS08-D2-AM1-302B-002 | AS08-A030

The Madden-Julian Oscillation's Influences on Stratospheric Moisture

Joowan KIM1#+

¹Kongju National University

AS08-D2-AM1-302B-003 | AS08-A034

Zonal Oscillation of Western Pacific Subtropical High and

Subseasonal Sea Surface Temperature Variations

Xuejuan REN¹, Xiu-Qun YANG^{1‡+}, Xu-Guang SUN¹
¹Nanjing University

AS08-D2-AM1-302B-004 | AS08-A020

Moisture-Convection-Dynamical Feedback in Eastward

Propagation of the Tropical Intraseasonal Variability in the

NICAM Aqua-Planet Experiments

Daisuke TAKASUKA1#+, Masaki SATOH1

¹The University of Tokyo

AS08-D2-AM1-302B-005 | AS08-A009

Decadal Change of MJO Teleconnection Pattern and its

Impacts on East Asia

Hyerim KIM1#+, Myong-In LEE2

¹Konkuk University, ²Ulsan National Institute of Science and Technology

AS08-D2-AM1-302B-006 | AS08-A006

Toward Understanding the Diverse Impact Processes of

Air-Sea Interactions on MJO Simulations

Joshua-Xiouhua FU1#+

¹Fudan University

Time 11:00 - 12:30

Chair(s) Jian LING, Chinese Academy of Sciences

Shuguang WANG, Columbia University

AS08-D2-AM2-302B-007 | AS08-A013 (Invited)

QBO and MJO Propagation

Chidong ZHANG^{1#+}, Bosong ZHANG²

¹National Oceanic and Atmospheric Administration, ²University of Miami

AS08-D2-AM2-302B-008 | AS08-A005 (Invited)

${\bf Organized} \ {\bf Convection} \ {\bf Parameterization} \ {\bf for} \ {\bf Global} \ {\bf Climate}$

Models

Mitchell W. MONCRIEFF1#+

¹University Corporation for Atmospheric Research

AS08-D2-AM2-302B-009 | AS08-A012

Roles of the Moisture and Wave Feedbacks in Shaping the

Madden-Julian Oscillation

Fei LIU1#+, Bin WANG2

¹Nanjing University of Information Science, ²University of Hawaii

AS08-D2-AM2-302B-010 | AS08-A008

Properties of Convective Gravity Waves Forced in the Tropics

During the Madden-Julian Oscillation

Silvio KALISCH $^{1\sharp +},$ Hye-Yeong CHUN $^{1},$ Min-Jee KANG 1 Yonsei University

Time 13:30 - 15:30

Chair(s) Chidong ZHANG, National Oceanic and Atmospheric

Administration

Mitchell W. MONCRIEFF, University Corporation for

Atmospheric Research

AS08-D2-PM1-302B-011 | AS08-A036 (Invited)

Dynamics-Oriented Diagnostics for the Madden-Julian

Oscillation

Bin WANG1#+

¹University of Hawaii

AS08-D2-PM1-302B-012 | AS08-A016 (Invited)

Impacts of Tropical ISO on Rainfall Extremes in South China and its Predictability

Hong-Li REN1#+

¹China Meteorological Administration

AS08-D2-PM1-302B-013 | AS08-A022

Influence on Variance of Oxygen Isotopes and Hydrogen

Isotopes in Precipitation of Shanghai by ENSO

Limin ZHOU1#+

¹East China Normal University

AS08-D2-PM1-302B-014 | AS08-A023

The Effect of ENSO on the Precipitation in South-East China

Since the Middle Holocene

Yushan XIE $^{1\#+}$, Limin ZHOU 1

¹East China Normal University

AS08-D2-PM1-302B-015 | AS08-A033

Intraseasonal Variability and the Onset of Monsoon Rainfall

Ken SPERBER1#+

¹Lawrence Livermore National Laboratory

AS08-D2-PM1-302B-016 | AS08-A035

A New Mechanism of the Slow Eastward Propagation of

Unstable Disturbances with Convection in the Tropics: Toward

Understanding the MJO Dynamics

Michiya HAYASHI^{1#+}, Hisanori ITOH²

¹University of Hawaii, ²Kyushu University

AS11 / Impacts of Haze and Dust in East Asia: Mechanism, Observations, and Model Assessments

Tue - 05 Jun | MR325A

Time 08:30 - 10:30

Chair(s) Chuanfeng ZHAO, Beijing Normal University

Daizhou ZHANG, Prefectural University of Kumamoto

AS11-D2-AM1-325A-007 | AS11-A061 (Invited)

Aerosol and Monsoon Climate Interactions in Asia

Zhanqing LI1,2#+

¹University of Maryland, ²Beijing Normal University

AS11-D2-AM1-325A-008 | AS11-A033 (Invited)

Development of the Aerosol Reanalysis Product (JRAero) and

its Use in Aerosol Researches in East Asia

Keiya YUMIMOTO $^{1z+}$, Taichu TANAKA 2 , Naga OSHIMA 2 , Takashi MAKI 2

¹Kyushu University, ²Japan Meteorological Agency

AS11-D2-AM1-325A-009 | AS11-A053

Aerosol-Induced Intensification of Convections over the

Tibetan Plateau

Guohui LI1**, Naifang BEI², Jiarui WU¹, Yongming HAN¹, Hongli LIU³

¹Chinese Academy of Sciences, ²Xi'an Jiaotong University, ³Chinese Academy of Meteorological Sciences

AS11-D2-AM1-325A-010 | AS11-A047

The Impact of Aerosol-Meteorology Interactions on the

Effectiveness of Emission Control Measures

Mi ZHOU1#+, Lin ZHANG1, Dan CHEN2

¹Peking University, ²Institute of Urban Meteorology

AS11-D2-AM1-325A-011 | AS11-A040

Aerosol-Cloud-Radiation Interactions over East China:

Simulations vs Observations

Xiaoyan MA1#+, Hailing JIA2, Fanggun YU3

¹Nanjing University of Information Science , ²Nanjing University of Information Science & Technology, ³University at Albany, State University of New York

AS11-D2-AM1-325A-012 | AS11-A052

Impact of Climate Change on Siberian High and Wintertime

Air Pollution in China in Past Two Decades

Shuyu ZHAO¹+, Tian FENG¹, Xuexi TIE¹*, Xin LONG¹, Guohui LI¹, Junji CAO¹, Weijian ZHOU¹, Zhisheng AN¹

¹Chinese Academy of Sciences

Time 11:00 - 12:30

Chair(s) Yong-Sang CHOI, Ewha Women's University

Chuanfeng ZHAO, Beijing Normal University

AS11-D2-AM2-325A-013 | AS11-A060

Development of Potential Source Density Functions (PSDFs)

for Locating Air Pollution Sources

Insun KIM^{1#+}, Daehyun WEE¹
¹Ewha Womans University

AS11-D2-AM2-325A-014 | AS11-A026

Sources and Long-Range Transport of Dust Aerosols from the

Taklamakan and Gobi Deserts: Insights from Satellite

Observations and Trajectory Modeling

Yan YU1#+

¹Jet Propulsion Laboratory, California Institute of Technology

AS11-D2-AM2-325A-015 | AS11-A039

Comparison of Dust Emissions, Transport, and Deposition

Between the Taklimakan Desert and Gobi Desert from 2007 to

2011

Siyu CHEN1#+, Jianping HUANG1

¹Lanzhou University

AS11-D2-AM2-325A-016 | AS11-A034

Identifying Cr- Containing Mineral Phases in Dust Dry Deposition Using Selected Area Electron Diffraction Patterns and Energy Dispersive Spectroscopy Elemental Maps

Soonyoung YU^{1‡+}, Pyeong-Koo LEE², Hye Jung CHANG³
¹Korea University, ²Korea Institute of Geoscience and Mineral
Resources, ³Korea Institute of Science and Technology

Time 13:30 - 15:30

Chair(s) Daizhou ZHANG, Prefectural University of Kumamoto

Seoung Soo Lee, Earth System Science Interdisciplinary

Center, University of Maryland

AS11-D2-PM1-325A-017 | AS11-A001

On the Link Between Long-Term Trend in Summertime Local-Scale Precipitation and Aerosol Pollution over Eastern China

Jianping GUO^{1±+}, Zhanqing LI^{2,3}
¹Chinese Academy of Meteorological Sciences, ²University of Maryland, ³Beijing Normal University

AS11-D2-PM1-325A-018 | AS11-A045

Optical Properties and Radiative Forcing of Aged BC due to Hygroscopic Growth

Chao LIU¹⁸⁺, Chen ZENG¹, Yan YIN¹
¹Nanjing University of Information Science & Technology

AS11-D2-PM1-325A-019 | AS11-A043

Sources of Arctic Black Carbon Simulated by Flexpart V10:

Comparison with GEOS-Chem Results

Chunmao ZHU^{1‡+}, Yugo KANAYA¹, Masayuki TAKIGAWA¹, Kohei IKEDA², Hiroshi TANIMOTO², Fumikazu TAKETANI¹, Takuma MIYAKAWA¹, Hideki KOBAYASHI¹, Ignacio PISSO³ ¹Japan Agency for Marine-Earth Science and Technology, ²National Institute for Environmental Studies, ³Norwegian Institute for Air Research

AS11-D2-PM1-325A-020 | AS11-A025

Oian CHEN1#+, Yan YIN1, Hui IIANG1

The Roles of Mineral Dust as Cloud Condensation Nuclei and

Ice Nuclei During the Evolution of a Hail Storm

¹Nanjing University of Information Science & Technology

AS11-D2-PM1-325A-021 | AS11-A029

Sulfate and Nitrate in the Atmosphere of Asian Desert Regions Feng $WU^{1\sharp +}$

¹Institute of Earth Environment, Chinese Academy of Sciences

AS11-D2-PM1-325A-022 | AS11-A038

Air Stagnation and its Impact on Air Quality During Winter in Sichuan and Chongqing, Southwestern China

Tingting LIAO1#+

¹Chengdu University of Information Technology

Time 16:00 - 18:00

Chair(s) Jianping GUO, Chinese Academy of Meteorological

Sciences

Yuan WANG, California Institute of Technology

AS11-D2-PM2-325A-023 | AS11-A008 (Invited)

The Effect of Aerosol on the Spatiotemporal Distributions of Heavy Precipitation in Urban Areas

Seoung Soo LEE^{1‡+}, Zhanqing LI², Jianping GUO³
¹Earth System Science Interdisciplinary Center, ²University of Maryland, United States / Beijing Normal University, ³Chinese Academy of Meteorological Sciences

AS11-D2-PM2-325A-024 | AS11-A021 (Invited)

Contrast of the Ice Cloud Fraction Between Eastern and

Western Eurasia Using Calipso Data in Winter Time Kazuaki KAWAMOTO^{1‡+}, Akira YAMAUCHI¹

¹Nagasaki University

AS11-D2-PM2-325A-025 | AS11-A012

Cloud and Haze Detection Algorithm for Himawari-8 Satellite

Measurements over China

Huazhe SHANG^{1*+}, Husi LETU¹, Ziming WANG¹, Run MA¹, Ni AN², Hushan BAO³, Jie HE¹, Nari A³, Xu HAN⁴
¹Chinese Academy of Sciences, ²Baotou Teacher's College, ³Inner Mongolia Normal University, ⁴China University of Mining and Technology

AS11-D2-PM2-325A-026 | AS11-A009

Mixing Layer Height and its Impacts on Air Pollution over North China

Guiqian TANG¹+, Xiaowan ZHU¹, Bo HU¹, Christoph MUENKEL², Yuesi WANG¹ \sharp

¹Chinese Academy of Sciences, ²Vaisala GmbH

AS11-D2-PM2-325A-027 | AS11-A013

Elucidating the Potential of Radiosonde Measurements in Characterizing Cloud Base Height Climatology in China: Implications for Aerosol-Cloud Interaction

Yong ZHANG1#+

¹China Meteorological Administration

AS11-D2-PM2-325A-028 | AS11-A027

Study on Atmospheric Boundary Layer over Lanzhou in

Northwest China

Minjin MA1#+

¹Lanzhou University

AS13 / 11th Sasaki Symposium on Data Assimilation for Atmospheric, Oceanic, and Hydrologic Applications

Tue - 05 Jun | MR326A

Time 08:30 - 10:30

Chair(s) Zhaoxia PU, University of Utah

Andrew MOORE, University of California Santa Cruz

AS13-D2-AM1-326A-001 | AS13-A001

Applying Data Assimilation to Precipitation Nowcasting

Shigenori OTSUKA^{1#+}, Takemasa MIYOSHI^{2,3}

¹RIKEN Center for Computational Science, ²RIKEN Advanced Institute for Computational Science, ³University of Maryland

AS13-D2-AM1-326A-002 | AS13-A003

Impacts of Dense Surface Observations on Predicting a

Torrential Rainfall Event on September 9 and 10, 2015 in the

East Japan Area

Yasumitsu MAEJIMA $^{1\sharp*}$, Guo-Yuan LIEN 1 , Takemasa MIYOSHI 1,2

¹RIKEN Advanced Institute for Computational Science, ²University of Maryland

AS13-D2-AM1-326A-003 | AS13-A008 (Invited)

Characteristics of Covariances Between Land and

Low-Atmosphere States and Their Influences on Coupled Data

Assimilation

Zhaoxia PU1#+

¹University of Utah

AS13-D2-AM1-326A-004 | AS13-A017

Sensitivity of Atmospheric Variables to Land Surface in the

Coupled Atmosphere-Land Surface Data Assimilation System

Sojung PARK1+, Seon Ki PARK1#

¹Ewha Womans University

AS13-D2-AM1-326A-005 | AS13-A015

The Observation Sensitivity and Forecast Sensitivity to

Observations for the Warm-Sector Heavy Rainfall: The Osses

Case Study

Yu ZHANG¹#+, Donghai WANG¹

¹Sun Yat-sen University

AS13-D2-AM1-326A-006 | AS13-A006

Discharge and Bathymetry Estimations of Rivers from

Altimetry

Kevin LARNIER¹, Jerome MONNIER²,³#+, Pierre-Andre GARAMBOIS⁴

¹CS Corporation, ²Mathematics Institute of Toulouse, ³National Institute of Applied Sciences Toulouse, ⁴ICube - Université de Strasbourg

AS13-D2-AM1-326A-007 | AS13-A010 (Invited)

Observation Impacts on 4D-VAR Ocean Circulation Estimates

of the Mid-Atlantic Bight Circulation

Andrew MOORE1#+, John WILKIN2, Julia LEVIN2, Hernan G $ARANGO^2$

¹University of California Santa Cruz, ²Rutgers University

Time 11:00 - 12:30

Chair(s) Takemasa MIYOSHI, RIKEN Advanced Institute for

Computational Science

Wei KANG, US Naval Postgraduate School

AS13-D2-AM2-326A-008 | AS13-A007

How Fast Shall We Go? Lessons Learned from

 ${\bf 30\text{-}Second\text{-}Update\ Convection\text{-}Resolving\ Data\ Assimilation}$

Experiments

Takemasa MIYOSHI^{1,2#}, Juan RUIZ³, Guo-Yuan LIEN¹, Toshiki TERAMURA¹, Yasumitsu MAEJIMA¹, Keiichi KONDO⁴, Hideyuki SAKAMOTO¹

¹RIKEN Advanced Institute for Computational Science, ²University of Maryland, ³University of Buenos Aires, ⁴Japan Meteorological Agency

AS13-D2-AM2-326A-009 | AS13-A002

The Trade-Off Between Memory and Computation Cost – An

Example of Sparse UKF

Wei KANG1#+, Liang XU2

¹Naval Postgraduate School, ²Naval Research Laboratory

AS13-D2-AM2-326A-010 | AS13-A005

A 4D-EnVAR Data Assimilation System Without Vertical

Localization

Le DUC1#+, Kazuo SAITO2

¹Japan Agency for Marine-Earth Science and Technology, ²Japan Meteorological Agency

AS13-D2-AM2-326A-011 | AS13-A014

The GNSS-RO Data Impact on the Prediction of Typhoon

Nepartak (2016) by MPAS-GSI Model

Shu-Ya CHEN¹**, Cheng-Peng SHIH¹, Ching-Yuang HUANG¹, Wen-Hsin TENG¹, Yang-Cheng HUANG¹
¹National Central University

AS13-D2-AM2-326A-012 | AS13-A012

Sampling Error in the Ensemble-Based Radar Data

Assimilation System and its Impact on Convective-Scale

Weather Prediction

Pin-Ying WU^{1‡+}, Shu-Chih YANG¹, Chih-Chien TSAI²
¹National Central University, ²Taiwan Typhoon and Flood Research
Institute

AS16-53 / Exploration and Science of the Earth's Lower and Middle Atmosphere: Past, Present and Future Perspectives

Tue - 05 Jun | MR303A

Time 08:30 - 10:30

Chair(s) Gaopeng LU, Chinese Academy of Sciences

AS16-53-D2-AM1-303A-001 | AS16-53-A013

Do Frequent Hurricanes Trigger Earthquakes over Caribbean and South American Regions?

Shikha RAIZADA^{1‡+}, D. V. PHANIKUMAR², Niranjan Kumar KONDAPALLI³, Alessandra ABE PACINI⁴, Christiano GARNETT MARQUES BRUM¹, Som Kumar SHARMA⁵
¹SRI International, ²Aryabhatta Research Institute of Observational Sciences, ³The University of Tokyo, ⁴Arecibo Observatory, ⁵Physical Research Laboratory

AS16-53-D2-AM1-303A-002 | AS16-53-A005 (Invited)

Implications of Nighttime O(3P) and OH Densities Retrieved Using SABER/TIMED Observations for Mesospheric Aeronomy

Peter PANKA¹⁵⁺, Alexander KUTEPOV¹, Diego JANCHES¹, Konstantinos KALOGERAKIS², Dan MARSH³, Artem FEOFILOV⁴, Erdal YIĞIT⁵, Ladislav REZAC⁶

¹NASA Goddard Space Flight Center, ²SRI International, ³University Corporation for Atmospheric Research, ⁴Ecole Polytechnique, ⁵George Mason University, ⁶Max Planck Institute for Solar System Study

AS16-53-D2-AM1-303A-003 | AS16-53-A009

Short-Term Trends in Stratospheric Circulation Driven by

Seasonal Timing of the Quasi-Biennial Oscillation

Jessica NEU^{1‡+}, Sasha GLANVILLE², Douglas KINNISON²
¹Jet Propulsion Laboratory, California Institute of Technology,
²National Center for Atmospheric Research

AS16-53-D2-AM1-303A-004 | AS16-53-A008 (Invited)

An All-Sky Meteor Trail Input Function: Development,

Analysis, and Impact in the Mesosphere Lower Thermosphere
Region

Julio URBINA^{1‡+}, Freddy GALINDO², Steven FRANKE³ ¹Penn State, ²Penn State University, ³University of Illinois at Urbana-Champaign

Time 11:00 - 12:30

Chair(s) Tai-Yin HUANG, PSU

AS16-53-D2-AM2-303A-005 | AS16-53-A021 (Invited)

The Characteristics and Polarities of the Sprites and Their Parent Lightning Captured by the TLE Observation Network in Taiwan

Alfred CHEN1**, Cheng-Shin KUO¹, Yi-Jen LEE¹, Han-Tzong SU¹, Rue-Ron HSU¹

¹National Cheng Kung University

AS16-53-D2-AM2-303A-006 | AS16-53-A019

Simulations of Lightning-Induced Transient Emissions (LITEs) of Airglow

Tai-Yin HUANG^{1#+}
¹Penn State Lehigh Valley

AS16-53-D2-AM2-303A-007 | AS16-53-A024 (Invited)

ULAT Project: Lightning Observations in the Philippines and Western Pacific Region for the Intensity Prediction of Severe Weather

Mitsuteru SATO¹*-, Yukihiro TAKAHASHI¹, Hisayuki KUBOTA¹, Kozo YAMASHITA², Jun-Ichi HAMADA³, Joel MARCIANO⁴

¹Hokkaido University, ²Ashikaga Institute of Technology, ³Tokyo Metropolitan University, ⁴Advanced Science and Technology Institute

AS16-53-D2-AM2-303A-008 | AS16-53-A022

Gravity Wave Vertical Scales Detectable by the Imagery of the Thermospheric O(1D) Redline (Modeling and Observation)
Fabio VARGAS^{1#+}
¹University of Illinois

AS16-53-D2-AM2-303A-009 | AS16-53-A023

Nighttime Airglow Ripples as an Example to Study the Coupling Processes Between the Lower and the Middle Atmosphere

Cheng-Ling KUO^{1‡+}, Tai-Yin HUANG²
¹National Central University, ²Penn State Lehigh Valley

AS20 / High-resolution Simulation, Prediction, and Projection of High-impact Weather Events and Climate Change

Tue - 05 Jun | MR319A

Time 08:30 - 10:30

Chair(s) Masaki SATOH, The University of Tokyo

AS20-D2-AM1-319A-001 | AS20-A007 (Invited)

Rainfall Extremes Associated with Tropical Cyclones and Their Future Changes

Akio KITOH1#+, Hirokazu ENDO2

¹Japan Meteorological Business Support Center, ²Japan Meteorological Agency

AS20-D2-AM1-319A-002 | AS20-A018 (Invited)

Changes in Tropical Cyclones Under Stabilized 1.5C, 2C and Higher Global Warming Scenarios as Simulated by the

Community Atmospheric Model Under the Happi Protocols Michael WEHNER^{1#+}, Kevin REED²

¹Lawrence Berkeley National Laboratory, ²Stony Brook University

AS20-D2-AM1-319A-003 | AS20-A042 (Invited)

Impacts of Resolution on Water Cycle Processes in the Energy Exascale Earth System Model (E3SM)

L. Ruby LEUNG^{1#+}

¹Pacific Northwest National Laboratory

AS20-D2-AM1-319A-004 | AS20-A014

Exploring the Use of High-Resolution CAM5 for Basin-Scale

Projections of Tropical Cyclone Activity

Kevin REED1#+, Xiaoning WU1, Michael WEHNER2, Julio BACMEISTER3

¹Stony Brook University, ²Lawrence Berkeley National Laboratory, ³National Center for Atmospheric Research

AS20-D2-AM1-319A-005 | AS20-A006

Attribution Study for Extreme Tropical Cyclone Seasons Using a High-Resolution Global Coupled Model

Hiroyuki MURAKAMI¹**, Emma LEVIN², Tom DELWORTH¹, Gabriel VECCHI³, Rich GUDGEL¹

¹Geophysical Fluid Dynamics Laboratory, ²Schreiber High School, ³National Oceanic and Atmospheric Administration

AS20-D2-AM1-319A-006 | AS20-A028

A 2015-2017 Forecast Evaluation of Western North Pacific Recurving Tropical Cyclones and Extratropical Interaction in the fvGFS Model

Shannon REES^{1‡+}, Heather ARCHAMBAULT², Shian-Jiann LIN²
¹National Center for Atmospheric Research/ Geophysical Fluid
Dynamics Laboratory, ²National Oceanic and Atmospheric
Administration

AS20-D2-AM1-319A-007 | AS20-A017

Simulation and Projection of Atmospheric River Activities

Using a High-Resolution AGCM

Huang-Hsiung HSU^{1#+}, Ying-Ting CHEN¹
¹Academia Sinica

Time 11:00 - 12:30

Chair(s) Song-You HONG, Korea Institute of Atmospheric

Prediction Systems

Kevin A. REED, Stony Brook University

AS20-D2-AM2-319A-008 | AS20-A040

Near-Term Increase in the Hazardous Weather Conditions over North America

Moetasim ASHFAQ¹⁵⁺, Brandon BONDS², Mariana ALIFA³, Deeksha RASTOGI⁴, Fulden BATIBENIZ⁴, Brianna PAGAN⁵, Jeremy PAL³, Kate EVANS⁴

¹UT-BATTELLE, ²Western Kentucky University, ³Loyola Marymount University, ⁴Oak Ridge National Laboratory, ⁵Ghent University

AS20-D2-AM2-319A-009 | AS20-A002

Dynamical Downscaling Simulation and Future Projection of Summer Rainfall in Taiwan: Contributions from Different Types of Rain Events

Wan-Ru HUANG¹‡+, Ya-Hui CHANG¹, Huang-Hsiung HSU², Chao-Tzuen CHENG³, Chia-Ying TU^2

¹National Taiwan Normal University, ²Academia Sinica, ³National Science and Technology Center for Disaster Reduction

AS20-D2-AM2-319A-010 | AS20-A011

Ultra-High-Resolution Numerical Weather Simulations of Heavy Rain Events

Tsutao OIZUMI^{1‡+}, Kazuo SAITO², Le DUC¹, Junshi ITO²
¹Japan Agency for Marine-Earth Science and Technology, ²Japan
Meteorological Agency

AS20-D2-AM2-319A-011 | AS20-A025

Applications of Variable-Resolution GCM for Simulating

Extreme Events Affecting Taiwan

Chia-Ying TU^{1‡+}, Huang-Hsiung HSU¹, Shian-Jiann LIN²
¹Academia Sinica, ²National Oceanic and Atmospheric Administration

Time 13:30 - 15:30

Chair(s) Hiroyuki MURAKAMI, Geophysical Fluid Dynamics

Laboratoru

Huang-Hsiung HSU, Academia Sinica

AS20-D2-PM1-319A-012 | AS20-A008

Medium-Range Forecasts with a Non-Hydrostatic Global

Atmospheric Model on a Cubed Sphere Grid

Song-You HONG 1s , Young-Cheol KWON 1 , Tae-Hun KIM 1 , Jung-Eun KIM 1 , Suk-Jin CHOI 1 , In-Hyuk KWON 1 , Eun-Hee KIM 1 , Rae-Seol PARK 1 , Dong-Il KIM 1

¹Korea Institute of Atmospheric Prediction Systems (KIAPS)

AS20-D2-PM1-319A-013 | AS20-A039

A Parameterization of Turbulent Orographic Form Drag in a Global Atmospheric Model

Myung-Seo KOO^{1‡+}, Hyun-Joo CHOI¹, Ji-Young HAN¹
¹Korea Institute of Atmospheric Prediction Systems (KIAPS)

AS20-D2-PM1-319A-014 | AS20-A013

Preliminary Results of a High-Resolution Climate Simulation Using the Non-Hydrostatic Icosahedral Atmospheric Model, NICAM, for CMIP6 HighResMIP

Chihiro KODAMA^{1±+}, Masaki SATOH², Tomoki OHNO¹, Akira NODA¹, Hisashi YASHIRO³, Yohei YAMADA¹, Masuo NAKANO¹, Tatsuya SEIKI¹, Tomoe NASUNO¹, Ying-Wen CHEN², Tomoki MIYAKAWA², Masato SUGI⁴, Woosub ROH² ¹Japan Agency for Marine-Earth Science and Technology, ²The University of Tokyo, ³RIKEN Advanced Institute for Computational Science, ⁴Japan Meteorological Agency

AS20-D2-PM1-319A-015 | AS20-A003

Cloud Feedback and Circulation in Decadal-Scale

Nonhydrostatic Global Simulations

Akira NODA1#+

¹Japan Agency for Marine-Earth Science and Technology

AS20-D2-PM1-319A-016 | AS20-A029

Investigation of Extreme Events in the GEOS Multi-Scale

Modeling System

William PUTMAN^{1#}, Nathan ARNOLD¹, Anton DARMENOV², Saulo FREITAS³, Lesley OTT¹

¹NASA Global Modeling and Assimilation Office, ²NASA Goddard Space Flight Center, ³GESTAR / NASA Global Modeling and Assimilation Office

AS20-D2-PM1-319A-017 | AS20-A020

Enabling and Improving Convective-Scale Predictions Using

the 4-45 Km Variable-Resolution Global Model: fvGFS

Linjiong ZHOU¹⁵⁺, Shian-Jiann LIN², Jan-Huey CHEN³, Lucas HARRIS², Xi CHEN¹, Shannon REES⁴
¹Princeton University, ²National Oceanic and Atmospheric Administration, ³Princeton University/ National Oceanic and

Atmospheric Administration, ⁴National Center for Atmospheric

Research/ Geophysical Fluid Dynamics Laboratory

AS20-D2-PM1-319A-018 | AS20-A015

Variable-Resolution Regional Forecasting Using Model for

Prediction Across Scales

Soyoung HA1#+

¹National Center for Atmospheric Research

AS20-D2-PM1-319A-019 | AS20-A016

High-Resolution Ensemble Prediction of the Australian East Coast Low of April 2015

Dragana ZOVKO-RAJAK^{1‡+}, Kevin TORY¹, Robert FAWCETT¹, Jeff KEPERT²

¹Bureau of Meteorology, ²Centre for Australian Weather and Climate Research

AS22 / Remote Sensing of Ocean Color and Aerosols

Tue - 05 Jun | MR326B

Time 13:30 - 15:30

Chair(s) Pengwang ZHAI, University of Maryland, Baltimore

County

Feng XU, Jet Propulsion Lab

AS22-D2-PM1-326B-001 | AS22-A024 (Invited)

Towards Pace Atmospheric Correction, Aerosol and Cloud

Products: Making Use of Expanded Spectral, Angular and

Polarimetric Information

Lorraine REMER^{1,2#+}, Ziauddin AHMAD³, Emmanuel BOSS⁴, Brian CAIRNS5, Jacek CHOWDHARY5, Anthony DAVIS6, Heidi DIERSSEN7, David DINER8, Bryan FRANZ9, Robert FROUIN10, Bo-Cai GAO11, Michael GARAY6, Otto HASEKAMP12, Andrew HEIDINGER¹³, Amir IBRAHIM⁹, Olga KALASHNIKOVA⁶, Kirk KNOBELSPIESSE9, Robert LEVY9, J. Vanderlei MARTINS1, Shana MATTOO14, Kerry MEYER9, Ali OMAR8, Steven PLATNICK9, Felix SEIDEL6, Omar TORRES9, Bastiaan VANDIEDENHOVEN5, Andi WALTHER15, Zhibo ZHANG1 ¹University of Maryland, Baltimore County, ²Airphoton LLC, ³, ⁴University of Maine, ⁵NASA Goddard Institute for Space Studies, ⁶Jet Propulsion Laboratory, California Institute of Technology, ⁷University of Connecticut, 8National Aeronautics and Space Administration, ⁹NASA Goddard Space Flight Center, ¹⁰Scripps Institution of Oceanography, ¹¹Naval Research Laboratory, ¹²SRON, ¹³National Oceanic and Atmospheric Administration, 14Science Systems and Applications, Inc./ NASA Goddard Space Flight Center, 15University of Wisconsin

AS22-D2-PM1-326B-002 | AS22-A032 (Invited)

Preparatory Studies for the Multi-View, Multi-Channel, Multi-Polarisation Imaging (3MI) Mission: Calibration

Challenges and Opportunities for Clouds and Aerosols Remote

Rensing

Jerome RIEDI^{1±+}, Frederique AURIOL², Fabien CONTAUT², Celine CORNET², Mohamed Salah DJELLALI², Oleg DUBOVIK³, Philippe DUBUISSON², Nicolas FERLAY², Nicolas HENRIOT², Laurent LABONNOTE², Christian MATAR², Jean-Marc NICOLAS², Frédéric PAROL², François THIEULEUX², Fabien WAQUET²

¹LOA / Université de Lille, ²Université Lille 1, ³Universit**é** Lille 1

AS22-D2-PM1-326B-003 | AS22-A016 (Invited)

A Study of the Phytoplankton, Aerosol and Cloud Interactions Using CALIPSO LIDAR Measurements

Yongxiang $HU^{1\sharp *},$ Xiaomei $LU^2,$ Kuan-Man XU 1, Patricia LUCKER 2

¹NASA Langley Research Center, ²Science Systems and Applications, Inc.

AS22-D2-PM1-326B-004 | AS22-A030

Polarimetric and Multiangular UV Observations of Absorbing Aerosols

Olga KALASHNIKOVA $^{1\pm}$, Pengwang ZHAI 2 , Feng XU 1 , David DINER 1 , Felix SEIDEL 1

¹Jet Propulsion Laboratory, California Institute of Technology, ²University of Maryland, Baltimore County

AS22-D2-PM1-326B-005 | AS22-A003

Atmospheric Correction for Coastal Waters Based on

Multi-Angle Polarimetric Observations

Meng GAO¹⁸⁺, Pengwang ZHAI¹, Bryan FRANZ², Yongxiang HU³, Kirk KNOBELSPIESSE², Jeremy WERDELL², Amir IBRAHIM², Feng XU⁴

¹University of Maryland, Baltimore County, ²NASA Goddard Space Flight Center, ³NASA Langley Research Center, ⁴Jet Propulsion Laboratory, California Institute of Technology

AS22-D2-PM1-326B-006 | AS22-A014

Ocean Subsurface Measurement Concept from Space

Xiaomei LU1#+, Yongxiang HU2

¹Science Systems and Applications, Inc., ²NASA Langley Research Center

AS22-D2-PM1-326B-007 | AS22-A005

Optical Properties of Maritime Aerosols and Their Influence on Atmospheric Radiative Transfer and Remote Sensing

Lei BI $^{1\#}$, Zheng WANG 1 , Wushao LIN 1 , Xiaoyu ZHANG 1 1 Zhejiang University

AS22-D2-PM1-326B-008 | AS22-A017

An Optimized Inversion Algorithm for Remote Sensing of Spectral Aerosol Optical Depth and Fine-Mode Fraction from Single-Viewing Intensity and Polarization over Land:

Theoretical Framework and Retrieval Test with Synthetic

Measurements

Weizhen HOU¹⁺, Zhengqiang LI^{2±}, Jun WANG³, Xiaoguang XU³, Hua XU², Xingfeng CHEN², Fengxun ZHENG^{2,4}

¹Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, ²Chinese Academy of Sciences, ³The University of Iowa,

⁴University of Chinese Academy of Sciences

Time 16:00 - 18:00

Chair(s) Feng XU, Jet Propulsion Lab

Pengwang ZHAI, University of Maryland, Baltimore

County

AS22-D2-PM2-326B-009 | AS22-A013 (Invited)

Simultaneous Retrieval of Aerosol and Surface Properties:

GRASP Algorithm and Open Software

Oleg DUBOVIK¹⁵⁺, Pavel LITVINOV², Xin HUANG², Tatsiana LAPYONOK³, David FUERTES², Anton LOPATIN², Benjamin TORRES³, Yevgeny DERIMIAN³, Jacques DESCLOITRES³, Johannes VASS⁴, Michael ASPETSBERGER⁴, Christian FEDERSPIELS⁴

¹Universit **é** Lille 1, ²Generalized Retrieval of Atmosphere and Surface Properties (GRASP-SAS), ³Université Lille 1, ⁴Catalysts GmbH

AS22-D2-PM2-326B-010 | AS22-A011 (Invited)

Atmospheric Correction of DSCOVR Epic Data: Diffuse UV

Reflectance of the Global Ocean

Alexei LYAPUSTIN^{1‡*}, Alexander VASILKOV², Dong HUANG², Yujie WANG³

¹NASA Goddard Space Flight Center, ²Science Systems and Applications, Inc., ³University of Maryland, Baltimore County

AS22-D2-PM2-326B-011 | AS22-A026

Advanced Surface/Atmosphere Characterisation Using

GRASP: New Possibilities of Classification and Global

Aerosol Sources Identification

Pavel LITVINOV¹**, Oleg DUBOVIK², Tatsiana LAPYONOK³, Anton LOPATIN¹, Xin HUANG¹, David FUERTES¹, Benjamin TORRES¹, Fabrice DUCOS³, Yevgeny DERIMIAN³, Andreas HANGLER⁴, Michael ASPETSBERGER⁴, Christian FEDERSPIELS⁴

¹Generalized Retrieval of Atmosphere and Surface Properties (GRASP-SAS), ²Université Lille 1, ³Université Lille 1, ⁴Catalysts GmbH

AS22-D2-PM2-326B-012 | AS22-A009

A Global OMACA Product of the Optical Depth of Aerosols

Above Clouds: Results from 12-Year Long OMI Record

Hiren JETHVA^{1‡+}, Omar TORRES², Changwoo AHN³
¹Universities Space Research Association/NASA Goddarad Space
Flight Center, ²NASA Goddard Space Flight Center, ³Science Systems
and Applications, Inc.

AS22-D2-PM2-326B-013 | AS22-A015

Aerosol Composition and Vertical Distribution Retrievals

Using Combined Multi-Angle Polarimetric and Hyperspectral

Measurements

Vijay NATRAJ $^{1*+}$, Pushkar KOPPARLA 1 , Adrian DOICU 2 , Diego LOYOLA 2 , Yuk YUNG 1

¹California Institute of Technology, ²German Aerospace Agency (DLR)

AS22-D2-PM2-326B-014 | AS22-A020

Investigating Aerosol Vertical Structure over the Los Angeles

Megacity Using Hyperspectral Oxygen Measurements

Zhao-Cheng ZENG^{1*}, Vijay NATRAJ¹, Feng XU², Stanley SANDER¹, Yuk YUNG¹

¹California Institute of Technology, ²Jet Propulsion Laboratory, California Institute of Technology

AS27 / Changes in Cryosphere and Its Climate Impacts: Observation and Modeling

Tue - 05 Jun | MR326B

Time 08:30 - 10:30

Chair(s) Chenghai WANG, Lanzhou University

Li DAN, Institude of Atmosphere Sciences

AS27-D2-AM1-326B-001 | AS27-A007

Improving of Freezing-Thawing Paramerterization in

Community Land Model

Kai YANG¹⁺, Chenghai WANG¹⁺ ¹Lanzhou University

AS27-D2-AM1-326B-002 | AS27-A019

Data-Adaptive Harmonic Decomposition and Prediction of

Regional Arctic Sea Ice Extent

Dmitri KONDRASHOV1#+

¹University of California, Los Angeles

AS27-D2-AM1-326B-003 | AS27-A009

Future Changes in Permafrost and Snow Water Equivalent Under a Scenario of 1.5°C Warming in the Northern

Officer a Scenario of 1.5 C Warming in the Northern

Hemisphere

Chenghai WANG^{1#+}, Kechen LI¹, Ying KONG¹
¹Lanzhou University

AS27-D2-AM1-326B-004 | AS27-A017

Modeling the Response of the Tibetan Plateau Lake to Climate Change

Lijuan WEN^{1#+}, Dongsheng SU², Zhaoguo LI², Lin ZHAO²
¹Cold and Arid Regions Environmental and Engineering Institute,
Chinese Academy of Sciences, ²Chinese Academy of Sciences

AS27-D2-AM1-326B-005 | AS27-A006

Simulation and Projection of Surface Temperature on Tibetan

Plateau: Results of Dynamic Downscaling

Xian ZHU^{1‡+}, Xiaohang WEN², Zhigang WEI¹, Wenjie DONG³
¹Beijing Normal University, ²Chengdu University of Information
Technology, ³Sun Yat-sen University

AS27-D2-AM1-326B-006 | AS27-A002

Simulation and Projection of Eurasia Blockings by CMIP5

Models

Yan LI1#+

¹Lanzhou University

Time 11:00 - 12:30

Chair(s) Chenghai WANG, Lanzhou University

AS27-D2-AM2-326B-007 | AS27-A005 (Invited)

The Possible Influence of Asian Polar Vertex Contraction on the Rainfall Deficits in the Middle and South China in

Autumn

Zhigang WEI1#+

¹Beijing Normal University

AS27-D2-AM2-326B-008 | AS27-A022

Evaluation of the Winter Sea Ice in the Barents and Kara Seas

Before 1979

Ruibo WANG^{1#+}, Shuanglin LI^{1,2}, Zhe HAN¹

¹Chinese Academy of Sciences, ²China University of Geosciences

AS27-D2-AM2-326B-009 | AS27-A013

Large-Scale Atmospheric Circulation Patterns Affecting Arctic

Sea Ice Variability in Boreal Summer

Nakbin CHOI1+, Myong-In LEE1#

¹Ulsan National Institute of Science and Technology

AS27-D2-AM2-326B-010 | AS27-A004

Relationship Between the Interannual Variations of Arctic Sea

Ice and Summer Eurasian Teleconnection and Associated

Influence on Summer Precipitation over China

Ruonan ZHANG1#+

¹Fudan University

AS27-D2-AM2-326B-011 | AS27-A015

Remote Sensing Based Estimation of the Maximum Thickness of Seasonally Frozen Ground over the Tibetan Plateau

Guanheng ZHENG^{1#+}, Dawen YANG¹

¹Tsinghua University

AS29 / Precipitation Extremes - Observations, Modelling, Projections

Tue - 05 Jun | MR319A

Time 16:00 - 18:00

Chair(s) Akiyo YATAGAI, Hirosaki University

Vinay KUMAR, Texas A & M University

AS29-D2-PM2-319A-001 | AS29-A039 (Invited)

Thermodynamic and Dynamic Mechanisms for the Hydrological Cycle over the Full Probability Distribution of Precipitation Events

Gang CHEN1**, Jesse NORRIS¹, J. David NEELIN¹, Jian LU², L. Ruby LEUNG²

¹University of California, Los Angeles, ²Pacific Northwest National Laboratory

AS29-D2-PM2-319A-002 | AS29-A045 (Invited)

Estimation of Detection Error of Extreme Precipitation Events in APHRODITE Quality Control Using Rain Potential Map

Natsuko YASUTOMI^{1#+}, Hitoshi HIROSE², Kenji TANAKA¹, Atsushi HIGUCHI², Koichi TOYOSHIMA², Shigenobu TANAKA¹

¹Kyoto University, ²Chiba University

AS29-D2-PM2-319A-003 | AS29-A051

How to Incorporate PMP into Nonparametric Frequency

Analysis

Kaoru TAKARA^{1#+}
¹Kyoto University

AS29-D2-PM2-319A-004 | AS29-A015

An Introduction of Chinese Microwave GEO Meteorological Satellite and its Potential Applications to Precipitation Retrieval

Naimeng LU^{1#+}, Yang GUO¹, Miao ZHANG¹, Song yan GU¹ ¹China Meteorological Administration

AS31 / The Science and Prediction of Tropical Cyclones

Tue - 05 Jun | MR315

Time 08:30 - 10:30

Chair(s) Sang-Hun PARK, Yonsei University

Kazuhisa TSUBOKI, Nagoya University

AS31-D2-AM1-315-021 | AS31-A046 (Invited)

Enhancing Tropical Cyclone Prediction with Advanced Assimilation of GPM and CYGNSS Satellite Observations

Zhaoxia PU^{1#+}
¹University of Utah

AS31-D2-AM1-315-022 | AS31-A085 (Invited)

A Comparison of Physical Parameterization on Tropical

Cyclones Simulations Using a Global Non-Hydrostatic Model

Sang-Hun PARK $^{1\pm}$, Jihyeon JANG², William SKAMAROCK², Yumin MOON³, Dong-Hyun CHA 4

¹Yonsei University, ²National Center for Atmospheric Research, ³University of Washington, ⁴Ulsan National Institute of Science and Technology

AS31-D2-AM1-315-023 | AS31-A005

Impacts of WRF Model Tendency Errors on Tropical Cyclone
Intensity Forecasts

Xiaohao QIN1#+

¹Chinese Academy of Sciences

AS31-D2-AM1-315-024 | AS31-A019

Challenges and Limitations of Ensemble-Based Typhoon Track

Forecast

Delia Yen-Chu CHEN¹*, Chou-Chun CHIANG², Ling-Feng HSIAO³, Jia-Chyi LIOU², Yi-Lin LIN², Ming-En HSIEH², Chin-Cheng TSAI², Lung-Yao CHANG²

¹Taiwan Typhoon and Flood Research Institute, National Applied Research Laboratories, ²Taiwan Typhoon and Flood Research Institute, ³Taiwan Typhoon and Flood Research Institute, National Applied Research Laboratories

AS31-D2-AM1-315-025 | AS31-A033

A Grapes-Based Mesoscale Ensemble Prediction System for

Tropical Cyclone Forecasting: Configuration and Performance Xubin ZHANG¹⁵⁺

¹China Meteorological Administration

AS31-D2-AM1-315-026 | AS31-A069 (Invited)

Vortex Initialization Through the High-resolution Ensemble

Kalman Filter Framework and Its Impact on Intensity Forecast:

a Case Study of Typhoon Megi (2010)

Shu-Chih YANG^{1‡+}, Yi-Pin CHANG¹, Kuan-Jen LIN¹
¹National Central University

AS31-D2-AM1-315-027 | AS31-A073

Reliability of Tropical Cyclone Best Track Data for

Pre-Satellite Period in the Western North Pacific

Moon-Hyun KIM1+, Il-Ju MOON1#

¹Jeju National University

AS31-D2-AM1-315-028 | AS31-A065

Multi-Scale Shear Impacts During the Genesis of Typhoon

Hagupit (2008)

Chelsea NAM1#+, Michael BELL1

¹Colorado State University

Time 11:00 - 12:30

Chair(s) Kosuke ITO, University of the Ryukyus

Liquang WU, Nanjing University

AS31-D2-AM2-315-029 | AS31-A030 (Invited)

Western North Pacific Tropical Cyclone Characteristics

Stratified by Genesis Environment

Hironori FUDEYASU^{1#+}, Ryuji YOSHIDA^{2,3}

¹Yokohama National University, ²RIKEN Advanced Institute for

Computational Science, ³Kobe University

AS31-D2-AM2-315-030 | AS31-A022

Future Changes in Tropical Cyclone Activity in High

Resolution Large Ensemble Simulations

Kohei YOSHIDA^{1#+}, Masato SUGI¹, Ryo MIZUTA¹, Hiroyuki MURAKAMI², Masayoshi ISHII¹

¹Japan Meteorological Agency, ²National Oceanic and Atmospheric Administration

AS31-D2-AM2-315-031 | AS31-A091

The Role and Evolution of Midtropospheric Vortex in the

Generation of Typhoon Nepartak (2016)

Shenglan WU1#+, Juan FANG1

¹Nanjing University

AS31-D2-AM2-315-032 | AS31-A071

Climatological Environmental Flow Patterns of Tropical

Cyclone Genesis over the Western North Pacific

Ryuji YOSHIDA^{1,2#+}, Hironori FUDEYASU³

¹RIKEN Advanced Institute for Computational Science, ²Kobe

University, 3Yokohama National University

AS31-D2-AM2-315-033 | AS31-A041

Effect of Intra-Seasonal Indo-Western Pacific Convection

Oscillation on Tropical Cyclone Activities over the Western

North Pacific During the Boreal Extended Summer

Qiuyun WANG1#+, Jianping LI1, Yanjie LI2, Jiaqing XUE2, Jiayu ZHENG3, Yidan XU1, Yazhou ZHANG1, Yuehong WANG1,

Jingwen ZHANG⁴

¹Beijing Normal University, ²Chinese Academy of Sciences, ³Second Institute of Oceanography, 4Chendu Meteorological Bureau

AS31-D2-AM2-315-034 | AS31-A057

Impacts of the Boreal Spring Indo-Pacific Warm Pool Hadley

Circulation on Tropical Cyclone Activity over the Western

North Pacific

Yi-Peng GUO1#+, Zhe-Min TAN1

¹Nanjing University

Time 13:30 - 15:30

Chair(s) Yuqing WANG, University of Hawaii

Hiroyuki YAMADA, University of the Ryukyus

AS31-D2-PM1-315-035 | AS31-A017 (Invited)

Tropical Plumes and the Outflow of Tropical Cyclones

Gregory TRIPOLI1#+

¹University of Wisconsin-Madison

AS31-D2-PM1-315-036 | AS31-A008

The Role of Vortical Hot Towers in Eyewall Reconstruction of

Typhoon Fanapi (2010) After Landfall on Taiwan

Ming-Jen YANG1#+, Yao-Chu WU2, Yu-Chieng LIOU2

¹National Taiwan University, ²National Central University

AS31-D2-PM1-315-037 | AS31-A015

The Role of Downshear Reformation in the Rapid

Intensification of a Tropical Cyclone

Xiaomin CHEN1#+, Yuqing WANG2, Juan FANG1, Ming XUE1,3 ¹Nanjing University, ²University of Hawaii at Manoa, ³University of

Oklahoma

AS31-D2-PM1-315-038 | AS31-A026

The Role of the Wishe Mechanism in Rapid Intensification of

Tropical Cyclones

Chun-Chieh WU1#+, Chieh-Jen CHENG1

¹National Taiwan University

Time 16:00 - 18:00

Chair(s) Hironori FUDEYASU, Yokohama National University

Man YAU, McGill University

AS31-D2-PM2-315-039 | AS31-A099 (Invited)

The Role of Small-Scale Vortices in Enhancing Surface Winds and Damage in Hurricane Harvey (2017)

Joshua WURMAN^{1#+}

¹Center for Severe Weather Research

AS31-D2-PM2-315-040 | AS31-A088 (Invited)

Large Eddy Simulation of Fine Scale Structures in the Tropical Cyclone Boundary

Liguang WU1#+

¹Nanjing University of Information Science & Technology

AS31-D2-PM2-315-041 | AS31-A052

Radiative Impacts on Tropical Cyclone Contraction Rate Before Rapid Intensification

Xiaodong TANG $^{1\sharp +}$, Zhe-Min TAN 1 , Juan FANG 1 , Fuqing ZHANG 2

¹Nanjing University, ²Pennsylvania State University

AS31-D2-PM2-315-042 | AS31-A092 (Invited)

On the Multiple Intensity and Structural Changes of Hurricane Sandy (2012) During its Extratropical Transition

Da-Lin ZHANG1#+

¹University of Maryland

AS31-D2-PM2-315-043 | AS31-A093

A Dynamical Framework Facilitating the Study on the Role of Boundary Layer Dynamics in Tropical Cyclone Intensification Yuqing WANG $^{1\sharp+}$

¹University of Hawaii at Manoa

AS31-D2-PM2-315-044 | AS31-A090

Forecast Performance and Study on Rapidly Intensified Process of Typhoon Hato (2017)

Qian WANG^{1#+}, Shaui WANG²

¹China Meteorological Administration, ²Imperial College London

AS31-D2-PM2-315-045 | AS31-A080

Urbanization Effects on Local Wind Due to Tropical Cyclones

Xiaoxue WANG¹‡+, Qinglan LI¹, Deli WANG², Lei ZHANG², Liqun SUN¹, Dian HUANG¹, Guangxin LI¹

 1 Chinese Academy of Sciences, 2 Shenzhen Meteorological Bureau

AS34 / El Niño Complexity and Change

Tue - 05 Jun | MR303B

Time 08:30 - 10:30

Chair(s) Malte STUECKER, University of Washington

Masahiro WATANABE, University of Tokyo

AS34-D2-AM1-303B-001 | AS34-A002 (Invited)

El Niño-Southern Oscillation Complexity

Axel TIMMERMANN^{1#+}

¹Pusan National University

AS34-D2-AM1-303B-002 | AS34-A028

Dynamics of El Niño Diversity

Fei-Fei JIN1,2#+

¹University of Hawaii, ²Chinese Meteorological Agency

AS34-D2-AM1-303B-003 | AS34-A018

Understanding ENSO Complexity in the Concept of Nonlinear

Interaction Between Bimodal ENSO and Annual Cycle

Ruihuang XIE1,2+, Fei-Fei JIN3,4#

¹Institute of Oceanology, Chinese Academy of Sciences, ²National Laboratory for Marine Science & Technology, ³University of Hawaii, ⁴Chinese Meteorological Agency

AS34-D2-AM1-303B-004 | AS34-A029

Empirical Nonlinear Recharge Oscillator Model

Soon-Il AN1#+, Soong-Ki KIM1

¹Yonsei University

AS34-D2-AM1-303B-005 | AS34-A019

Atmospheric Energetics over the Tropical Pacific During the ENSO Cycle

Jianping LI^{1s+}, Di DONG², Lidou HUYAN², Jiaqing XUE²
¹Beijing Normal University, ²Chinese Academy of Sciences

AS34-D2-AM1-303B-006 | AS34-A026

Diagnosing Growth Rates of Two Types of ENSO Events

Hong-Li REN1#+

¹China Meteorological Administration

AS34-D2-AM1-303B-007 | AS34-A024

Subsurface Nonlinear Dynamical Heating and ENSO

Asymmetry in Ocean Reanalysis

Michiya HAYASHI1#+, Fei-Fei JIN1,2

¹University of Hawaii, ²Chinese Meteorological Agency

Time 11:00 - 12:30

Chair(s) Hong-Li REN, CMA

Malte STUECKER, University of Washington

AS34-D2-AM2-303B-008 | AS34-A005 (Invited)

Robust Evidence in the Central Pacific for Stronger ENSO in

Last Decades than Pre-Industrial Period

Pamela GROTHE^{1‡+}, Kim COBB², Giovanni LIGUORI², Emanuele DI LORENZO², Antonietta CAPOTONDI³, Hai CHENG⁴, R. Lawrence EDWARDS⁵, Dan DEOCAMPO⁶, Jean LYNCH-STIEGLITZ², Hussein SAYANI⁷, Diane THOMPSON⁷, Lauren TOTH⁸, Jessica CONROY⁹, Andrea MOORE¹, Gemma O'CONNOR¹⁰

¹University of Mary Washington, ²Georgia Institute of Technology, ³National Oceanic and Atmospheric Administration, ⁴Xi'an Jiaotong University, ⁵University of Minnesota, ⁶Georgia State University, ⁷Boston University, ⁸United States Geological Survey, ⁹University of Illinois Urbana-Champaign, ¹⁰University of Washington

AS34-D2-AM2-303B-009 | AS34-A003 (Invited)

Recent Progress in Understanding ENSO Under Greenhouse Warming

Wenju CAI^{1,2‡+}, Guojian WANG², Agus SANTOSO^{2,3}, Lixin WU⁴
¹Ocean University of China and Qingdao National Laboratory for
Marine Science and Technology, ²Commonwealth Scientific and
Industrial Research Organisation, ³University of New South Wales,
⁴Ocean University of China

AS34-D2-AM2-303B-010 | AS34-A011

Weakening of Nonlinear ENSO and a La Niña-Like Mean-State

Response to Global Warming

Tsubasa KOHYAMA^{1#+}, Dennis HARTMANN², David BATTISTI²

¹The University of Tokyo, ²University of Washington

AS34-D2-AM2-303B-011 | AS34-A009

ENSO Teleconnection and Hydrological Cycle Responses to

Idealised Global Warming Perturbations

Alexander TODD¹ $^{\sharp *}$, Matthew COLLINS¹, F. Hugo LAMBERT¹, Robin CHADWICK²

¹University of Exeter, ²Met Office Hadley Centre

AS34-D2-AM2-303B-012 | AS34-A016

Future Changes in Extreme El Nino Events Modulated by

North Tropical Atlantic Variability

Jong-Seong KUG1#+, Yoo-Geun HAM2

¹Pohang University of Science and Technology, ²Chonnam National University

AS34-D2-AM2-303B-013 | AS34-A020

A Comparison of ENSO in the Present and Early Holocene Relevant to Understand Interaction Between ENSO and Seasonal Cycle.

Tomoki IWAKIRI^{1‡+}, Masahiro WATANABE¹
¹The University of Tokyo

Time 13:30 - 15:30

Chair(s) Hong-Li REN, CMA

AS34-D2-PM1-303B-014 | AS34-A001 (Invited)

Unusually Warm Indian Ocean Sea Surface Temperatures

Arrest Development of El Niño in 2014

Michael MCPHADEN^{1#+}, Lu DONG²

¹National Oceanic and Atmospheric Administration, ²Pacific Northwest National Laboratory

AS34-D2-PM1-303B-015 | AS34-A030

The South Pacific Meridional Mode and its Role in ENSO

Variability

Jason FURTADO^{1‡+}, Yujia YOU²
¹University of Oklahoma, ²University of Oklahoma School of
Meteorology

AS34-D2-PM1-303B-016 | AS34-A017

Revisiting the Pacific Meridional Mode

Malte STUECKER1#+

¹University of Washington

AS34-D2-PM1-303B-017 | AS34-A012

Influence of Subsurface Advection in the Off-Equatorial South

Pacific Ocean on El Niño Evolution

Yukiko IMADA $^{1\pm}$, Hiroaki TATEBE 2 , Masahiro WATANABE 3 , Masayoshi ISHII 1 , Masahide KIMOTO 3

¹Japan Meteorological Agency, ²Japan Agency for Marine-Earth Science and Technology, ³The University of Tokyo

AS34-D2-PM1-303B-018 | AS34-A023

The Western Pacific Heat Buildup and its Effect on ENSO

Diversity: Implications for the Timing, Magnitude and

Prediction of El Niño

Desislava PETROVA^{1,2‡+}, Joan BALLESTER¹, Siem Jan KOOPMAN³, Simona BORDONI⁴, Ben CASH⁵, Markel GARCÍA-DÍEZ⁶, Xavier RODÓ⁷

¹Barcelona Institute for Global Health, ²University of Barcelona, ³Vrije Universiteit Amsterdam, ⁴California Institute of Technology, ⁵George Mason University, ⁶Predictia Intelligent Data Solutions, ⁷Institució Catalana de Recerca I Estudis Avançats AS34-D2-PM1-303B-019 | AS34-A025

An ENSO Prediction Approach Based on Ocean Conditions and Ocean-Atmosphere Coupling

Yu-Heng TSENG 1 , Zeng-Zhen HU 2 , Ruiqiang DING 3 , Han-Ching CHEN $^{1+}$

¹National Taiwan University, ²National Oceanic and Atmospheric Administration, ³Chinese Academy of Sciences

AS34-D2-PM1-303B-020 | AS34-A036

Supermodeling the Coupled Ocean-Atmosphere System in the Tropical Pacific

Gregory DUANE^{1,2*+}, Mao-Lin SHEN¹, Noel KEENLYSIDE¹
¹University of Bergen, ²University of Colorado

AS35 / Mountain and Island Effects on Airflow, Precipitation, Weather, and Climate

Tue - 05 Jun | MR302B

Time 16:00 - 18:00

Chair(s) Cheng-Ku YU, National Taiwan University

Alexandros POULIDIS, Kyoto University

AS35-D2-PM2-302B-001 | AS35-A021

A Study of Summer Leeside Rainfall Maxima over the Island of Hawaii

Yi-Leng CHEN1#+

¹University of Hawaii at Manoa

AS35-D2-PM2-302B-002 | AS35-A022

Wintertime Orographic Precipitation over the Da-Tun

Mountain of Northern Taiwan

Cheng-Ku YU1#+, Lin-Wen CHENG1

¹National Taiwan University

AS35-D2-PM2-302B-003 | AS35-A009

Classification of Persistent Summer Extreme Heavy Rainfall Events in North China from the Perspective of Topographic Influences

Jie CAO^{1,2#+}, Linna ZHANG³

 $^{1}\mbox{Chinese}$ Academy of Sciences, $^{2}\mbox{University}$ of Oklahoma, $^{3}\mbox{Beijing}$ Meteorological Bureau

AS35-D2-PM2-302B-004 | AS35-A018

Eddy-Permitting Simulations of Eruptions at Sakurajima,

Japan Using WRF-LES and FALL3D

Alexandros POULIDIS^{1#+}, Tetsuya TAKEMI¹, Masato IGUCHI¹ ¹Kyoto University

AS35-D2-PM2-302B-005 | AS35-A006

Remote Triggering of Intense Rainbands Upstream of

Topography by Tropical Cyclones

Che-Yu LIN^{1#+}, Cheng-Ku YU¹
¹National Taiwan University

AS35-D2-PM2-302B-006 | AS35-A012

Topographic Effects on Ice Clouds Evaluated by Cloudsat and

Calipso Satellite Observations and a High-Resolution Global

Non-Hydrostatic Model

Tatsuya SEIKI^{1‡+}, Chihiro KODAMA¹, Masaki SATOH², Tempei HASHINO³, Yuichiro HAGIHARA⁴, Hajime OKAMOTO³
¹Japan Agency for Marine-Earth Science and Technology, ²The University of Tokyo, ³Kyushu University, ⁴Japan Aerospace Exploration Agency

AS35-D2-PM2-302B-007 | AS35-A017

Detections and Simulations of Mountain Lee Wave Signals

Due to Water Vapor Fluctuation by ALOS-2 ScanSAR

Interferometry

Youhei KINOSHITA^{1#+}, Yu MORISHITA², Yukiko HIRABAYASHI³

¹Remote Sensing Technology Center of Japan, ²Geospatial Information Authority of Japan, ³The University of Tokyo

AS37 / Earth System Models: Development, Validation and Uncertainties

Tue - 05 Jun | MR303B

Time 16:00 - 18:00

Chair(s) Xiaohong LIU, University of Wyoming

Shaocheng XIE, Lawrence Livermore National Laboratory

AS37-D2-PM2-303B-001 | AS37-A010 (Invited)

Description and Performance of the Chinese Academy Sciences

Earth System Model

Minghua ZHANG $^{1,2s+}$, He ZHANG 2 , Juanxiong HE 2 , Xunqiang BI 2 , Hailong LIU 2 , Jiangbo JING 2 , Pengfei LIN 2 , Jiawen ZHU 2 , Dongling ZHANG 2

¹Stony Brook University, ²Chinese Academy of Sciences

AS37-D2-PM2-303B-002 | AS37-A041 (Invited)

Developing Version 2 of the Community Earth System Model

Julio BACMEISTER $^{1s+}$, Andrew GETTELMAN 1 , Jean-François LAMARQUE 1 , Cecile HANNAY 1

¹National Center for Atmospheric Research

AS37-D2-PM2-303B-003 | AS37-A042 (Invited)

Impact of Initialization on Pacific Decadal Oscillation

Prediction

Bin WANG^{1#+}, Yujun HE²

¹Chinese Academy of Sciences, ²Tsinghua University

AS37-D2-PM2-303B-004 | AS37-A016

The Beijing Climate Center Climate System Model

(BCC-CSM): Main Progress from CMIP5 to CMIP6

Tongwen WU1**, Yixiong LU¹, Xiaoge XIN¹, Yanwu ZHANG¹, Jie ZHANG¹, Li ZHANG¹, Yimin LIU¹, Weihua JIE¹

¹China Meteorological Administration

AS37-D2-PM2-303B-005 | AS37-A032

Challenges in Modeling Atmospheric Aerosols in East Asia:

Latest NCAR CESM Developments to Address Them

Xiaohong LIU1,2#+

¹University of Wyoming, ²Chinese Academy of Sciences

AS37-D2-PM2-303B-006 | AS37-A002

Testing a Stochastic Deep Convection Parameterization in the

NCAR CAM5

Yong WANG¹⁺, Guang ZHANG¹⁺, Yujun HE¹, Yiquan JIANG², George CRAIG³

¹Tsinghua University, ²Nanjing University,

AS49 / Mesoscale Meteorology and High-impact Weather

Tue - 05 Jun | MR326A

Time 13:30 - 15:30

Chair(s) Gyu Won LEE, Kyungpook National University

AS49-D2-PM1-326A-001 | AS49-A032 (Invited)

Dual-Doppler Tornado Structure and Radar-In Situ Tornado

Damage Analyses

Joshua WURMAN^{1#+}

¹Center for Severe Weather Research

AS49-D2-PM1-326A-002 | AS49-A015 (Invited)

Numerical Simulations of Meso-Beta-Scale Vortices that

Spawned Tornado-Like Vortices

Eigo TOCHIMOTO¹⁵⁺, Sho YOKOTA², Hiroshi NIINO¹, Wataru YANASE²

¹The University of Tokyo, ²Japan Meteorological Agency

AS49-D2-PM1-326A-003 | AS49-A010 (Invited)

A Morning Convective Rainfall Event over Southwestern

Taiwan in the Mei-Yu Season Under Weak Synoptic

Conditions

Chung-Chieh WANG $^{\mbox{\scriptsize 15}}$, George Tai-Jen CHEN 2 , Chi-Hong NGAI 2

¹National Taiwan Normal University, ²National Taiwan University

AS49-D2-PM1-326A-004 | AS49-A033

Mesoscale Processes in Intense New England Coastal Winter Cyclones

Karen KOSIBA¹⁵⁺, Matthew KUMJIAN², Kelly LOMBARDO³, Michael FRENCH⁴, Joshua WURMAN¹, James MARQUIS⁵, Steven GREYBUSH²

¹Center for Severe Weather Research, ²Pennsylvania State University, ³University of Connecticut, ⁴Stony Brook University, ⁵University of Colorado Boulder

AS49-D2-PM1-326A-005 | AS49-A016

Possibility of Particle Identification for Solid Hydrometeors

Using a Ka-Band Polarimetric Radar

Taro SHINODA¹⁸⁺, Tadayasu OHIGASHI², Kenji SUZUKI³, Mamoru KUBO⁴, Yukiya MINAMI⁵, Haruya MINDA¹, Moeto KYUSHIMA¹, Nobuhiro TAKAHASHI¹, Kazuhisa TSUBOKI¹ ¹Nagoya University, ²Kyoto University, ³Yamaguchi University, ⁴Kanazawa University, ⁵Ishikawa Prefectural University

AS49-D2-PM1-326A-006 | AS49-A026

Recent Improvement of TWRF and the Effect on High-Impact

Typhoon Predictions over the Western North Pacific

Der Song CHEN $^{1s+}$, Tien-Chiang YEH 1 , Ling-Feng HSIAO 2 , Chin-Tzu FONG 1 , Jing-Shan HONG 1

¹Central Weather Bureau, ²Taiwan Typhoon and Flood Research Institute,National Applied Research Laboratories

AS49-D2-PM1-326A-007 | AS49-A009

Role of Topography in the Distributions of Precipitation over the Pyeongchang Area Seen from Multiple-Doppler Radar Observations

Gyu Won LEE $^{{}_{1\sharp}},$ Chia-Lun TSAI $^{\!{}_{1}},$ Kwonil KIM $^{\!{}_{1}},$ Yu-Chieng LIOU $^{\!{}_{2}},$ Cheng-Ku YU $^{\!{}_{3}}$

¹Kyungpook National University, ²National Central University, ³National Taiwan University

Time 16:00 - 18:00

Chair(s) Michael BELL, Colorado State University

Ki-Hong MIN, Kyungpook National University

AS49-D2-PM2-326A-008 | AS49-A018

Initiation of an Elevated Convective Line that Produced the

Yancheng EF4 Tornado in 2016 in China

Murong ZHANG¹⁺, Zhiyong MENG¹⁺
¹Peking University

³Ludwig-Maximilians-Universität

AS49-D2-PM2-326A-009 | AS49-A003

Sensitivity of Typhoon Track and Convection Structure to Cloud Microphysics Near Taiwan Topography: A Case Study of Typhoon Saola (2012)

Li-Huan HSU¹**, Shih-Hao SU², Hung-Chi KUO³
¹Taiwan Typhoon and Flood Research Institute, National Applied
Research Laboratories, ²Chinese Culture University, ³National Taiwan
University

AS49-D2-PM2-326A-010 | AS49-A019

Structure and Dynamics of an Intense Rear-Inflow Jet Observed During PECAN

Michael BELL^{1‡+}, Jonathan MARTINEZ¹, Daniel STECHMAN²
¹Colorado State University, ²University of Illinois at
Urbana-Champaign

AS49-D2-PM2-326A-011 | AS49-A024

Very Short-Term Precipitation Forecasting with Radar Data Assimilation Method

Ki-Hong MIN $^{1,2\sharp *}$, Jeong-Ho BAE^1 , Gyu Won LEE 1 , Jongchul HA 3 , Yong Hee LEE 3

¹Kyungpook National University, ²Purdue University, ³Korea Meteorological Administration

AS49-D2-PM2-326A-012 | AS49-A031

Simulated Radioactive Tracer of the Virtual Emission from the Nuclear Experiment

Eun-Chul CHANG¹*, Kei YOSHIMURA²
¹Kongju National University, ²The University of Tokyo

AS54 / Aerosols, Clouds, Radiation, Precipitation, and Their Interactions

Tue - 05 Jun | MR303A

Time 13:30 - 15:30

Chair(s) Xiquan DONG, University of Arizona

Chunguang CUI, Wuhan Hevay Rain Institute

AS54-D2-PM1-303A-008 | AS54-A036 (Invited)

An Overview of the NASA MODIS Cloud Product and Uses in Global Climate Model Evaluation

Steven PLATNICK^{1‡+}, Robert PINCUS², Kerry MEYER¹
¹NASA Goddard Space Flight Center, ²University of Colorado

AS54-D2-PM1-303A-009 | AS54-A037 (Invited)

The CMIP6 Model Evaluation and Analysis Using Satellite Observations

Jonathan JIANG1#+

¹Jet Propulsion Laboratory, California Institute of Technology

AS54-D2-PM1-303A-010 | AS54-A004

Cloud-Resolving Simulations of Environmental Forcing on

Marine Boundary Cloud Development and Drizzle Formation

Yuan WANG $^{1\#*}$, Xiquan DONG 2 , Baike XI 2 , Peng WU 2 , Jonathan JIANG 3 , Yuk YUNG 1

¹California Institute of Technology, ²University of Arizona, ³Jet Propulsion Laboratory, California Institute of Technology

AS54-D2-PM1-303A-011 | AS54-A029

Investigation of the Cloud-Precipitation Properties of Three

Modes of MCSs During PECAN

Wenjun CUI¹⁺, Xiquan DONG^{1#}, Baike XI¹, Jingyu WANG¹
¹University of Arizona

AS54-D2-PM1-303A-012 | AS54-A043

Convective Clouds in Smoke, Dust and Anthropogenic

Pollution Environment

Lei HUANG^{1,2‡+}, Jonathan JIANG², Hui SU², Yuan WANG³, Bin ZHAO¹, Steven MASSIE⁴, Ali OMAR⁵, Zhien WANG⁶

¹University of California, Los Angeles, ²Jet Propulsion Laboratory, California Institute of Technology, ³California Institute of Technology, ⁴University of Colorado Boulder, ⁵National Aeronautics and Space Administration, ⁶University of Wyoming

Time 16:00 - 18:00

Chair(s) Terry NAKAJIMA, Japan Aerospace Exploration Agency

Xiquan DONG, University of Arizona

AS54-D2-PM2-303A-013 | AS54-A030 (Invited)

Substantial Convection and Precipitation Enhancements by

Ultrafine Aerosol Particles

Jiwen FAN1#+

¹Pacific Northwest National Laboratory

AS54-D2-PM2-303A-014 | AS54-A044 (Invited)

Evaluating the Impact of Cloud-Aerosol-Precipitation

Interaction on Rainfall Forecast by NOAA/NWP

Zhanqing LI^{1,2‡+}, Mengjiao JIANG², Seoung Soo LEE³
¹University of Maryland, ²Beijing Normal University, ³Earth System Science Interdisciplinary Center

AS54-D2-PM2-303A-015 | AS54-A028

Extending Deep Blue Aerosol Retrievals to Absorbing Aerosols

Above Clouds: A New Tool for

Aerosol-Cloud-Precipitation-Radiation Studies

Andrew SAYER^{1#}, N. Christina HSU², Jaehwa LEE², Woogyung KIM², Richard FERRARE³, Sharon BURTON³, Jens REDEMANN⁴, Samuel LEBLANC⁵

¹Universities Space Research Association, ²NASA Goddard Space Flight Center, ³NASA Langley Research Center, ⁴NASA Ames Research Center, ⁵Bay Area Environmental Research Institute/ NASA Ames Research Center AS54-D2-PM2-303A-016 | AS54-A003

Column-Integrated Aerosol Optical Properties of Coarse- and Fine-Mode Particles over the Pearl River Delta Region in China Boru $MAI^{1#+}$

¹China Meteorological Administration

AS54-D2-PM2-303A-017 | AS54-A031

Turbulence and Droplet Clustering in Shallow Cumulus: The

Effects of Aerosol Number Concentration

Dillon DODSON^{1‡+}, Jennifer GRISWOLD¹
¹University of Hawaii at Manoa

AS54-D2-PM2-303A-018 | AS54-A033

The Impact of Organic Aerosols Partitioning on Activated

Cloud Number Concentration

Chloe GAO^{1‡+}, Susanne BAUER², Kostas TSIGARIDIS³
¹Columbia University/NASA GISS, ²NASA Goddard Institute for Space Studies, ³Columbia University

AS54-D2-PM2-303A-019 | AS54-A026

Comparison of Daytime Low-Level Cloud Properties Derived

from GOES and ARM SGP Measurements

Theodore MCHARDY^{1,*}+, Xiquan DONG¹, Patrick MINNIS², Mandana THIEMAN³, Rabi PALIKONDA³, Baike XI¹
¹University of Arizona, ²NASA Langley Research Center, ³Science Systems and Applications, Inc.

BG05-SE / New Results from Advanced Spectroscopic and Thermal Infrared Measurements in North America, Hawaii, and South Asia

Tue - 05 Jun | MR304B

Time 08:30 - 10:30

Chair(s) Vincent J. REALMUTO, NASA JPL

Florian M. SCHWANDNER, NASA JPL

BG05-SE-D2-AM1-304B-001 | BG05-SE-A001 (Invited)

Characterizing the World in a Full Spectrum: The Ground Object Spectral Library

Qing XIAO^{1±+}, Jianguang WEN¹, Dongqin YOU²
¹Chinese Academy of Sciences, ²Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences

BG05-SE-D2-AM1-304B-002 | BG05-SE-A002

Nano-Scale Secondary Ion Mass Spectrometry (Nano-SIMS)
Images Can Differentiate Organo-Mineral Complexes and
Associated Carbon Preservation in a Chinese Red Soil
Xinhua HE^{1,2#+}

¹Southwest University, ²University of Western Australia

BG05-SE-D2-AM1-304B-003 | BG05-SE-A006 (Invited)

Overview of Advanced Imaging Spectrometer Campaigns and Science in Hawaii, Australia, and India

Robert GREEN1#+

¹Jet Propulsion Laboratory, California Institute of Technology

BG05-SE-D2-AM1-304B-004 | BG05-SE-A007

Coral Reef Airborne Laboratory: Airborne Spectral Imaging of

Coral Reef Ecology

Eric HOCHBERG1#+

¹Bermuda Institute of Ocean Sciences

BG05-SE-D2-AM1-304B-005 | BG05-SE-A003

Thermal Infrared Measurements of Active Lava Surfaces:

Implications for Improved Flow Modeling and Future

Instrument Development

James THOMPSON^{1‡+}, Michael RAMSEY¹
¹University of Pittsburgh

BG05-SE-D2-AM1-304B-006 | BG05-SE-A004

Satellite-Based Thermal Precursors of Phreatic Volcanic Eruptions

Társilo GIRONA^{1‡+}, Vincent REALMUTO¹
¹Jet Propulsion Laboratory, California Institute of Technology

BG05-SE-D2-AM1-304B-007 | BG05-SE-A008

Combining Multi-Sensor Remote Sensing and Dispersion Modeling to Improve Forecasts of the Impact of Volcanic

Sulfur Dioxide Emissions on Air Quality in Hawaii

Vincent REALMUTO¹**, Florian M. SCHWANDNER^{1,2}
¹Jet Propulsion Laboratory, California Institute of Technology, ²Gas Monitoring Solutions

BG05-SE-D2-AM1-304B-008 | BG05-SE-A005

A Window into the Future of the Earth, Hidden in the Jungles of Costa Rica's Volcanoes

Florian M. SCHWANDNER^{1,2‡+}, Joshua B. FISHER¹, Gregory P. ASNER³, David SCHIMEL¹, Richard J. NORBY⁴, Christian FRANKENBERG⁵, Rosie FISHER⁶, Chad D. DEERING³, Amy J. BRAVERMAN¹, Ulli SEIBT², Gretchen R. MILLER®, Arturo SÁNCHEZ-AZOFEIFA®, Jorge Andres DIAZ¹⁰, Eliecer DUARTE¹⁰, J. Maarten DE MOOR¹⁰, Roberto A. CORDERO SOLÓRZANO¹⁰, Jennifer L. LEWICKI¹¹, Georgios MATHEOU¹², David PIERI⁵, Charles MILLER¹, Ryan P. PAVLICK¹¹Jet Propulsion Laboratory, California Institute of Technology, ²University of California, Los Angeles, ³Carnegie Institution for Science, ⁴Oak Ridge National Lab, ⁵California Institute of Technology, ⁴National Center for Atmospheric Research, ¬Michigan Tech University, ®Texas A&M University, 9University of Alberta, ¹⁰National University of Costa Rica, ¹¹United States Geological Survey, ¹²University of Connecticut

BG06-AS / From GHG Observations to Fluxes: Top-down Measurements of the Carbon Cycle

Tue - 05 Jun | MR304B

Time 11:00 - 12:30

Chair(s) Christopher ODELL, Colorado State University

Makoto SAITO, National Institute for Environmental

Studies

BG06-AS-D2-AM2-304B-001 | BG06-AS-A001

Role of Climate Variability and Land Use on Fire Emissions of

Carbon Gasses in the 21st Century

John WORDEN $^{1\#*},$ A. Anthony BLOOM 1, Yi YIN 2, Helen WORDEN 3

¹Jet Propulsion Laboratory, California Institute of Technology, ²California Institute of Technology, ³National Center for Atmospheric Research

BG06-AS-D2-AM2-304B-002 | BG06-AS-A015

The 2015-2016 El Niño and the Response of the Carbon Cycle:

Findings from the Orbiting Carbon Observatory-2 Mission

Abhishek CHATTERJEE¹; Michelle GIERACH², Adrienne SUTTON³, Richard FEELY³, Peter LANDSCHUETZER⁴, Sourish BASU⁵, David CRISP², Annmarie ELDERING², Michael R. GUNSON², Ralph KEELING⁶, Brad WEIR¹, Britton STEPHENS⁷, David SCHIMEL²

¹NASA Goddard Space Flight Center, ²Jet Propulsion Laboratory, California Institute of Technology, ³Pacific Marine Environmental Laboratory, ⁴Max Planck Institute for Meteorology, ⁵National Oceanic and Atmospheric Administration, ⁶University of California, San Diego, ⁷National Center for Atmospheric Research

BG06-AS-D2-AM2-304B-003 | BG06-AS-A009

The First Year of TanSat CO2 Measurement

Dongxu YANG¹#+, TanSat TEAM²

¹Institute of Atmospheric Physics, Chinese Academy of Sciences, ²Chinese Academy of Sciences

BG06-AS-D2-AM2-304B-004 | BG06-AS-A004

Segment-Based Signal Characteristics of Satellite-Derived

XCO2 Seasonal Cycles

Leonardo CALLE^{1**}, Benjamin POULTER², Prabir PATRA^{3,4}
¹Montana State University, ²National Aeronautics and Space
Administration, ³Japan Agency for Marine-Earth Science and
Technology, ⁴Tohoku University

BG06-AS-D2-AM2-304B-005 | BG06-AS-A016

New Evidence for a Significant Underestimate of

Photosynthesis in the Alaskan Arctic

Le KUAI^{1#+}, Charles MILLER², Ian BAKER³, Kevin BOWMAN², Meemong LEE², Nicholas PARAZOO², Roisin COMMANE⁴, Zhaocheng ZENG⁵, Yuk YUNG⁵

¹UCLA / JPL-Caltech, ²Jet Propulsion Laboratory, California Institute of Technology, ³Colorado State University, ⁴Columbia University, ⁵California Institute of Technology

BG06-AS-D2-AM2-304B-006 | BG06-AS-A026

The 2017 Ascends/Above Airborne Campaign and Pulsed Lidar

Measurements of CO2 Column Concentrations

James ABSHIRE^{1‡+}, Jianping MAO², Haris RIRIS¹, Graham ALLAN³, William HASSELBRACK³, Kenji NUMATA¹, Jeffrey CHEN¹, Randy KAWA¹, Joshua DI GANGI⁴, Yonghoon CHOI⁴ ¹NASA Goddard Space Flight Center, ²University of Maryland, ³NASA Goddard Space Flight Center/ Sigma, ⁴NASA Langley Research Center

Time 13:30 - 15:30

Chair(s) Abhishek CHATTERJEE, NASA Goddard Spaceflight

Center

Christopher ODELL, Colorado State University

BG06-AS-D2-PM1-304B-007 | BG06-AS-A018 (Invited)

Measuring CO2 from Space – Lessons Learned from Sciamachy, GOSAT, and OCO-2

David CRISP1#+

¹Jet Propulsion Laboratory, California Institute of Technology

BG06-AS-D2-PM1-304B-008 | BG06-AS-A017

The OCO-3 Mission: Science Objectives and Instrument

Performance

Annmarie ELDERING^{1‡}, Christopher O'DELL²⁺, Matthew BENNETT¹, Ralph BASILIO¹

¹Jet Propulsion Laboratory, California Institute of Technology, ²Colorado State University

BG06-AS-D2-PM1-304B-009 | BG06-AS-A028 (Invited)

Chinese GHGs Satellite Status and Future Plan

Yi LIU1#+

¹Chinese Academy of Sciences

BG06-AS-D2-PM1-304B-010 | BG06-AS-A030

The Next-Generation CO2 Monitoring Constellation Project

Maohua WANG1#+, Qian-Rong GU2

¹Chinese Academy of Sciences, ²Shanghai Advanced Research Institute, Chinese Academy of Sciences

BG06-AS-D2-PM1-304B-011 | BG06-AS-A032

Comparing Modeled Nitrous Oxide Emissions to Regional

Atmospheric Inversion Results over North America

Cynthia NEVISON1#+

¹University of Colorado, Boulder

Time 16:00 - 18:00

Chair(s) Abhishek CHATTERJEE, NASA Goddard Spaceflight

Center

Dongxu YANG, Chinese Academy of Sciences

BG06-AS-D2-PM2-304B-012 | BG06-AS-A014

The Potential for Measuring Carbon Dioxide from Space Using Lidar

Stephan KAWA¹⁺*, Jianping MAO², James ABSHIRE¹, Xioli SUN¹, Sean CROWELL³, Abhishek CHATTERJEE¹, Anand RAMANATHAN²

¹NASA Goddard Space Flight Center, ²University of Maryland, ³University of Oklahoma

BG06-AS-D2-PM2-304B-013 | BG06-AS-A027

How Good are Retrievals of CO2 from Satellite-Based Passive

Near-Infrared Sensors, and are They Good Enough?

Christopher O'DELL^{1‡+}, Annmarie ELDERING², David CRISP², Brendan FISHER², Aronne MERRELLI³, Robert NELSON¹, Vivienne PAYNE², Thomas TAYLOR¹, Paul WENNBERG⁴

¹Colorado State University, ²Jet Propulsion Laboratory, California Institute of Technology, ³University of Wisconsin-Madison, ⁴California Institute of Technology

BG06-AS-D2-PM2-304B-014 | BG06-AS-A023

The Global Distribution of CO2 Fluxes Given by New Retrievals of OCO-2 Column CO2 in an Inverse Model David BAKER^{1‡+}

¹Colorado State University

BG06-AS-D2-PM2-304B-015 | BG06-AS-A020

Interpreting OCO-2 Constrained CO2 Surface Flux Estimates

Through the Lens of Atmospheric Transport Uncertainty

Andrew SCHUH1*, Andy JACOBSON2, Sourish BASU2, Brad WEIR3, David BAKER1+

¹Colorado State University, ²National Oceanic and Atmospheric Administration, ³NASA Goddard Space Flight Center

BG06-AS-D2-PM2-304B-016 | BG06-AS-A031

A New Fast Randomized Optimal Approach for Diagnostic and Optimization (FRODO) Carbon Dioxide Fluxes Inferred from the NASA CMS-Flux

Daven K. HENZE^{1‡+}, Nicolas BOUSSEREZ², Kevin BOWMAN³, Meemong LEE³

¹University of Colorado Boulder, ²European Centre for Medium-Range Weather Forecasts, ³Jet Propulsion Laboratory, California Institute of Technology

HS05 / Remote Sensing and Data Assimilation in Hydrology

Tue - 05 Jun | MR318A

Time 16:00 - 18:00

Chair(s) Ben JARIHANI, University of the Sunshine Coast

HS05-D2-PM2-318A-001 | HS05-A004 (Invited)

Remote Sensing of Environment - Soil Moisture, Snowpacks, Sea Water Turbidity, Gross Primary Production, Floods, and River Erosion and Migration

Thian Yew GAN^{1‡+}, Harri KOIVUSALO², Yongqin David CHEN³
¹Research Ambassador, ²Aalto University, ³The Chinese University of Hong Kong

HS05-D2-PM2-318A-002 | HS05-A005

Radar Rainfall Rate Adjustment Driven by Raindrop Size Distribution Variation

Yang SONG^{1#+}, Dawei HAN¹, M. A. RICO-RAMIREZ¹ ¹University of Bristol

HS05-D2-PM2-318A-003 | HS05-A011

Integration of Remote Sensing Evapotranspiration into
Multi-Objective Calibration of DHSVM in Humid Region of

Suli PAN¹⁵⁺, Yue-Ping XU¹, Li LIU¹
¹Zhejiang University

HS05-D2-PM2-318A-004 | HS05-A016

Slope DEM of Inland Waterbodies Reconstructed by Optical and Radar Imageries

Hsin-Ya PENG^{1#+}, Kuo-Hsin TSENG¹
¹National Central University

HS05-D2-PM2-318A-005 | HS05-A018

Calibration of Satellite Precipitation Product GSMaP with Ground Rain-Gauge Observations for Hydrological Simulations

Kumiko TSUJIMOTO^{1#+}, Tetsu OHTA²
¹Okayama University, ²N/A

HS05-D2-PM2-318A-006 | HS05-A019

Assessing Water Storage Trends and Extremes in Global River Basins Using Models and Grace Data

Zizhan ZHANG^{1‡+}, Bridget SCANLON², Alexander SUN² ¹Chinese Academy of Sciences, ²University of Texas at Austin

HS05-D2-PM2-318A-007 | HS05-A025

Reducing Uncertainties in a Semiarid Basin of South East of Spain by Applying a Hydrological Model Driven by Remote Sensing

Sandra G. GARCIA GALIANO¹⁵⁺, Patricia OLMOS GIMÉNEZ², Jose Angel MARTINEZ PEREZ²
¹UNIVERSIDAD POLITECNICA DE CARTAGENA

Fiscal No. Q8050013E, ²Universidad Politécnica de Cartagena

HS05-D2-PM2-318A-008 | HS05-A026

Enhancing Agricultural Resilience to Drought in Ninh Thuan

Province of Vietnam

Farrukh CHISHTIE1#+

¹SERVIR-Mekong Asian Disaster Preparedness Center Bangkok

HS11 / Dealing with Hydrological Extremes: Theory, Simulation, and Practice

Tue - 05 Jun | MR318B

Time 16:00 - 18:00

Chair(s) Hidetaka CHIKAMORI, Okayama University

HS11-D2-PM2-318B-001 | HS11-A008

Trends in Return Levels of Rainfall Extremes During the Typhoon Season in Taiwan: Observations and Climate Model Simulation

Pao-Shin CHU $^{\mbox{\tiny 1}}$, Hanpei ZHANG $^{\mbox{\tiny 1}}$, Hui-Ling CHANG $^{\mbox{\tiny 2}}$, Boyi LU $^{\mbox{\tiny 1}}$, Tsui-Ling CHEN $^{\mbox{\tiny 2}}$

¹University of Hawaii, ²Central Weather Bureau

HS11-D2-PM2-318B-002 | HS11-A011

Rainfall Frequency Analysis Using Mixture Distribution of

Event-Maximum Rainfalls

Bo-Yu CHEN¹⁺, Ke-Sheng CHENG^{1‡}
¹National Taiwan University

HS11-D2-PM2-318B-003 | HS11-A015

Probabilistic Flood Envelope Curves Derived from Annual

Maximum Areal Rainfall and its Comparison with

Conventional Envelope Curves in Japan

Hidetaka CHIKAMORI1#+

¹Okayama University

HS11-D2-PM2-318B-004 | HS11-A002

Analysis of Change in Precipitation Extreme Indices over the

Indochina Region Using Large Climate Model Ensemble

Patinya HANITTINAN¹**, Yasuto TACHIKAWA¹, Yutaka ICHIKAWA¹, Kazuaki YOROZU¹

¹Kyoto University

HS11-D2-PM2-318B-005 | HS11-A016

Improving the Prevention and Preparation to Flooding in the

South East of Spain

Sandra G. GARCIA GALIANO¹⁸⁺, Fulgencio CANOVAS GARCIA², Patricia OLMOS GIMÉNEZ² ¹UNIVERSIDAD POLITECNICA DE CARTAGENA

Fiscal No. Q8050013E, ²Universidad Politécnica de Cartagena

HS18 / Individual and Compound Extremes in Hydrology: Observations and Models

Tue - 05 Jun | MR318B

Time 08:30 - 10:30

Chair(s) Zengchao HAO, Beijing Normal University

Bellie SIVAKUMAR, University of New South Wales

HS18-D2-AM1-318B-001 | HS18-A011 (Invited)

Understanding Socioeconomic Drought Events Under Climate

Change

Ji CHEN^{1#+}, Haiyun SHI^{1,2}

¹The University of Hong Kong, ²Qinghai University

HS18-D2-AM1-318B-002 | HS18-A006 (Invited)

Hydrological Ensemble Forecasting of Flood and its

Components over the Yarlung Zangbo River Basin, China

Yue-Ping XU $^{1\#+}$, Li LIU $^{\!1}$, Suli PAN $^{\!1}$

¹Zhejiang University

HS18-D2-AM1-318B-003 | HS18-A003

Prediction of Agriculture Drought Using Climatology Indices

Based on Support Vector Regression

Ye TIAN1#+

¹Nanjing University of Information Science

HS18-D2-AM1-318B-004 | HS18-A001

Meteorological and Hydrological Drought on the Loess

Plateau, China: Evolutionary Characteristics, Impact, and

Propagation

Jingwen WU1+, Chiyuan MIAO1#, Qingyun DUAN1

¹Beijing Normal University

HS18-D2-AM1-318B-005 | HS18-A007

Study on Sediment Runoff in Extreme Event

Atsuhiro YOROZUYA^{1#+}, Shinji EGASHIRA²

¹Public Works Research Institute, ²International Centre for Water

Hazard and Risk Management

HS23 / Hydrological Processes in Agricultural Lands

Tue - 05 Jun | MR301

Time 08:30 - 10:30

Chair(s) Jun NIU, China Agricultural University

Ji CHEN, The University of Hong Kong

HS23-D2-AM1-301-001 | HS23-A038 (Invited)

Water, Heat, and Carbon Fluxes in a Mulched Drip Irrigation Field

Fuqiang TIAN^{1‡+}, Hongchang HU¹, Guanghui MING¹
¹Tsinghua University

HS23-D2-AM1-301-002 | HS23-A001 (Invited)

An Agro-Hydrological Model for Simulating Water Flow and Solute Transport in Layered Soil with Crop Growth

Xiaomin MAO1#+

¹China Agricultural University

HS23-D2-AM1-301-003 | HS23-A039

Study on Responses of Crop Water Productivity to Climatic

Variation over an Inland River Basin in Northwest China

Jun NIU¹+, Shaozhong KANG¹‡
¹China Agricultural University

HS23-D2-AM1-301-004 | HS23-A035

Effects of Irrigation Schemes on Transpiration

Fei TIAN^{1#+}

¹China Agricultural University

HS23-D2-AM1-301-005 | HS23-A043

Irrigation Requirements of Rainfed Cropland to Improve

Carbon Sequestration on the Loess Plateau of China

Linjing QIU¹⁺, Yiping WU^{1#}
¹Xi'an Jiaotong University

HS23-D2-AM1-301-006 | HS23-A036

Assessment of Water Productivity Under Multi-Model

Projected Climate Change Scenarios in Irrigated Areas of the

Arid Northwest China

Liu LIU^{1‡+}, Zezhong GUO¹, Guanhua HUANG¹ ¹China Agricultural University

HS32 / Hydrometeorological Analysis of Natural Hazards

Tue - 05 Jun | MR301

Time 16:00 - 18:00

Chair(s) Hung Soo KIM, Inha University

Bellie SIVAKUMAR, University of New South Wales

HS32-D2-PM2-301-001 | HS32-A010

Development of Heavy Rain Damage Prediction Function

Considering Regional Characteristics

Donghyun KIM $^{1\sharp +}$, Jongsung KIM 2 , Changhyun CHOI 2 , Hung Soo KIM 2

¹Center for Hydrology and Ecology, ²Inha University

HS32-D2-PM2-301-002 | HS32-A008

Resilience-Based Optimal Design of Urban Drainage Network:

Investigating the Impact of Considering Different Failure

Severity Constraints on Network Topology and Fractal

Characteristics and Pipe Sizes

Soonho KWON¹⁺, Donghwi JUNG², Joong Hoon KIM^{1‡} ¹Korea University, ²Keimyung University

HS32-D2-PM2-301-003 | HS32-A002

Application of Dynamic Naïve Bayesian Classifier to Drought

Monitoring and Drought Risk Analysis in Korea

Dong-Hyeok PARK¹⁺, Si CHEN¹, Tae-Woong KIM^{1‡}
¹Hanyang University

HS32-D2-PM2-301-004 | HS32-A001

Development of MOFFS Evaluation Sheet for Assessment of

Flood Damage Prediction Model

Jin-Young LEE1+, Dongkyun KIM2, Hung Soo KIM3, Tae-Woong KIM1+

¹Hanyang University, ²Hongik University, ³Inha University

HS32-D2-PM2-301-005 | HS32-A017

Comparison and Assessment of Post-Processing Method for

Meteorological Drought Outlook Using the Meteorological

Forecast Information

Jae-Min SO¹⁺, Deg-Hyo BAE^{1‡}
¹Sejong University

HS32-D2-PM2-301-006 | HS32-A009

On Heavy Rain Damage Prediction Model Using Machine

Learning Based on Big Data

Changhyun CHOI¹+, Jongsung KIM¹, Donghyun KIM², Junhyeong LEE¹, Hung Soo KIM¹‡
¹Inha University, ²Center for Hydrology and Ecology

HS34 / Monitoring and Modelling SPAC Hydraulic **Gradient to Improve Estimation of Plant Transpiration and Water Stress**

Tue - 05 Jun | MR318A

08:30 - 10:30 Time

Chair(s) Huade GUAN, National Centre for Groundwater

Research and Training, Flinders University

Hugo GUTIERREZ-JURADO, University of Texas at El

Paso

HS34-D2-AM1-318A-001 | HS34-A014 (Invited)

Experimental Study on Water Transport Observations of Desert Riparian Forests in the Inland River of Arid Region, Northwest China

Yaning CHEN1#+, Honghua ZHOU2, Yapeng CHEN2, Xingming HAO²

¹Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, ²Chinese Academy of Sciences

HS34-D2-AM1-318A-002 | HS34-A006

Investigating the Seasonal Changes in Evaporation and Transpiration in a Dry Subtropical Forest with a Combination of Conventional and Non-Conventional Methods for the **Estimation of Water and Energy Fluxes**

Hugo GUTIERREZ^{1,2#+}, Luis MENDEZ-BARROSO³, Gregorio JUAREZ-CANSDALES3

¹The University of Texas at El Paso, ²Flinders University, ³Instituto Tecnologico de Sonora

HS34-D2-AM1-318A-003 | HS34-A013

Experimental and Numerical Investigations of Salix Psammophila at the Maowusu Desert for Water Flux **Estimation**

Lizhu HOU1#+, Bing GAO1, Jingdong GAO1 ¹China University of Geosciences

HS34-D2-AM1-318A-004 | HS34-A011

Applying Stable Isotopes to Determine Seasonal Variations in Water Uptake of Summer Maize Under Different Fertilization

Treatments

Ying MA1#+

¹Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

HS34-D2-AM1-318A-005 | HS34-A005 (Invited)

Plants Hydraulic Modeling Helps in Understanding the

Cost-Benefit Tradeoffs of Deep Roots for Surviving Droughts

David MACKAY1#+, Charlotte GROSSIORD2, Daniel JOHNSON3, Nathan MCDOWELL⁴, Phillip SAVOY⁵, John SPERRY⁶ ¹University at Buffalo, ²Los Alomos National Laboratory, ³University

of Idaho, ⁴Pacific Northwest National Laboratory, ⁵Duke University, ⁶University of Utah

HS34-D2-AM1-318A-006 | HS34-A002

Root-Zone "Periscope" and its Applications for Investigating

Plant-Water Relations and Modelling Transpiration

Huade GUAN^{1#+}, Zijuan DENG¹, Hailong WANG², Yuting YANG3, Zidong LUO4, Na LIU4, Xinping ZHANG4, Xinguang

¹Flinders University, ²The University of Aberdeen, ³Commonwealth Scientific and Industrial Research Organisation, 4Hunan Normal University

IG01 / General Session

Tue - 05 Jun | MR323A

Time 08:30 - 10:30

Chair(s) Kazuhisa GOTO, Tohoku University

Anawat SUPPASRI, Tohoku University

IG01-D2-AM1-323A-001 | IG01-A002

Identification of Humid Areas in Berlin City

Ines LANGER1#+, Katharina LANGE1, Sahar SODOUDI1 ¹Free University of Berlin

IG01-D2-AM1-323A-002 | IG01-A007

Mapping the Carbon, Air Pollution, and Biodiversity

Footprints of Nations: A GIS + Global Supply Chains

Keiichiro KANEMOTO1#+, Daniel MORAN2

¹Shinshu University, ²Norwegian University of Science and Technology

IG01-D2-AM1-323A-003 | IG01-A010

Scientific Worldviews as a Research Tool in Science

Communication: Exploring How People Make Sense of the

Natural World

Inez PONCE DE LEON1#+, C. Kendra GOTANGCO1,2 ¹Ateneo de Manila University, ²Manila Observatory

IG01-D2-AM1-323A-004 | IG01-A011

A Study on the System for Real-Time Generation of

Geostationary Ocean Colour Imager Level 1B Product

Jaehoon JEONG^{1#+}, Jae-Moo HEO¹, Hee-Jeong HAN¹, Seongick CHO1, Young-Je PARK1

¹Korea Institute of Ocean Science and Technology

IG01-D2-AM1-323A-005 | IG01-A017

The Moon Images Acquisition by COMS/MI During Mission Life

Eun-Bin PARK^{1#+}, Sun-Hee WOO¹
¹Korea Aerospace Research Institute

IG01-D2-AM1-323A-006 | IG01-A020

A Geomorphological Study on the Diversity of Micro Karst Landforms of a Limestone Cave (With Special Reference to Waulpane Cave in Ratnapura District)

Ransimala THAMODI^{1±+}, Sumanajith KUMARA¹
¹University of Sri Jayewardenepura

IG04 / Interdisciplinary Research on Tsunamis and Practical Applications for Disaster Risk Reduction

Tue - 05 Jun | MR323A

Time 13:30 - 15:30

Chair(s) Volker ROEBER, University of Hawaii

IG04-D2-PM1-323A-001 | IG04-A024

Current Status of TsunAWI Contributions to the Indonesia Tsunami Early Warning System (InaTEWS) with a Comparison of Warning Products Derived from Near-Realtime EasyWave and Precomputed TsunAWI Simulations

Natalja RAKOWSKY^{1#+}, Sven HARIG¹, Andrey BABEYKO², Antonia IMMERZ¹, Alexey ANDROSOV¹, Tri HANDAYANI³

¹Alfred Wegener Institute, ²Helmholtz Centre Potsdam, ³Badan

Meteorologi, Klimatologi dan Geofisika

IG04-D2-PM1-323A-002 | IG04-A007

Transformation from Low- to High-Resolution Model for a Rapid Tsunami Inundation Forecast

Iyan MULIA^{1‡+}, Aditya GUSMAN¹, Kenji SATAKE¹
¹The University of Tokyo

IG04-D2-PM1-323A-003 | IG04-A025

A Joint Assessment Framework for Bank Slope Stability, Slope Failure and Landslide Tsunami Hazard in Reservoirs, Lakes and Fjords

Yaoru LIU^{1‡}, Xiaoming WANG²⁺, Zheshu WU¹, Zhu HE¹, Qiang YANG¹, Joshu MOUNTJOY³, William POWER²

¹Tsinghua University, ²GNS Science, ³National Institute of Water and Atmospheric Research

IG04-D2-PM1-323A-004 | IG04-A021

Assessment of Numerical Models for Forecasting of

Wave-Driven Run-Up and Currents

Volker ROEBER $^{1\sharp *}$, Assaf AZOURI 1 , Martin GUILES 1 , Doug LUTHER 1

¹University of Hawaii

IG04-D2-PM1-323A-005 | IG04-A026

Probabilistic Distributions of Extreme Wave Heights at the

Wave Energy Test Site, Hawaii

Ning LI^{1‡+}, Kwok Fai CHEUNG¹, Patrick CROSS¹
¹University of Hawaii at Manoa

IG04-D2-PM1-323A-006 | IG04-A010

Development of Tsunami Damage Fragility Curves for Coastal

Infrastructure Based on the 2011 Great East Japan Tsunami

Constance Ting CHUA^{1‡+}, Adam SWITZER¹, Anawat SUPPASRI², Linlin LI¹, David LALLEMANT¹, Nigel WINSPEAR³, Susanna JENKINS¹, Amanda Yee Lin CHEONG¹ ¹Nanyang Technological University, ²Tohoku University, ³SCOR Global P&C

IG04-D2-PM1-323A-007 | IG04-A003

Tsunami Damage Assessment by Considering Wooden

Building's Resistance Force

Anawat SUPPASRI^{1*+}, Kwanchi PAKOKSUNG¹, Ingrid CHARVET², Noriyuki TAKAHASHI¹, Panon LATCHAROTE³, Natt LEELAWAT^{3,4}, Fumihiko IMAMURA¹
¹Tohoku University, ²Risk Management Solutions, ³Thammasat

¹Ionoku University, ²Kisk Management Solutions, ³Inammasa University, ⁴Chulalongkorn University

Time 16:00 - 18:00

Chair(s) Anawat SUPPASRI, Tohoku University

Natt LEELAWAT, Chulalongkorn University

IG04-D2-PM2-323A-008 | IG04-A001

Tsunami Tendenko: A Sociological Critique

James GOLTZ^{1#+}
¹Kyoto University

IG04-D2-PM2-323A-009 | IG04-A027

Spontaneous Tsunami Evacuation and Personal Characteristics:

Potential Relevance to the Effectiveness of the Evacuation

Drills

Motoaki SUGIURA¹⁵⁺, Shosuke SATO¹, Rui NOUCHI¹, Akio HONDA², Tsuneyuki ABE¹, Toshiaki MURAMOTO¹, Fumihiko IMAMURA¹

¹Tohoku University, ²Yamanashi Eiwa College

IG04-D2-PM2-323A-010 | IG04-A005

Verifying a Macroscopic Method Identifying

Difficult-to-Evacuate Zone for Tsunamis by Stochastic

Evacuation Simulation

Fumiyasu MAKINOSHIMA $^{1\sharp *}$, Fumihiko IMAMURA 1 , Yoshi ABE 1

¹Tohoku University

IG04-D2-PM2-323A-011 | IG04-A014

Investigation of Motion and Speed of the Frail Elderly During

Evacuation Process

Hajime MORISHITA1#+, Ryuichi MIZUGUCHI¹, Toshitaka BABA¹

¹Tokushima University

IG04-D2-PM2-323A-012 | IG04-A009

Verification of Disaster-Preparedness Education Effect

"Changes in the Consciousness of Children in Thailand and

Japan"

Mari YASUDA^{1‡+}, Anawat SUPPASRI¹, Rui NOUCHI¹, Natt LEELAWAT², Toshiaki MURAMOTO¹

¹Tohoku University, ²Chulalongkorn University

IG04-D2-PM2-323A-013 | IG04-A012

Causal Loop Diagram Design for Tourism Industry in

Thailand: A Case of the Effect from Tsunami Disaster

Noppawat CHOTIWAN¹, Thanavit PRAKITTACHAKUL¹, Natt LEELAWAT^{1,2±+}, Jing TANG², Anawat SUPPASRI³, Fumihiko IMAMURA³

¹Chulalongkorn University, ²Thammasat University, ³Tohoku University

IG06 / Advanced Remote Sensing and Big Data Analysis for Disaster Risk Reduction

Tue - 05 Jun | MR322B

Time 08:30 - 10:30

Chair(s) Sang-Ho YUN, NASA-JPL

IG06-D2-AM1-322B-001 | IG06-A001 (Invited)

Regional Ensemble Prediction of Heavy Rainfall in Sri Lanka

Flood in 2017 May

Tomoki USHIYAMA^{1,2#+}

¹Public Works Research Institute, ²National Graduate Institute for Policy Studies

IG06-D2-AM1-322B-002 | IG06-A003

Recent Trend of Drying-Down Period of Live Fuel Moisture and Wildfires in Southern California USA

Seung Hee KIM $^{1\sharp *}$, Shenyue JIA 1 , Son NGHIEM 2 , Kristen WHITNEY 1 , Menas KAFATOS 1

¹Chapman University, ²California Institute of Technology

IG06-D2-AM1-322B-003 | IG06-A004

Mapping of Tidal Flat Topography Using Long-Baseline

Airborne and TanDEM-X SAR

Duk-Jin KIM¹#+, Jungkyo JUNG¹, Ji-Hwan HWANG¹ ¹Seoul National University

IG06-D2-AM1-322B-004 | IG06-A008 (Invited)

Satellite Monitoring of Eutrophication in Inland Lakes:

Algorithm Development and Applications

Wei YANG¹‡*, Bunkei MATSUSHITA², Takehiko FUKUSHIMA², Akihiko KONDOH¹

¹Chiba University, ²University of Tsukuba

IG06-D2-AM1-322B-005 | IG06-A010

Application of GIS and Machine Learning in Natural Hazard Predictive Mapping for Implementation of Artificial

Intelligence

Saro LEE1#+

¹Korea Institute of Geoscience & Mineral Resources

IG06-D2-AM1-322B-006 | IG06-A009

The Interaction of Mass Movements with Natural Hazards

Under Changing Hydrologic Conditions

J. Toby MINEAR^{1#}, Kristy TIAMPO¹, Ben LIVNEH¹, Mike WILLIS¹, Christopher WILLIAMS¹, Mylene JACQUEMART¹ ¹University of Colorado, Boulder

IG12 / Carbon dioxide sequestration and utilization (CCUS) in energy geosciences

Tue - 05 Jun | MR322B

Time 13:30 - 15:30

Chair(s) Qi LI, Chinese Academy of Sciences

Tip A. MECKEL, The University of Texas at Austin

IG12-D2-PM1-322B-001 | IG12-A001 (Invited)

Advantages of Distributed Deformation Monitoring by

Fiber-Optic Sensor in Geomechanical Modelling

Xinglin LEI^{1‡+}, Ziqiu XUE², Tsutomu HASHIMOTO²
¹Institute of Advanced Industrial Science and Technology, ²Research
Institute of Innovative Technology for the Earth

IG12-D2-PM1-322B-002 | IG12-A021 (Invited)

Experimental Investigation of Permeability Change with Shear

Fracturing in Low-Permeable Caprocks for CCUS Technology

Takashi FUJII^{1#+}, Yasuki OIKAWA¹, Xinglin LEI¹

¹National Institute of Advanced Industrial Science and Technology

IG12-D2-PM1-322B-003 | IG12-A006

Iron Speciation of Mud Breccia from the Dushanzi Mud Volcano in the Xinjiang Uygur Autonomous Region, NW

China

Wang XU¹, Guodong ZHENG^{1±+}, Xiangxian MA¹, David HILTON², Danielle FORTIN³, Qi LI¹

¹Chinese Academy of Sciences, ²University California San Diego, ³University of Ottawa

IG12-D2-PM1-322B-004 | IG12-A018

Hydrogeological Monitoring of CO2 Injected into a Shallow Aquifer by Two Different Controlled Leakage Events at the K-COSEM Site, Korea

Seong-Sun LEE¹⁺, Yeojin JU¹, Seung-Wook HA¹, Won-Tak JOUN¹, Seong-Chun JUN², Kang-Kun LEE^{1±}
¹Seoul National University, ²GeoGreen21 Co., Ltd.

IG12-D2-PM1-322B-005 | IG12-A007

Molecular Dynamics Study on Wettability Change of CO2/Brine/Kaolinite Three Phase System

Masashige SHIGA^{1#+}, Masao SORAI²

¹the University of Tokyo, ²National Institute of Advanced Industrial Science and Technology

IG12-D2-PM1-322B-006 | IG12-A014

Can We Monitor the Breath of Sandstone During CO2 Flooding by Optical Fibers?

Qi LI^{1*+}, Chengkai FAN², Xiaying LI¹, Liang XU², Zhiyong NIU¹
¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

Time 16:00 - 18:00

Chair(s) Masao SORAI, National Institute of Advanced Industrial

Science and Technology

IG12-D2-PM2-322B-007 | IG12-A022

Offshore CCS in the Gulf of Mexico, with Emphasis on the Inner-Shelf Cenozoic Stratigraphy of Texas, Usa

Tip MECKEL^{1‡+}, Ramon TREVINO², Susan HOVORKA²
¹The University of Texas at Austin, ²Gulf Coast Carbon Center

IG12-D2-PM2-322B-008 | IG12-A002

Potential of CO2 Aided Hot Water Extraction Technology in the Low-Medium Temperature Geothermal Reservoirs in China

Hejuan LIU $^{1\sharp +}$, Zhengmeng HOU 2 , Qi LI 1 , Patrick WERE 2 , Mengting LI 2

¹Chinese Academy of Sciences, ²Clausthal University of Technology

IG12-D2-PM2-322B-009 | IG12-A020 (Invited)

Interpretation of Self-Potential Changes Observed Around Gas Injection Wells Based Upon Numerical Simulations, at Test Sites in Japan

Tsuneo ISHIDO^{1#+}, Yuji NISHI¹, Toshiyuki TOSHA²
¹National Institute of Advanced Industrial Science and Technology,
²Kumamoto University

IG12-D2-PM2-322B-010 | IG12-A019 (Invited)

Effect of CO2 Injection Speed and Pore Structure on CO2

Behaviour in Two Types of Sandstones

Keigo KITAMURA¹⁺, Hiroyuki HONDA¹, Kenya MATSUO¹, Hiro IKEMI¹, Yasuhiro MITANI¹ ¹Kyushu University

IG12-D2-PM2-322B-011 | IG12-A017

A Wavelet Based Novel Approach to Characterize Environmental Dynamic Factors Controlling the Baseline of Soil Surface CO2 Flux in the Controlled CO2 Release Test Site (EIT), South Korea

Yun-Yeong OH¹⁺, Seong-Taek YUN^{1‡}, Soonyoung YU¹, Hyun-Jun KIM¹, Seong-Chun JUN²

¹Korea University, ²GeoGreen21 Co. Ltd

IG22 / Pre-earthquake Anomalies, Earthquake Predictability, 10 Years Commemoration 2008 M8.0 Wehchuan Earthquake, Kickoff Chinese Seismo-electromagnetic Satellite

Tue - 05 Jun | MR322B

Time 11:00 - 12:30

Chair(s) Tiger JY LIU, National Central University

Dimitar OUZOUNOV, Chapman University

IG22-D2-AM2-322B-001 | IG22-A009

Spatial and Temporal Characteristics of the Pre-Seismic Ionospheric Anomaly over Japan: Case Study for the 2011 off the Pacific Coast of Tohoku Earthquake (Mw9.0) and Statistical Study

Katsumi HATTORI¹, Shinji HIROOKA¹, Mustafa YAGUMUR¹, Sanaka SAITO¹, Chie YOSHINO¹, Jann-Yenq LIU²

¹Chiba University, ²National Central University

IG22-D2-AM2-322B-002 | IG22-A001 (Invited)

Pre-Earthquake Ground Motion

Chieh-Hung CHEN^{1‡+}, Li-Ching LIN², Jann-Yenq LIU³
¹China University of Geosciences, ²Academia Sinica, ³National Central University

IG22-D2-AM2-322B-003 | IG22-A004

A Statistical Study of Total Electron Content Changes Prior to

Occurrences of M≥6.0 Earthquakes During 2003–2017

Cheng-Yan LIU 1* , Jann-Yenq LIU 2 , Yuh-Ing CHEN 2 , Fei QIN 1 , Weisheng CHEN 1

¹Beijing University of Technology, ²National Central University

OS04 / Cold, Wet, and Wild: Ocean and Atmospheric Dynamics in the Southern Ocean and Antarctic

Tue - 05 Jun | MR324

Time 08:30 - 10:30

Chair(s) Robin ROBERTSON, Xiamen University Malaysia

OS04-D2-AM1-324-001 | OS04-A002

Research Activities at Centre for Southern Hemisphere Oceans Research (CSHOR)

Wenju CAI1,2#+

¹Ocean University of China and Qingdao National Laboratory for Marine Science and Technology, ²Commonwealth Scientific and Industrial Research Organisation

OS04-D2-AM1-324-002 | OS04-A001

Changes in the Upper Ocean Mixed Layer and Phytoplankton

Productivity Along the West Antarctic Peninsula

Oscar SCHOFIELD¹*, Michael BROWN¹, Josh KOHUT¹, Grace SABA¹, Schuyler NARDELLI¹, Nicole WAITE¹, Hugh DUCKLOW¹

¹Rutgers University

OS04-D2-AM1-324-003 | OS04-A009

Wind-Driven Sea-Ice Changes Intensify Subsurface Warm

Water Intrusion to the Antarctic Glacier

Xichen LI1#+

¹Chinese Academy of Sciences

OS04-D2-AM1-324-004 | OS04-A003

Relationship Between Development of the Terra Nova Bay

Polynya and Distributions of Water Masses During the Austral

Summer Seasons in 2014-2016

Seung-Tae YOON^{1,2+}, Won Sang LEE¹, Craig STEVENS², Christopher J. ZAPPA³, Sukyoung YUN¹, Chung Yeon HWANG¹, Gwangll JANG¹, Jiyeon LEE¹, Sung-Hyun NAM⁴ ¹Korea Polar Research Institute, ²National Institute of Water and Atmospheric Research, ³Lamont-Doherty Earth Observatory, ⁴Seoul National University

OS04-D2-AM1-324-005 | OS04-A011

Sea-Ice Production in Antarctic Coastal Polynyas Estimated

Using AMSR-E and AMSR2 Data

Sohey NIHASHI^{1‡+}, Kay OHSHIMA², Takeshi TAMURA³
¹National Institute of Technology, Tomakomai College, ²Hokkaido University, ³National Institute of Polar Research

OS04-D2-AM1-324-006 | OS04-A005

Estimation of Melt Ponds on Arctic Sea Ice Using Modis

Surface Reflectance Data

Yifan DING^{1#+}, Xiao CHENG¹, Jiping LIU²
¹Beijing Normal University, ²University of Albany

OS05 / Continuing the Tidal Tale: the Story of Tides and Their Impacts

Tue - 05 Jun | MR324

Time 11:00 - 12:30

Chair(s) Robin ROBERTSON, Xiamen University Malaysia

Adam DEVLIN, The Chinese University of Hong Kong

OS05-D2-AM2-324-001 | OS05-A004

Tidal Variability Related to Sea Level Variability in the

Atlantic Ocean

Adam DEVLIN^{1#+}, Jiayi PAN²

¹The Chinese University of Hong Kong, ²Chinese University of Hong kong

OS05-D2-AM2-324-002 | OS05-A003

Seasonal Alternation of Tidal Asymmetry Induced by Mean

Sea Level Variation

Yunwei WANG^{1‡+}, Qian YU², Shu GAO³
¹Hohai University, ²Nanjing University, ³East China Normal University

OS05-D2-AM2-324-003 | OS05-A006

Speed Traps in the Sky: Using Satellites and Radar Technology to Track the Coastal Tidal Signal

Paul HARTLIPP1#+

¹University of New South Wales

OS05-D2-AM2-324-004 | OS05-A005

Tidal Mixing Estimation in the Andaman Sea Based on the Internal Tide Energetics

Shiqiu PENG¹‡+, Xiaowei WANG¹, Weidong YU².³
¹Chinese Academy of Sciences, ²State Oceanic Administration,
³Thailand-China Joint Laboratory for Climate and Marine Ecosystem

OS05-D2-AM2-324-005 | OS05-A002

The Impact of Background Currents on Diurnal Critical

Latitude Effects on Internal Tides and Mixing

Robin ROBERTSON^{1#+}, Jihai DONG², Paul HARTLIPP³
¹Xiamen University, ²Nanjing University of Information Science & Technology, ³University of New South Wales

OS05-D2-AM2-324-006 | OS05-A007

Internal Waves Around Luzon Strait: Repeated Observation

from XBT

Akie SAKAI $^{1\#+}$, Tomoharu SENJYU 1 *Kyushu University*

OS12 / Estuarine and Coastal Oceanography

Tue - 05 Jun | MR317B

Time 08:30 - 10:30

Chair(s) Atsushi FUJIMURA, University of Guam

Sung Yong KIM, Korea Advanced Institute of Science and

Technology

OS12-D2-AM1-317B-001 | OS12-A001

Surface Tidal and Residual Circulations in an Enclosed Bay

Sung Yong KIM1#+, Sang In WON1

¹Korea Advanced Institute of Science and Technology

OS12-D2-AM1-317B-002 | OS12-A015

Wave Characteristics Around a Reef Island in the South China

Sea Under a Strong Typhoon Event

Shih-Feng SU^{1‡+}, Te-Yun CHIANG¹
¹Tamkang University

OS12-D2-AM1-317B-003 | OS12-A029

Coastal Ocean Environment in Pago Bay, Guam

Atsushi FUJIMURA^{1#+}, Christina COMFORT², Gordon WALKER², Margaret MCMANUS², Chris OSTRANDER³, Terry DONALDSON¹

¹University of Guam, ²University of Hawaii, ³University of Utah

OS12-D2-AM1-317B-004 | OS12-A016

Population Dynamics of Meiobenthos of Kali Estuarine

Environment Karwar, Karnataka India

Shivanagouda N $SANAGOUDRA^{1\#*}, U.~G.~BHAT^1$ $^1Karnataka~University$

OS12-D2-AM1-317B-005 | OS12-A031

Analysis of Surfactant-Associated Bacteria in the Sea Surface Microlayer in Oil Slicks Observed in Synthetic Aperture Radar Satellite Imagery

Georgia PARKS^{1#}, Alexander SOLOVIEV¹, Kathryn HOWE¹, Cayla DEAN¹, John KLUGE¹, Aurelien TARTAR¹, Susanne LEHNER², William PERRIE³

¹Nova Southeastern University, ² German Aerospace Center, ³Bedford Institute of Oceanography

OS12-D2-AM1-317B-006 | OS12-A022

Feasibility Study of Synthetic Aperture Radar for Shoreline Monitoring

Lianhui WU $^{1\#}$, Yoshimitsu TAJIMA 1 The University of Tokyo

OS12-D2-AM1-317B-007 | OS12-A019

Development of Data Processing System for High Resolution

Geostationary Ocean Color Satellite Data

Hee-Jeong HAN¹**, Jae-Moo HEO¹, Wonkook KIM¹, Jae-Hyun AHN¹, Hyun YANG¹, Jaehoon JEONG¹, Sang-Soo BAE¹, Young-Je PARK¹

¹Korea Institute of Ocean Science and Technology

OS12-D2-AM1-317B-008 | OS12-A028

Biogeophysical Interactions of Nearshore Plankton Dynamics

Atsushi FUJIMURA^{1#+}, Ad RENIERS², Claire PARIS³, Alan SHANKS⁴, Jamie MACMAHAN⁵, Steven MORGAN⁶
¹University of Guam, ²Delft University of Technology, ³University of Miami, ⁴University of Oregon, ⁵Naval Postgraduate School, ⁶University of California, Davis

Time 11:00 - 12:30

Chair(s) Atsushi FUJIMURA, University of Guam

Sung Yong KIM, Korea Advanced Institute of Science and

Technology

OS12-D2-AM2-317B-009 | OS12-A011

First Evidence of Historic Heavy Metal Input to the Firth of

Thames, North Island, New Zealand

Sandy BOEHNERT $^{1\sharp +}$, Yusuke YOKOYAMA², Dierk HEBBELN 1 University of Bremen, 2 The University of Tokyo

OS12-D2-AM2-317B-010 | OS12-A005

Numerical Modeling on Suspended Sediment Tansport in Sydney Estuary

Ziyu XIAO^{1#+}, Xiao WANG², Dehai SONG³, Isabel JALON-ROJAS¹

¹University of New South Wales, Canberra, ²Sino-Australian Research Centre for Coastal Management (SARCCM), ³Ocean University of China

OS12-D2-AM2-317B-011 | OS12-A006

Observational Evidence for Turbulent Effects on Total

Suspended Matter within the Pearl River Plume

Chunhua QIU $^{1\pm}$, Huabin MAO 2 , Jiaxue WU 1 , Danyi SU 1 Sun Yat-sen University, 2 Chinese Academy of Sciences

OS12-D2-AM2-317B-012 | OS12-A035

Effects of Biological Production and Vertical Mixing on Sea

Surface PCO2 Variations in the Changjiang River Plume

During Early Autumn: A Buoy-Based Time Series Study

Dewang LI¹⁺, Jianfang CHEN^{1#}, Xiaobo NI¹, Kui WANG¹, Dingyong ZENG¹, Bin WANG¹, Haiyan JIN¹, Da-Ji HUANG¹, Wei-Jun CAI²

¹State Oceanic Administration, ²University of Delaware

OS12-D2-AM2-317B-013 | OS12-A017

Optical Dating of Sediments from the Yangtze Delta of China

Xiaomei NIAN1#+

¹East China Normal University

OS12-D2-AM2-317B-014 | OS12-A021

Spatial and Temporal Variability in Sand Bar Morphology and

Migration Along a Zeta-Shaped Embayment

Tom MURRAY $^{1\pm}$, Darrell STRAUSS 1 , Guilherme VIEIRA DA SILVA 1 , Courtney WHARTON 2

¹Griffith University, ²City of Gold Coast

OS16 / Seasonal Climate Predictability and Applicability

Tue - 05 Jun | MR322A

Time 11:00 - 12:30

Chair(s) Takeshi DOI, Japan Agency for Marine-Earth Science and

Technology

Zhaoyong GUAN, Nanjing University of Information

Sciences & Technology

OS16-D2-AM2-322A-001 | OS16-A008 (Invited)

Nonlinearities in the Evolutional Distinctions Between El Niño and La Niña Types

Karumuri ASHOK¹³+, Shamal MARATHE², Swapna P³, Ak SAHAI³

¹University of Hyderabad, ²Formerly of Indian Institute of Tropical Meteorology, ³Indian Insitute of Tropical Meteorology

OS16-D2-AM2-322A-002 | OS16-A012 (Invited)

Processes Oriented Diagnostics for El Nino-Related

Precipitation Anomalies Along the Equatorial Pacific in

Climate Models

H. ANNAMALAI1#+

¹University of Hawaii

OS16-D2-AM2-322A-003 | OS16-A013

Forecasting Unusual Seasonal Sea Level Anomalies Around

Tropical Pacific Islands

Matthew WIDLANSKY^{1‡+}, Xiaoyu LONG¹, H. ANNAMALAI¹, Mark MERRIFIELD², Philip THOMPSON¹, John MARRA³
¹University of Hawaii, ²University of California San Diego, ³National Oceanic and Atmospheric Administration

OS16-D2-AM2-322A-004 | OS16-A014

Improved Predictability of the Indian Ocean Dipole Using

Seasonally Modulated ENSO Forcing

Sen ZHAO1,2#+, Fei-Fei JIN3,4, Malte STUECKER5

¹University of Hawaii at Manoa, ²Nanjing University of Information Science & Technology, ³University of Hawaii, ⁴Chinese Meteorological Agency, ⁵University of Washington OS16-D2-AM2-322A-005 | OS16-A003

Mid-Latitude Source of the ENSO-Spread in SINTEX-F

Ensemble Predictions

Tomomichi OGATA $^{1\sharp +}$, Takeshi DOI 1 , Yushi MORIOKA 1 , Swadhin BEHERA 1

¹Japan Agency for Marine-Earth Science and Technology

OS18 / Ocean Circulation and Air-sea Interaction Over the Maritime Continent and Surrounding Waters

Tue - 05 Jun | MR322A

Time 08:30 - 10:30

Chair(s) Lei ZHOU, Shanghai Jiao Tong University

Dongxiao WANG, South China Sea Institute of

Oceanology

OS18-D2-AM1-322A-001 | OS18-A016 (Invited)

The Equatorial Line Observations (ELO) Campaign:

Air-Sea-Land Observations of Sub-Seasonal Variability over

the Maritime Continent

Janet SPRINTALL^{1‡+}, Piotr FLATAU², Dariusz BARANOWSKI³, Adrian MATTHEWS⁴, Karen HEYWOOD⁴, Nelly Florida RIAMA⁵

¹Scripps Institution of Oceanography, ²University of California San Diego, ³Warsaw University, ⁴University of East Anglia, ⁵Indonesia Agency for Meteorology Climatology and Geophisycs

OS18-D2-AM1-322A-002 | OS18-A035 (Invited)

Shoaling of the Thermocline Southwest of Sumatra Observed

by R/V Mirai During December 2017

Takanori HORII $^{\mbox{\tiny I}\,\mbox{\tiny 2}}$, Iwao UEKI $^{\mbox{\tiny 1}}$, Qoosaku MOTEKI $^{\mbox{\tiny 1}}$, Kelvin RICHARDS $^{\mbox{\tiny 2}}$, Kentaro ANDO $^{\mbox{\tiny 1}}$

¹Japan Agency for Marine-Earth Science and Technology, ²University of Hawaii

OS18-D2-AM1-322A-003 | OS18-A001

Spatial Pattern and Temporal Feature of Intra-Seasonal

Oceanic Variability Along the Philippine Coast From Mooring

Observations and Numerical Simulations

Shijian HU^{1s*} , Janet SPRINTALL², Cong GUAN³, Bowen SUN¹, Fan WANG¹, Guang YANG⁴, Fan JIA¹, Jianing WANG¹, Dunxin HU^1 , Fei CHAI⁵

¹Chinese Academy of Sciences, ²Scripps Institution of Oceanography, ³Institute of Oceanology Chinese Academy of Sciences, ⁴State Oceanic Administration, ⁵University of Maine

OS18-D2-AM1-322A-004 | OS18-A004

Interannual Modulations of the 50-Day Oscillations in the

Celebes Sea: Dynamics and Impact

Xiao CHEN1#+

¹Hohai University

OS18-D2-AM1-322A-005 | OS18-A025

Direct Measurement of the South China Sea-Indonesian Seas

Water Exchange Through Karimata Strait

Tengfei $XU^{1\pi}$, Zexun WEI¹, Dwi SUSANTO², Shujiang LI¹, Guohong FANG¹, Agus SETIAWAN³

¹State Oceanic Administration, ²University of Maryland, ³Ministry of Marine Affairs and Fisheries

OS18-D2-AM1-322A-006 | OS18-A034

Comparison of Intraseasonal Variability of Zonal Current in the Western Equatorial Pacific Ocean During the 1997–1998 and 2014–2015 ENSO Events

Xiaohui TANG^{1‡+}, Yilong LYU¹, Yuanlong LI¹, Fan WANG¹
¹Chinese Academy of Sciences

Time 13:30 - 15:30

Chair(s) Dwi SUSANTO, University of Maryland

Wen ZHOU, City University of Hong Kong

OS18-D2-PM1-322A-007 | OS18-A014 (Invited)

The Fate of Freshwater in the Indonesian Seas

Shinichiro KIDA^{1#+}, Hideharu SASAKI²

¹Kyushu University, ²Japan Agency for Marine-Earth Science and Technology

OS18-D2-PM1-322A-008 | OS18-A017

Change in Destructiveness of Landfalling Tropical Cyclones

over China in Recent Decades

Wen ZHOU^{1‡+}, Cheuk Yin LI¹, C.M. SHUN², T. C. LEE² ¹City University of Hong Kong, ²Hong Kong Observatory

OS18-D2-PM1-322A-009 | OS18-A020

Multi-Time Scale Variability of the Sea Surface Salinity Dipole

Mode in the Tropical Indian Ocean

Yuhong ZHANG^{1#+}, Yan DU², Ming FENG³

¹South China Sea Institute of Oceanology, Chinese Academy of Sciences, ²Chinese Academy of Sciences, ³Commonwealth Scientific and Industrial Research Organisation

OS18-D2-PM1-322A-010 | OS18-A022

How Can a Weakening of the East Asian Monsoon Contribute to the Warming of Coastal China Sea on Inter-Decadal

Timescales?

Rongshuo CAI^{1‡+}, Hongjian TAN¹, Harilaos KONTOYIANNIS²
¹State Oceanic Administration, ²Hellenic Center for Marine Research

OS18-D2-PM1-322A-011 | OS18-A023

Origins of Eddy Kinetic Energy in the Bay of Bengal

Gengxin CHEN¹⁺, Yuanlong LI¹, Qiang XIE¹, Dongxiao WANG^{2‡}
¹Chinese Academy of Sciences, ²South China Sea Institute of
Oceanology, Chinese Academy of Sciences

OS18-D2-PM1-322A-012 | OS18-A024

CMIP5 Model Biases in the Climatological Mean State of the

Western Pacific Warm Pool

Yuxing YANG^{1,*}, Faming WANG¹, Jian ZHENG^{1,2}
¹Chinese Academy of Sciences, ²Qingdao National Laboratory for Marine Science and Technology

OS18-D2-PM1-322A-013 | OS18-A027

Niño4 as a Key Region for the Interannual Variability of the

Western Pacific Warm Pool

Fan JIA¹**, Dunxin HU¹, Shijian HU¹, Junqiao FENG¹¹Chinese Academy of Sciences

OS18-D2-PM1-322A-014 | OS18-A028

Spreading of South Pacific Waters over the Maritime Continent

Lei ZHOU^{1‡+}, Lina YANG², Shujiang LI², Zexun WEI²
¹Shanghai Jiao Tong University, ²State Oceanic Administration

Time 16:00 - 18:00

Chair(s) Dongxiao WANG, South China Sea Institute of

Oceanology

Lei ZHOU, Shanghai Jiao Tong University

OS18-D2-PM2-322A-015 | OS18-A015 (Invited)

Deep Western Boundary Current in the South China Sea

Wei ZHAO $^{\!\scriptscriptstyle 1\sharp *}$, Chun ZHOU $^{\!\scriptscriptstyle 1}$, Jiwei TIAN $^{\!\scriptscriptstyle 1}$

¹Ocean University of China

OS18-D2-PM2-322A-016 | OS18-A037 (Invited)

The Thermocline Depth in the South China Sea Determined by

Both Winds and Deep Ocean Upwelling

Fanghua XU^{1#+}, Jinru SUN¹
¹Tsinghua University

OS18-D2-PM2-322A-017 | OS18-A002

Interdecadal Change in the Summer SST-Precipitation

Relationship Around the Late 1990s over the South China Sea

Jiepeng CHEN¹⁸⁺, Xin WANG², Wen ZHOU³, Zhiping WEN^{4,5}
¹South China Sea Institute of Oceanology Chinese Academy of
Sciences, ²Chinese Academy of Sciences, ³City University of Hong
Kong, ⁴Sun Yat-sen University, ⁵Fudan University

OS18-D2-PM2-322A-018 | OS18-A011

Internal Variability in the South China Sea

Juncheng XIE1,2#+, Lei ZHOU3

¹Hohai University, ²State Oceanic Administration, ³Shanghai Jiao Tong University

OS18-D2-PM2-322A-019 | OS18-A021

Ocean Thermodynamics Behind the Asymmetry in the South

China Sea Cold Tongue Events

Marvin Xiang Ce SEOW^{1‡+}, Tomoki TOZUKA¹
¹The University of Tokyo

OS18-D2-PM2-322A-020 | OS18-A041

Thermohaline Variations Caused by Subthermocline Eddies

East of Philippine

Linlin ZHANG1#+

¹Institute of Oceanology, Chinese Academy of Sciences

OS25-BG / Carbon Sequestration in Marginal Seas: Regulation and Response to Global Change

Tue - 05 Jun | MR317B

Time 13:30 - 15:30

Chair(s) Guangxin LIU, Ocean University of China

Kuo-Ping CHIANG, National Taiwan Ocean University

OS25-BG-D2-PM1-317B-001 | OS25-BG-A023 (Invited)

Understanding Carbon Fixation and Transformation in Taiwan

Strait Through the Concept of Metabolic Machine and the

Approach of Metatranscriptomics

Senjie LIN1#+, Hongfei LI1, Xin LIN1

¹Xiamen University

OS25-BG-D2-PM1-317B-002 | OS25-BG-A021

Metabarcoding Reveals the Diversity and Diel Vertical

Distribution of Mesozooplankton in the Northern South China

Sea

Yunyun ZHUANG¹+, Hongju CHEN¹, Chang CHEN¹, Huan ZHANG¹-2, Guangxing LIU¹ $^\sharp$

¹Ocean University of China, ²University of Connecticut

OS25-BG-D2-PM1-317B-003 | OS25-BG-A019

Marine Carbon Sequestration in Marginal Sea Ecosystems

(MARCO): Multiscale Regulation and Response to Global

Changes

Bangqin HUANG^{1‡+}, Guangxing LIU², Dalin SHI¹, Gangjian WEI³
¹Xiamen University, ²Ocean University of China, ³Chinese Academy of Sciences

OS25-BG-D2-PM1-317B-004 | OS25-A001

Influences of Surface Chlorophyll a on the Estimation of

Remote Carbon Fixation in the Marginal Northern South China

Sea

Yung-Yen SHIH1#+, Chin-Chang HUNG2

¹Republic of China Naval Academy, ²National Sun Yat-sen University

OS25-BG-D2-PM1-317B-005 | OS25-BG-A011

Realized Traits Explain Distributions of Major Phytoplankton

Groups in a Tropical-Subtropical Marginal Sea

Wupeng XIAO $^{1s+}$, Lei WANG 1 , Edward LAWS 2 , Yuyuan XIE 1 , Jixin CHEN 1 , Xin LIU 1 , Bingzhang CHEN 1 , Bangqin HUANG 1

¹Xiamen University, ²Louisiana State University

OS25-BG-D2-PM1-317B-006 | OS25-BG-A027

Anticyclonic Eddy Edge Effects on Phytoplankton

Communities and Particle Export in the Northern South China

Sea

Lei WANG¹⁺, Bangqin HUANG²⁺, Edward LAWS³, Kuanbo ZHOU², Xin LIU², Yuyuan XIE², Minhan DAI²

¹State Oceanic Administration, ²Xiamen University, ³Louisiana State University

OS25-BG-D2-PM1-317B-007 | OS25-BG-A009

Higher Chlorophylla Based Photosynthetic Rates of

Large-Celled Phytoplankton than Picophytoplankton Under

High-Light Environment: Toward a Novel Model to Estimate

Size-Specific Primary Production in the Sea

Yuyuan XIE1+, Haoran LIU1, Edward LAWS2, Yong QIU1, Lei WANG1, Bangqin HUANG1 $^{1\pm}$

¹Xiamen University, ²Louisiana State University

Time 16:00 - 18:00

Chair(s) Bangqin HUANG, Xiamen University

Chin-Chang HUNG, National Sun Yat-sen University

OS25-BG-D2-PM2-317B-008 | OS25-BG-A025 (Invited)

Metal Stable Isotope Fractionations During Coral Calcification:

Possible Proxies for Biological Activities

Gangjian WEI 1z , Wenfeng DENG 1 , Xuefei CHEN 1 , Zhibing WANG 1 , Jinlong MA 1

¹Chinese Academy of Sciences

OS25-BG-D2-PM2-317B-009 | OS25-BG-A026

Stable Isotope (13C, 15N) Constraints of Suspended Particulate

Organic Matter in a Coastal Upwelling of the Subtropical

Northwestern South China Sea

Run ZHANG1#+

¹Xiamen University

OS25-BG-D2-PM2-317B-010 | OS25-BG-A013

Comparative Evaluation of Sediment Trap and

VGPM-PP-Derived POC Fluxes in the Northern South China

Sea

Hsueh-Han HSIEH^{1‡+}, Chin-Chang HUNG¹
¹National Sun Yat-sen University

OS25-BG-D2-PM2-317B-011 | OS25-BG-A010

Effect of Ocean Acidification in the Carbon Assimilation and

Export: Implications for the Biological Pump

Yibin HUANG¹⁺, Xin LIU¹, Yong QIU¹, Bangqin HUANG^{1‡}
¹Xiamen University

OS25-BG-D2-PM2-317B-012 | OS25-BG-A016

Contribution of Resuspended Sediments to Sinking Particles

in the Ocean

Jeomshik HWANG^{1‡+}, Minkyoung KIM¹
¹Seoul National University

OS25-BG-D2-PM2-317B-013 | OS25-BG-A014

The Sources and Transformations of Dissolved Organic Matter in the Pearl River Estuary, as Revealed by Stable Isotope

Analysis

Feng YE1#+, Gangjian WEI2

 ${}^1 Guangzhou\ Institute\ of\ Geochemistry,\ Chinese\ Academy\ of\ Sciences,$

²Chinese Academy of Sciences

OS25-BG-D2-PM2-317B-014 | OS25-A007

Uncoupling of Seasonal Variations Between Phytoplankton

Chlorophyll a and Productions in the East China Sea

Xin LIU1**, Edward LAWS², Yuyuan XIE¹, Lei WANG¹, Pinghe CAI¹, Bangqin HUANG¹

¹Xiamen University, ²Louisiana State University

OS27 / General Oceanography

Tue - 05 Jun | MR324

Time 13:30 - 15:30

Chair(s) Taira NAGAI, The University of Tokyo

Charles LEMCKERT, University of Canberra

OS27-D2-PM1-324-001 | OS27-A041

The Wind Speed Inversion and In-Orbit Assessment of

Imaging Altimeter on Tiangong-2 Space Station

Xiaobin YIN $^{1s+}$, Qingliu BAO 1 , Mingsen LIN 2 , Youguang ZHANG 2 , Yongjun JIA 2

¹Beijing PIESAT Information Technology Co., Ltd, ²National Satellite Ocean Application Service OS27-D2-PM1-324-002 | OS27-A035

Dynamics of a Quasi-Stationary Jet Along the Subarctic Front in the North Pacific Ocean (the Western Isoguchi Jet): An Ideal

Two-Layer Model

Toru MIYAMA1**, Humio MITSUDERA2, Hajime NISHIGAKI3, Ryo FURUE4

¹Japan Agency for Marine-Earth Science and Technology, ²Hokkaido University, ³Oita University, ⁴JAMSTEC

OS27-D2-PM1-324-003 | OS27-A033

Long Term Measurement of the Current at the Bay Head in the

Suruga Bay, Japan

Takaaki KATSUMATA 1.22+, Masato NIKI 1, Akihiko TANAKA 1, Hiroyuki TAN 1,3

¹Tokai University, ²NPO, The Association for the Environmental Conservation of the Ocean, ³Japan Aerospace Exploration Agency

OS27-D2-PM1-324-004 | OS27-A014

Boundary Currents in the Arabian Sea

Nan ZANG1#+, Janet SPRINTALL2, Fan WANG1

¹Chinese Academy of Sciences, ²Scripps Institution of Oceanography

OS27-D2-PM1-324-005 | OS27-A010

Physical Boundaries of Intrathermocline Ulleung Eddies in the

East/Japan Sea

Young-Heon JO1#+

¹Pusan National University

OS27-D2-PM1-324-006 | OS27-A004

A Lagrangian View of Mesoscale Eddies in the Ocean

Sergey PRANTS1#+

¹Pacific Oceanological Institute

OS27-D2-PM1-324-007 | OS27-A002

Influence of the Current Field Non-Stationarity on

ADCP-Based Barotropic Transport Estimates

Roman TARAKANOV1#+

¹Shirshov Institute of Oceanology

Time 16:00 - 18:00

Chair(s) Taira NAGAI, The University of Tokyo

OS27-D2-PM2-324-008 | OS27-A040

Phytoplankton Response to the Offshore Transport of the

River Plume Induced by a Mesoscale Eddy

Peng XIU1#+, Bingxu GENG2

¹South China Sea Institute of Oceanology, Chinese Academy of

Sciences, ²Chinese Academy of Sciences

OS27-D2-PM2-324-009 | OS27-A029

Effects of Typhoons on Squids Catch and Primary Production in the Southern East China Sea

Tsang-Yuh LIN^{1#+}, De-Wang LI², Chin-Chang HUNG³
¹National Cheng Kung University, ²Zhejiang University, ³National
Sun Yat-sen University

OS27-D2-PM2-324-010 | OS27-A013

The Effects of Bottom Boundary Layer Temperature and Wind-Driven Upwelling on the Catchability of Spanner Crabs

(Ranina Ranina) in South-East Queensland, Australia

David SPENCER^{1*+}, Ian BROWN², Mark DOUBELL³, Christopher BROWN¹, Ana REDONDO RODRIGUEZ³, Joe LEE⁴, Hong ZHANG¹, Charles LEMCKERT^{1,5}

¹Griffith University, ²Fisheries Queensland, ³SARDI Aquatic Sciences, ⁴The Chinese University of Hong Kong, ⁵University of Canberra

OS27-D2-PM2-324-011 | OS27-A009

Retrieval of Snow Depth on Sea Ice in the Arctic by the

Fengyun-3B Microwave Radiation Imager

Lele LI^{1#+}, Haihua CHEN¹, Lei GUAN¹
¹Ocean University of China

OS27-D2-PM2-324-012 | OS27-A042

Remote Sensing of Chlorophyll-A in Case II Waters: A Novel
Approach with Improved Accuracy over Existing Algorithms
Harilal MENON^{1‡*}, Arjun ADHIKARY¹
¹Goa University

PS05 / Ring Systems of the Solar System Objects and Exoplanets

Tue - 05 Jun | MR302A

Time 11:00 - 12:30

Chair(s) Larry ESPOSITO, University of Colorado Boulder

Keiji OHTSUKI, Kobe University

PS05-D2-AM2-302A-001 | PS05-A001 (Invited)

Saturn's Ring Particles and Clumps

Joshua COLWELL1#+

¹University of Central Florida

PS05-D2-AM2-302A-002 | PS05-A007

Predator-Prey Analogs for Saturn Ring Dynamics

Larry ESPOSITO1#+

 $^{\scriptscriptstyle 1}University$ of Colorado Boulder

PS05-D2-AM2-302A-003 | PS05-A012

Mutual Effects of the Rings and the Ring Bearer - A Closer Look at the Cosmic Dust Analyser Measurements During the

Cassini Grand Finale Mission

Hsiang-Wen HSU1#+

¹University of Colorado Boulder

PS05-D2-AM2-302A-004 | PS05-A003 (Invited)

On the Origin of Rings around Giant Planets and Small Bodies Ryuki HYODO1#+

¹Tokyo Institute of Technology

PS05-D2-AM2-302A-005 | PS05-A011

Synergy Between Density Waves and Viscous Overstability in Planetary Rings

Glen STEWART1#+

¹University of Colorado Boulder

PS05-D2-AM2-302A-006 | PS05-A002 (Invited)

Detection of Exoplanetary Rings

Masataka AIZAWA1#+

¹The University of Tokyo

PS09-04 / Science and Exploration of Mars and Venus

Tue - 05 Jun | MR302A

Time 08:30 - 10:30

Chair(s) Timothy GLOTCH, Stony Brook University

PS09-04-D2-AM1-302A-001 | PS09-04-A036 (Invited)

The M3 Project: Application to the Bulk Mineralogy of the

Finalist Landing Sites for ExoMars2020 and Mars2020 Rovers

François POULET1#+

¹Paris-Sud University

PS09-04-D2-AM1-302A-002 | PS09-04-A037

Evidence for Ancient Hydrothermal Seafloor Type Deposits on Mars

Joseph MICHALSKI1#+

Joseph MICHALSKI**

¹University of Hong Kong

PS09-04-D2-AM1-302A-003 | PS09-04-A039

NASA's Mars 2020 Rover Mission: Exploration and Sample

Caching on Ancient Mars

James BELL1#+

¹Arizona State University

PS09-04-D2-AM1-302A-004 | PS09-04-A041 (Invited)

Planning for Mars Sample Return Missions – Maximising Science Value During Sample Curation

Caroline SMITH1#+

¹The Natural History Museum

PS09-04-D2-AM1-302A-005 | PS09-04-A042 (Invited)

An Ancient Hydrothermal Setting on Mars with Features Resembling Modern Examples on Earth: Implications for Astrobiology

Steven RUFF1#+

¹Arizona State University

PS09-04-D2-AM1-302A-006 | PS09-04-A028

The Hydration State of Chloride Salt-Bearing Deposits on Mars

Timothy GLOTCH^{1‡+}, Joshua BANDFIELD², Brooke PHILLIPS¹
¹Stony Brook University, ²Space Science Institute

PS09-04-D2-AM1-302A-007 | PS09-04-A025

How Martian Araneiforms Get Their Shapes: Morphological Analysis and DLA Model

Ganna PORTYANKINA 15+, Candice HANSEN², Klaus-Michael AYE 1

¹University of Colorado Boulder, ²Planetary Science Institute

Time 13:30 - 15:30

Chair(s) Shuanggen JIN, Shanghai Astronomical Observatory

PS09-04-D2-PM1-302A-008 | PS09-04-A012

Dynamic and Isotopic Evolution of Mars Ice Reservoirs
Oded AHARONSON^{1,2s+}, Eran VOS¹, Norbert SCHORGHOFER²
¹Weizmann Institute of Science, ²Planetary Science Institute

PS09-04-D2-PM1-302A-009 | PS09-04-A023 (Invited)

Variation of Cloud Opacity on Night-Side Disk of Venus
Takehiko SATOH!** Takashi NAKAKIISHI2 Takao M. SATO

Takehiko SATOH $^{1\sharp *},$ Takashi NAKAKUSHI², Takao M. SATO¹, George HASHIMOTO³

¹Japan Aerospace Exploration Agency, ²Wakayama University, ³Okayama University

PS09-04-D2-PM1-302A-010 | PS09-04-A016

Temperature Inversions and Atmospheric Fine Structures in the High Latitude Range of Venus as Seen by the Radio

Science Experiment VeRa on Venus Express

Silvia TELLMANN¹⁵⁺, Bernd HÄUSLER², Martin PÄTZOLD¹, Stefan REMUS³, Michael K. BIRD⁴, Janusz OSCHLISNIOK¹
¹Rhenish Institute for Environmental Research, ²University of the Bundeswehr Munich, ³European Space Agency, ⁴University of Bonn PS09-04-D2-PM1-302A-011 | PS09-04-A004

Mean Thermal Structure of the Venus Atmosphere Clarified by Radio Occultation Measurements in Venus Express and Akatsuki Missions

Hiroki ANDO^{1;+}, Takeshi IMAMURA², Silvia TELLMANN³, Martin PÄTZOLD³, Bernd HÄUSLER⁴, Norihiko SUGIMOTO⁵, Masahiro TAKAGI¹, Yoshihisa MATSUDA⁶

¹Kyoto Sangyo University, ²The University of Tokyo, ³Rhenish Institute for Environmental Research, ⁴University of the Bundeswehr Munich, ⁵Keio University, ⁶Tokyo Gakugei University

PS09-04-D2-PM1-302A-012 | PS09-04-A006

HDO and SO2 Thermal Mapping on Venus: Short-Term Variations, Statistical Analysis of the SO2 Plumes and

Comparison with Spacecraft Data

Therese ENCRENAZ^{1±+}, Thomas GREATHOUSE², Emmanuel MARCQ³, Hideo SAGAWA⁴, Thomas WIDEMANN¹, Bruno BEZARD¹, Thierry FOUCHET¹, Sushil ATREYA⁵, Yeon Joo LEE⁶ ¹Paris Observatory, ²Southwest Research Institute, ³National Center for Scientific Research (CNRS)/ Institut Pierre Simon Laplace (IPSL)/ Université de Versailles Saint-Quentin-en-Yvelines (UVSQ) / University Pierre et Marie Curie (UPMC), ⁴Kyoto Sangyo University, ⁵University of Michigan, ⁶The University of Tokyo

PS09-04-D2-PM1-302A-013 | PS09-04-A002

Data Assimilation System for the Venusian Atmosphere

Norihiko SUGIMOTO^{1#+}, Akira YAMAZAKI², Toru KOUYAMA³,
Hiroki KASHIMURA⁴, Takeshi ENOMOTO⁵, Masahiro TAKAGI⁶

¹Keio University, ²Japan Agency for Marine-Earth Science and
Technology, ³National Institute of Advanced Industrial Science and

Technology, ³National Institute of Advanced Industrial Science and Technology, ⁴Kobe University, ⁵Kyoto University, ⁶Kyoto Sangyo University

PS09-04-D2-PM1-302A-014 | PS09-04-A005

Vertical Propagation of the Large Stationary Gravity Waves in the Venus Atmosphere

Takeru YAMADA^{1#+}, Takeshi IMAMURA², Tetsuya FUKUHARA¹, Makoto TAGUCHI¹
¹Rikkyo University, ²The University of Tokyo

PS09-04-D2-PM1-302A-015 | PS09-04-A009

Effect of CO2 Saturation on Gravity Wave Activities in Martian Polar Nights

Katsuyuki NOGUCHI^{1#+}, Ayaka NISHIURA¹, Takeshi KURODA²
¹Nara Women's University, ²National Institute of Information and
Communications Technology

Time 16:00 - 18:00

Chair(s) Joseph MICHALSKI, University of Hong Kong

PS09-04-D2-PM2-302A-016 | PS09-04-A031 (Invited)

First Coupled Model of D and E Regions of Mars' Ionosphere

for Flare and Non-Flare Electron Density Profiles

S.A. HAIDER^{1#+}, Siddhi Y SHAH¹, Masoom P JETHWA¹
¹Physical Research Laboratory

PS09-04-D2-PM2-302A-017 | PS09-04-A014

Dual-Frequency Radio Soundings of Planetary Ionospheres

Avoid Misinterpretations of Ionospheric Features

Martin PÄTZOLD^{1‡+}, Tom ANDERT², Bernd HAEUSLER², David P. HINSON³, Kerstin PETER¹, Silvia TELLMANN¹

¹Rhenish Institute for Environmental Research, ²Universität der Bundeswehr München, ³Stanford University

PS09-04-D2-PM2-302A-018 | PS09-04-A001

Wave Distribution and Activities in the Martian Upper

Atmosphere from Multi-Satellite Observations

Shuanggen JIN^{1#+}, Jiandong LIU¹ ¹Chinese Academy of Sciences

PS09-04-D2-PM2-302A-019 | PS09-04-A010 (Invited)

Measurements of Solar Energetic Particles from the Martian

Orbit Using Energetic Ion Spectrometer

Shiv Kumar GOYAL¹⁵⁺, Dibyendu CHAKRABARTY¹, Santosh VADAWALE¹, Neeraj Kumar TIWARI¹, Aadtiya SARDA¹, Amogh AUKNOOR¹, Piyush SHARMA¹, S.A. HAIDER¹

¹Physical Research Laboratory

PS09-04-D2-PM2-302A-020 | PS09-04-A033

Atmospheric Dust and Interplanetary Dust Particles on Mars

Varun SHEEL^{1‡+}, Jayesh PABARI¹, Shefali UTTAM¹, Kinsuk ACHARYYA¹, Ajai KUMAR², Bhavinkumar PANDYA³
¹Physical Research Laboratory, ²Institute of Plasma Research, ³C. U. Shah Science College

PS09-04-D2-PM2-302A-021 | PS09-04-A019

The ExoMars 2016 Trace Gas Orbiter

Håkan SVEDHEM¹#+, Jorge L. VAGO¹¹European Space Agency

PS09-04-D2-PM2-302A-022 | PS09-04-A029

MAVEN/IUVS Observations of Dayglow Emissions on Mars:

Indicator of Dynamics, Energetics, Physical Processes, and

Coupling Between Lower and Upper Atmosphere

Sonal JAIN¹⁵⁺, Justin DEIGHAN¹, Nick SCHNEIDER¹, Ian STEWART¹, Joseph EVANS², Michael CHAFFIN¹, Matteo CRISMANI¹, Michael STEVENS³, Majd MAYYASI⁴, Ed THIEMANN¹, Frank EPARVIER¹, Phil CHAMBERLIN¹

¹University of Colorado Boulder, ²Computational Physics, Inc., ³Naval Research Laboratory, ⁴Boston University

PS09-04-D2-PM2-302A-023 | PS09-04-A013

Small Scale Disturbances in the Lower Dayside Ionosphere of

Kerstin PETER¹^{‡+}, Martin PATZOLD², Francisco GONZALEZ GALINDO³, Laila ANDERSSON⁴, Michael K. BIRD⁵, Matteo CRISMANI⁴, Christopher FOWLER⁴, Bernd HÄUSLER⁶, Davin LARSON⁵, Robert LILLIS⁶, Gregomc MOLINA-CUBEROS⁶, Nick SCHNEIDER⁴, Silvia TELLMANN¹, Ed THIEMANN⁴, Olivier WITASSE¹⁰

¹Rhenish Institute for Environmental Research, ²University of Cologne, ³Instituto de Astrofísica de Andalucía, ⁴University of Colorado Boulder, ⁵University of Bonn, ⁶University of the Bundeswehr Munich, ⁷University of California, Berkeley, ⁸University of California Berkeley, ⁹Space Research Institute, Austrian Academy of Sciences, ¹⁰European Space Agency

PS11 / Science and Exploration of the Moon and Mercury

Tue - 05 Jun | MR323B

Time 11:00 - 12:30

Chair(s) Jorn HELBERT, German Aerospace Center (DLR)

Makiko OHTAKE, Japan Aerospace Exploration Agency

PS11-D2-AM2-323B-001 | PS11-A033

Analysis of Pyroclastic Deposits Using Messenger Macs

Observations

Sebastien BESSE^{1‡+}, Alain DORESSOUNDIRAM²
¹European Space Agency, ²Paris Observatory

PS11-D2-AM2-323B-002 | PS11-A027

Exploring Mercury's Surface in the Thermal Infrared -

Challenges and Opportunities for the Mertis Instrument on

Bepicolombo

Jorn HELBERT¹;, Mario D'AMORE¹, Alessandro MATURILLI¹, Indhu VARATHARAJAN¹, Ingo WALTER¹, Gisbert PETER¹, Karin BAUCH², Harald HIESINGER²

¹German Aerospace Center, ²University of Münster

PS11-D2-AM2-323B-003 | PS11-A030

Modeling Impact Gardening as a Control of Near-Surface Ice Distribution Between the Poles of the Moon and Mercury

Emily COSTELLO1#+, Rebecca GHENT2, Paul LUCEY1 ¹University of Hawaii at Manoa, ²University of Toronto

PS11-D2-AM2-323B-004 | PS11-A023

Magnetosphere?

To What Extent Does Solar Wind Forcing Affect the Occurrences of Energetic Electron Events in the Hermean

Christy LENTZ1#+, Dan BAKER1, Allison JAYNES2, Trevor LEONARD1, Ryan DEWEY3, David LAWRENCE4, Weijie SUN3 ¹University of Colorado Boulder, ²University of Iowa, ³University of Michigan, 4Johns Hopkins University

PS11-D2-AM2-323B-005 | PS11-A031

Surface Release Processes to Populate Mercury's Exosphere Peter WURZ^{1#+}, Diana GAMBORINO¹, Audrey VORBURGER¹ ¹University of Bern

PS11-D2-AM2-323B-006 | PS11-A016

Volcanic Infillings of Large Basins on the Moon and Mercury:

What are they Telling us About the Interior?

Sebastiano PADOVAN^{1#+}, Nicola TOSI¹, Elena MARTELLATO², Ana-Catalina PLESA1, Thomas RUEDAS1, Doris BREUER1 ¹German Aerospace Center, ²Natural History Museum

Time 13:30 - 15:30

Chair(s) Kyeong Ja KIM, Korea Institute of Geoscience and Mineral

Jorn HELBERT, German Aerospace Center (DLR)

PS11-D2-PM1-323B-007 | PS11-A018

Compositional Estimation of Possible Mantle Material of the Moon

Makiko OHTAKE1#+, Satoru YAMAMOTO2, Tomokatsu MOROTA³, Shinsuke KATO³

¹Japan Aerospace Exploration Agency, ²National Institute for Environmental Studies, 3Nagoya University

PS11-D2-PM1-323B-009 | PS11-A028

Dike Structures and Dichotomy of Lunar Domes Detected from Chang'e Data

Wenrui WANG1#+, Jianjun LIU1, Chun-Lai LI1, Xiaoxia ZHANG1, Wei ZUO1, Yaying XIONG1 ¹Chinese Academy of Sciences

PS11-D2-PM1-323B-008 | PS11-A017

Basalt Mineralogy Variations at Tsiolkovskiy Crater: Insights

into the Eruption History on the Lunar Far Side

Deepak DHINGRA1#+, Thomas GIGUERE2, Peter MOUGINIS-MARK2, Joseph BOYCE2

¹Indian Institute of Technology Kanpur, ²University of Hawaii

PS11-D2-PM1-323B-010 | PS11-A026

Ring-Moat Dome Structures in the Lunar Maria: Morphologic

Diversity and Comparison with Irregular Mare Patches

Feng ZHANG1#+, Christian WOEHLER2, James HEAD3, Roberto BUGIOLACCHI1, Lionel WILSON4, Arne GRUMPE2 ¹Macau University of Science and Technology, ²Technical University of

Dortmund, ³Brown University, ⁴Lancaster University

PS11-D2-PM1-323B-011 | PS11-A025

Characterizing the Optical Maturity Trend of Lunar Craters

Chae Kyung SIM1#+, Sungsoo KIM1 ¹Kyung Hee University

PS11-D2-PM1-323B-012 | PS11-A022

Geochemical and Petrological Features of Lunar Crust Told by

Recent Studies of Lunar Meteorites

Hiroshi NAGAOKA1#+, Yuzuru KAROUJI1, Nobuyuki HASEBE2, Makiko OHTAKE1

¹Japan Aerospace Exploration Agency, ²Waseda University

Time 16:00 - 18:00

Makiko OHTAKE, Japan Aerospace Exploration Agency Chair(s)

Kyeong Ja KIM, Korea Institute of Geoscience and Mineral

Resources

PS11-D2-PM2-323B-013 | PS11-A003

Geology of the Rümker Region in Northern Procellarum:

Candidate Sample Return Area of the Chang'e-5 Lunar Mission

Long XIAO1#+, Yuqi QIAN1, James HEAD2, Jiannan ZHAO1, Jessica FLAHAUT³

¹China University of Geosciences, ²Brown University, ³Paul Sabatier University

PS11-D2-PM2-323B-014 | PS11-A009

Geological Characteristics of Chang'e-4 Landing Region

Jun HUANG1#+, Long XIAO1

¹China University of Geosciences

PS11-D2-PM2-323B-015 | PS11-A032

Characterization of Lunar Surface Hydration Using LADEE's

Observations of Exospheric Water Events

Mehdi BENNA
1 $^{1\pm}$, Dana HURLEY², timothy STUBBS¹, Richard ELPHIC³, Paul MAHAFFY¹

¹NASA Goddard Space Flight Center, ²The Johns Hopkins University Applied Physics Laboratory, ³National Aeronautics and Space Administration

PS11-D2-PM2-323B-016 | PS11-A015

Simultaneous Retrieval of the H2 Tidal Love Number and the

Global Shape of the Moon from Laser Altimetry

Robin THOR¹⁵⁺, Reinald KALLENBACH², Philipp GLÄSER³, Ulrich CHRISTENSEN¹, Jürgen OBERST³, Alexander STARK², Gregor STEINBRÜGGE²

¹Max Planck Institute for Solar System Research, ²German Aerospace Center, ³Technical University of Berlin

PS11-D2-PM2-323B-017 | PS11-A005

The Effects of Spacecraft Charging and Outgassing on the LADEE Ion Measurements

Lianghai XIE^{1‡+}, Xiao-Ping ZHANG¹, Dawei GUO¹

¹Macau University of Science and Technology

PS11-D2-PM2-323B-018 | PS11-A034

Introduction to a Gamma-Ray and Neutron Spectrometer Suite for Future Planetary Surface Investigation

Kyeong Ja KIM¹^{‡+}, Yire CHOI¹, Eung Seok YI¹, Junghun PARK¹, K. B. LEE², Sungsoon LEE¹, Young-Kwang YEON¹, Nobuyuki HASEBE³, Won-Kee PARK⁴, Young-Jun CHOI⁴, Kyungin KANG⁵¹Korea Institute of Geoscience and Mineral Resources, ²Korea Research Institute of Standards and Science, ³Waseda University, ⁴Korea Astronomy and Space Science Institute, ⁵KAIST

PS11-D2-PM2-323B-019 | PS11-A019

Status Report for Development of the Gamma-Ray

Spectrometer Onboard Korea Pathfinder Lunar Orbiter

Kyeong Ja KIM¹²+, Yire CHOI¹, Junghun PARK¹, Sungsoon LEE¹, Eung Seok YI¹, Young-Kwang YEON¹, K. B. LEE², Yong-Kwon KIM³, Kilsoon PARK³, Kyoung Wook MIN⁴, Kyungin KANG⁵, Jin Yeon CHO⁶, Nobuyuki HASEBE₹, Richard ELPHIC⁶, Hiroshi NAGAOKA⁶

¹Korea Institute of Geoscience and Mineral Resources, ²Korea Research Institute of Standards and Science, ³NuCare, ⁴Korea Advanced Institute of Science and Technology, ⁵KAIST, ⁶Inha University, ⁷Waseda University, ⁸National Aeronautics and Space Administration, ⁹Japan Aerospace Exploration Agency

PS14 / Planetary Data in the Big Data Era

Tue - 05 Jun | MR304A

Time 08:30 - 10:30

Chair(s) Jian-Yang LI, Planetary Science Institute

Baptiste CECCONI, Observatoire de Paris

PS14-D2-AM1-304A-001 | PS14-A003 (Invited)

The NASA Big Data Task Force and Planetary Data

Raymond WALKER1#+

¹University of California, Los Angeles

PS14-D2-AM1-304A-002 | PS14-A007

A Standard Reference Model for Planetary Science Data

Archives

John Steven HUGHES^{1‡+}, Daniel CRICHTON¹, Ronald JOYNER¹
¹Jet Propulsion Laboratory, California Institute of Technology

PS14-D2-AM1-304A-003 | PS14-A010 (Invited)

PDS, DOIs, and the Literature

Anne RAUGH^{1#+}, Edwin HENNEKEN²
¹University of Maryland, ²Harvard-Smithsonian Centor for Astrophysics

PS14-D2-AM1-304A-004 | PS14-A008 (Invited)

Institutional Synergy: Data Management and Strategies with the Planetary Science Data System's Small Bodies Node and

the Minor Planet Center

James BAUER^{1#+}, Matthew HOLMAN²
¹University of Maryland, ²Harvard University

PS14-D2-AM1-304A-005 | PS14-A015

Integrating Hubble Data into the Planetary Data System

Mark SHOWALTER^{1‡+}, Eric NEDERVOLD¹, Mitchell GORDON¹, Matthew TISCARENO¹, Ludmilla KOLOKOLOVA², Tilden BARNES²

¹SETI Institute, ²University of Maryland

PS14-D2-AM1-304A-006 | PS14-A016

Planetary Scientific Observations at the European Space

Astronomy Centre

Sebastien BESSE^{1*}, Christophe ARVISET¹, Guido DE MARCHI¹, Isa BARBARISI¹, Bruno MERIN¹, Deborah BAINES¹, Jesus SALGADO¹, Beatriz MARTINEZ¹, Arnaud MASSON¹, Claire VALLAT¹

¹European Space Agency

PS14-D2-AM1-304A-007 | PS14-A014 (Invited)

Big Data Era: Opportunities and Challenges for LDCC

Wei ZUO¹⁵+, Chun-Lai LI¹, Yaying XIONG¹, Xiaoxia ZHANG¹, Wenrui WANG¹, Jianjun LIU¹

¹Chinese Academy of Sciences

Time 11:00 - 12:30

Chair(s) Ludmilla KOLOKOLOVA, University of Maryland

Sebastien BESSE, European Space Astronomy Center

PS14-D2-AM2-304A-008 | PS14-A013 (Invited)

The Activity of Jaxa's Lunar and Planetary Exploration Data

Analysis Group

Yukio YAMAMOTO^{1*+}, Hisashi OTAKE¹, Satoshi TANAKA¹, Makiko OHTAKE¹, Akira MIURA¹, Yoshiaki ISHIHARA¹, Koichi MASUDA¹, Mitsuo YAMAMOTO¹, Hiroka INOUE¹, Ken ISHIYAMA¹, Hiroyuki SATO¹

¹Japan Aerospace Exploration Agency

PS14-D2-AM2-304A-009 | PS14-A001 (Invited)

VESPA, a Planetary Science Virtual Observatory Corner Stone

Baptiste CECCONI^{15*}, Stephane ERARD¹, Pierre LE SIDANER¹, Angelo Pio ROSSI², Maria Teresa CAPRIA³, Bernard SCHMITT⁴, Vincent GÉNOT⁵, Nicolas ANDRE⁵, AnnCarine VANDAELE⁶, Manuel SCHERF⁷, Ricardo HUESO⁸, Anni MÄÄTTÄNEN⁹, Benoit CARRY¹⁰, Nicholas ACHILLEOS¹¹, Chiara MARMO¹², Ondrej SANTOLIK^{13,14}, Kevin BENSON¹¹, Pierre FERNIQUE¹⁵

¹Paris Observatory, ²Jacobs University, ³National Institute for Astrophysics, ⁴Université Grenoble Alpes, ⁵University of Toulouse, ⁶Belgian Institute for Space Aeronomy, ⁷Austrian Academy of Sciences, ⁸University of the Basque Country, ⁹Institut Pierre Simon Laplace, ¹⁰Nice Observatory, ¹¹University College London, ¹²University of Paris-Sud, ¹³Czech Academy of Sciences, ¹⁴Charles University, ¹⁵University of Strasbourg

PS14-D2-AM2-304A-010 | PS14-A005

Venus Atmospheric Data Accessibility: Connecting the

Planetary Data Archives of NASA, ESA, and JAXA

Lyle HUBER¹⁴⁺, Lynn NEAKRASE¹, Nancy CHANOVER¹, Reta BEEBE¹, Daniel CRICHTON², Sean HARDMAN², Kevin MCGOULDRICK³, Shin-Ya MURAKAMI⁴, Yukio YAMAMOTO⁵, Santa MARTINEZ⁶, Tanya LIM⁶, Maud BARTHELEMY⁶, Richard SIMPSON⁷, Ralph LORENZ⁸

¹New Mexico State University, ²Jet Propulsion Laboratory, California Institute of Technology, ³University of Colorado, ⁴Akatsuki, ⁵Japan Aerospace Exploration Agency, ⁶European Space Agency, ⁷Stanford University, ⁸The Johns Hopkins University Applied Physics Laboratory

PS14-D2-AM2-304A-011 | PS14-A019

SAFARI: Searching Asteroids for Activity Revealing Indicators in Big Data

Colin Orion CHANDLER¹#+, Anthony CURTIS², Michael MOMMERT¹, Scott SHEPPARD³, Chad TRUJILLO¹
¹Northern Arizona University, ²University of South Florida, ³Carnegie Institution for Science

PS14-D2-AM2-304A-012 | PS14-A021

The Cometary Observation Metadata Archive, an Interactive

Science Portal for Primitive Solar System Objects

Stanley DODDS $^{1\sharp *}$, Karen MEECH 1 , Narayan RAJA 1 , Jan KLEYNA 1

¹University of Hawaii at Manoa

PS18 / Understanding Icy Worlds, Ocean Worlds, and Habitability

Tue - 05 Jun | MR323B

Time 08:30 - 10:30

Chair(s) Jun KIMURA, Osaka University

Catherine WALKER, Jet Propulsion Laboratory, Caltech

PS18-D2-AM1-323B-001 | PS18-A005

Abrupt Climate Transition of Icy Worlds from Snowball to

Moist or Runaway Greenhouse

Jun YANG¹⁵⁺, Yongyun HU¹, Yonggang LIU¹, Feng DING², Ramses RAMIREZ³, W. Richard PELTIER⁴

¹Peking University, ²Harvard University, ³Cornell University,

⁴University of Toronto

PS18-D2-AM1-323B-002 | PS18-A001 (Invited)

Ocean Tidal Heating in Icy Satellites

Isamu MATSUYAMA $^{1#+}$, Hamish HAY 1 , Francis NIMMO 2 , Shunichi KAMATA 3

¹University of Arizona, ²University of California Santa Cruz, ³Hokkaido University

PS18-D2-AM1-323B-003 | PS18-A009 (Invited)

The Interior of Enceladus After Cassini

Gael CHOBLET¹**, Gabriel TOBIE¹, Ondrej CADEK², Christophe SOTIN³, Mathieu BOUFFARD⁴, Frank POSTBERG⁵, Mathilde KERVAZO¹, Marie BEHOUNKOVA², Ondrej SOUCEK²¹University of Nantes, ²Charles University in Prague, ³Jet Propulsion Laboratory, California Institute of Technology, ⁴Max Planck Institute for Solar System Research, ⁵University of Heidelberg

PS18-D2-AM1-323B-004 | PS18-A016

The Role of Hydrothermal Reactions in Determining the Fate of Sulfate in Europa's Ocean

Shuya TAN $^{{\scriptscriptstyle \parallel}z_{\uparrow}}$, Yasuhito SEKINE $^{{\scriptscriptstyle \parallel}}$, Takazo SHIBUYA $^{{\scriptscriptstyle 2}}$, Chihiro MIYAMOTO $^{{\scriptscriptstyle 1}}$, Yoshio TAKAHASHI $^{{\scriptscriptstyle \parallel}}$

¹The University of Tokyo, ²Japan Agency for Marine-Earth Science and Technology

PS18-D2-AM1-323B-005 | PS18-A012

Ubiquitous and Mysterious: Fracturing, Collapse and Expected

Outcomes Above and Below an Icy Shell

Catherine WALKER^{1#+}, Britney SCHMIDT², Jacob BUFFO²
¹NASA Jet Propulsion Laboratory, ²Georgia Institute of Technology

PS18-D2-AM1-323B-006 | PS18-A020

Europa's Surface Radiation Environment

Tom Andre NORDHEIM^{1#+}, Kevin HAND¹, Chris PARANICAS²
¹Jet Propulsion Laboratory, California Institute of Technology, ²The
Johns Hopkins University Applied Physics Laboratory

PS18-D2-AM1-323B-007 | PS18-A019 (Invited)

Kuiper Belt Planets - Surface Geology and Processes and What

These Tell us About Their Possible Subsurface Oceans

Orkan UMURHAN^{1‡+}, Kelsi SINGER², Louise PROCKTER³, Francis NIMMO⁴, Will GRUNDY⁵, William MCKINNON⁶, Jeff MOORE⁷, Alan HOWARD⁸, Paul SCHENK⁹, S. Alan STERN², Catherine OLKIN², Leslie YOUNG², Harold WEAVER¹⁰

¹SETI Institute, ²Southwest Research Institute, ³Lunar and Planetary Institute, ⁴University of California Santa Cruz, ⁵Lowell Observatory, ⁶Washington University, ⁷NASA AMES Research Center, ⁸University of Virginia, ⁹Universities Space Research Association, ¹⁰Johns Hopkins University

PS18-D2-AM1-323B-008 | PS18-A017

Methane, Ethane, and Nitrogen Stability on Titan and Other Icy Bodies

Jennifer HANLEY^{1‡+}, Logan PEARCE², Shy DUSTRUD³, Gerrick LINDBERG³, Will GRUNDY¹, Henry ROE⁴, Garrett THOMPSON³, Steve TEGLER³

¹Lowell Observatory, ²The University of Texas at Austin, ³Northern Arizona University, ⁴Gemini Observatory

PS22 / Field and Laboratory Studies in Support of Planetary Infrared Remote Sensing

Tue - 05 Jun | MR304A

Time 13:30 - 15:30

Chair(s) Kerri DONALDSON HANNA, University of Oxford

PS22-D2-PM1-304A-001 | PS22-A017

Laboratory Spectroscopy Measurements to Support Thermal Infrared Observations of Airless Bodies in the Inner Solar System

Neil BOWLES¹⁵⁺, Kerri DONALDSON HANNA¹, Timothy GLOTCH², Benjamin GREENHAGEN³

¹University of Oxford, ²Stony Brook University, ³The Johns Hopkins University Applied Physics Laboratory

PS22-D2-PM1-304A-002 | PS22-A009

Analogue Materials Measured Under Simulated Airless Body Conditions: Insights into the Interpretation of Thermal

Infrared Remote Sensing Observations

Kerri DONALDSON HANNA¹⁵⁺, Neil BOWLES¹, Benjamin GREENHAGEN², Devin SCHRADER³, Lindsay KELLER⁴, Ann L. SPRAGUE⁵

¹University of Oxford, ²The Johns Hopkins University Applied Physics Laboratory, ³Arizona State University, ⁴NASA Johnson Space Center, ⁵University of Arizona PS22-D2-PM1-304A-003 | PS22-A018

The Planetary Spectroscopy Laboratory (PSL): Spectroscopy from UV to FIR for Sample Temperatures from 70 to 1000 Kelvin

Alessandro MATURILLI^{1‡}, Jorn HELBERT^{1‡}, Indhu VARATHARAJAN¹, Yaquelin ROSAS ORTIZ¹
¹German Aerospace Center

PS22-D2-PM1-304A-004 | PS22-A027

The Mid-IR Spectral Effects of Porosity and Darkening Agents on the Silicate Surface Features of Airless Bodies

Cindy YOUNG^{1#+}, Michael POSTON², James WRAY¹, Kevin HAND³, Robert CARLSON³

¹Georgia Institute of Technology, ²Southwest Research Institute, ³Jet Propulsion Laboratory, California Institute of Technology

PS22-D2-PM1-304A-005 | PS22-A001

Search for Extralunar Materials in Apollo Soil Samples

Paul LUCEY^{1‡+}, Sarah CRITES², Casey HONNIBALL³
¹University of Hawaii at Manoa, ²Japan Aerospace Exploration
Agency, ³University of Hawaii

PS22-D2-PM1-304A-006 | PS22-A011

Visible and Near Infrared Reflectance of Mineral Mixtures and

Nanophase Iron Under Anoxic Conditions

Carey LEGETT^{1#+}, Timothy GLOTCH¹, Victoria RIVERA-BANUCHI², Steven CHEMTOB²
¹Stony Brook University, ²Temple University

PS22-D2-PM1-304A-007 | PS22-A008

¹University of Oxford

Laboratory Measurements of the Thermal Infrared Emissivity of Planetary Surface's as a Function of Observation Angle Tristram WARREN^{1‡+}, Neil BOWLES¹, Kerri DONALDSON HANNA¹

Time 16:00 - 18:00

Chair(s) Timothy GLOTCH, Stony Brook University

Neil BOWLES, University of Oxford

PS22-D2-PM2-304A-008 | PS22-A021

Incorporation of Portable Infrared Spectral Imaging into
Planetary Geological Field Work: Analog Studies at Kilauea

Volcano, Hawaii and Potrillo Volcanic Field, New Mexico

Gen ITO¹[‡], Deanne ROGERS¹, Kelsey YOUNG²³, Jacob BLEACHER³, Christopher EDWARDS⁴, John HINRICHS⁵, Casey HONNIBALL⁶, Paul LUCEYˀ, Daniel PIQUERO⁵, Byron WOLFE⁵, Timothy GLOTCH¹

¹Stony Brook University, ²University of Maryland, ³NASA Goddard Space Flight Center, ⁴Northern Arizona University, ⁵Spectrum Photonics, Inc., ⁶University of Hawaii, ⁷University of Hawaii at Manoa

PS22-D2-PM2-304A-009 | PS22-A016

Investigating Hydrothermal Systems in Costa Rica and Iceland with Multiple Instruments Including Drones: Applications for Mars Exploration

M. Ramy EL-MAARRY $^{1\sharp +}$, Brian HYNEK 1 , Sarah BLACK 1 , Lindsay MCHENRY 2

¹University of Colorado Boulder, ²University of Wisconsin–Milwaukee

PS22-D2-PM2-304A-010 | PS22-A005

Reconciling Remote Data, Detailed Field Localities, and High Resolution Lab Measurements of Shocked and Unshocked Basaltic Ejecta

Shawn WRIGHT1,2#+

¹Planetary Science Institute, ²University of Pittsburgh

PS22-D2-PM2-304A-011 | PS22-A019

Spectral Properties of Salt-Bearing Assemblages: Implications for Detection Limits of Minor Phases in Chloride-Bearing Deposits on Mars

Cheng YE^{1#+}, Timothy GLOTCH¹
¹Stony Brook University

PS22-D2-PM2-304A-012 | PS22-A024

Using Martian Meteorite Spectra to Calibrate to

Spacecraft-Collected Spectral Maps

Gretchen BENEDIX $^{1\sharp+}$, Victoria HAMILTON 2 , Lucy FORMAN 1 , Nick TIMMS 1 , Steve REDDY 1

¹Curtin University, ²Southwest Research Institute

PS22-D2-PM2-304A-013 | PS22-A020

Cryogenic Laboratory Experiments into Radiation Effects on the Spectra of Non-Ice Materials Relevant to Ocean Worlds

Karen CAHILL1#+, Charles HIBBITTS2

¹Planetary Science Institute, ²The Johns Hopkins University Applied Physics Laboratory PS22-D2-PM2-304A-014 | PS22-A030

The Effects of Radiation on the Adsorption of CO2 onto

Materials Relevant to Icy Satellites

Charles HIBBITTS $^{1\sharp *}$, Karen STOCKSTILL-CAHILL 1 , Chris PARANICAS 1

¹The Johns Hopkins University Applied Physics Laboratory

PS22-D2-PM2-304A-015 | PS22-A031

Cryogenic Ices in the Astrophysical Materials Laboratory at

Northern Arizona University

Jennifer HANLEY^{1#+}, Will GRUNDY¹, Mark LOEFFLER², Gerrick LINDBERG², Steve TEGLER²

¹Lowell Observatory, ²Northern Arizona University

SE02 / Seismic Modelling and Imaging: from Global to Local Scales

Tue - 05 Jun | MR321A

Time 13:30 - 15:30

Chair(s) Ping TONG, Nanyang Technological University

Shu-Hui HUNG, National University of Taiwan

SE02-D2-PM1-321A-001 | SE02-A026 (Invited)

Receiver Functions Without Borders

Stéphane RONDENAY¹⁸⁺, Kathrin SPIEKER¹, Lucas SAWADE¹, Anne DROTTNING¹, Mari FARESTVEIT¹, Felix HALPAAP¹

¹University of Bergen

SE02-D2-PM1-321A-002 | SE02-A001

Seismic Tomographic Imaging of the Internal Structure of

Mount Merapi, Central Java, Indonesia

Sri WIDIYANTORO¹⁸⁺, Mohamad RAMDHAN², Andri Dian NUGRAHA¹, Jean-Philippe METAXIAN³, Tedi YUDISTIRA¹, Zulfakriza ZULFAKRIZA¹, Sandy SUHARDJA⁴

¹Bandung Institute of Technology, ²Meteorological, Climatological, and Geophysical Agency, ³Universite de Savoie Mont Blanc, ⁴Pertamina University

SE02-D2-PM1-321A-003 | SE02-A009

Pn Tomography with Moho Depth Correction from Europe to East Asia

Yan LYU^{1‡+}, Sidao NI¹, Ling CHEN¹, Qi-Fu CHEN¹, Jinhai ZHANG¹, Juan LI^{1,2}, Lianfeng ZHAO¹

¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

SE02-D2-PM1-321A-004 | SE02-A011

Seismic Imaging of Southern Peruvian Subduction Zone:

Velocity Heterogeneity in the Nazca Slab and Mantle Wedge

Hobin LIM^{1#+}, Young-Hee KIM¹, Robert CLAYTON², Clifford THURBER3

¹Seoul National University, ²California Institute of Technology, ³University of Wisconsin-Madison

SE02-D2-PM1-321A-005 | SE02-A023

The Deep Structure Beneath the Nuomin Volcanos

Qingju WU1#+

¹Institute of Geophysics, China Earthquake Administration

SE02-D2-PM1-321A-006 | SE02-A014 (Invited)

Linear Array Ambient Noise Adjoint Tomography with Phases

and Amplitude Ratios: Methodology and Application

Huajian YAO1#+, Chao ZHANG1, Ting LEI1, Qinya LIU2 ¹University of Science and Technology of China, ²University of Toronto

Time 16:00 - 18:00

Chair(s) Xu YANG, University of California Santa Barbara

SE02-D2-PM2-321A-007 | SE02-A019 (Invited)

Imaging Lilithospheric and Asthenospheric Structures in the

Central Pacific Nomelt Region by a Joint Tomography of Body

Wave and Surface Wave Phase Delays: A Fully 3-D

Finite-Frequency Approach

Shu-Huei HUNG1#+, Pei-Ying LIN2, James GAHERTY3, Joshua RUSSELL³, John A. COLLINS⁴, Daniel LIZARRALDE⁴, Rob EVANS4, Greg HIRTH5

¹National Taiwan University, ²Taiwan Ocean Research Institute, ³Columbia University, ⁴Woods Hole Oceanographic Institution, 5Brown University

SE02-D2-PM2-321A-008 | SE02-A013

Staggered-Grid Seismic Tomography of Central Sumatra

Yingyu QI1+, Iman SUARDI2, Muzli MUZLI1,2, Xueyuan HUANG¹, Shengji WEI¹, Ping TONG^{1#}

¹Nanyang Technological University, ²Meteorological, Climatological, and Geophysical Agency

SE02-D2-PM2-321A-009 | SE02-A025

The Origin and Mantle Dynamics of Quaternary Intraplate

Volcanism in Northeast China

Zhen GUO1#+, Kai WANG2, Yingjie YANG2, John CHEN3 ¹Southern University of Science and Technology, ²Macquarie University, 3Peking University

SE02-D2-PM2-321A-010 | SE02-A027

Crustal and Upper Mantle Structures in the Eastern Margin of

Tibetan Plateau by Using Chinarray Data

Zhifeng DING1#+, Huili GUO1, Xingchen WANG1, Lijun CHANG², Fengxue ZHANG¹, Songyong YUAN¹, Chen ZHENG¹ ¹China Earthquake Administration, ²Institute of Geophysics, China Earthquake Administration

SE02-D2-PM2-321A-011 | SE02-A028

Validation of Source Stacking Method for Global Seismic

Waveform Tomography Using the Spectral Element Method

Li-Wei CHEN1#+, Barbara ROMANOWICZ1

¹University of California, Berkeley

SE03 / Imaging the Earth: from Data to Interpretation

Tue - 05 Jun | MR321B

Time 11:00 - 12:30

Chair(s) Hsin-Hua HUANG, Insititute of Earth Sciences,

Academia Sinica

Nori NAKATA, University of Oklahoma

SE03-D2-AM2-321B-001 | SE03-A021 (Invited)

Refined Seismic Structure of Southern California by Ambient

Noise Adjoint Tomography

Yingjie YANG1#+, Kai WANG1, Piero BASINI2, Ping TONG3, Qinya LIU2, Carl TAPE4

¹Macquarie University, ²University of Toronto, ³Nanyang Technological University, 4University of Alaska Fairbanks

SE03-D2-AM2-321B-002 | SE03-A042

Towards the Development of the Community Velocity Model

for Oklahoma Using Seismic Ambient Noise

Nori NAKATA1#+, Stephen MARSH1

¹University of Oklahoma

SE03-D2-AM2-321B-003 | SE03-A009

High Resolution Imaging Using Dense Geophone Arrays

Fan-Chi LIN1#+, Yadong WANG1, Sin-Mei WU1, Elizabeth BERG1, Kevin WARD1, Amir ALLAM1, Jamie FARRELL1

¹University of Utah

SE03-D2-AM2-321B-004 | SE03-A024

Japanese Standard Three-Dimensional Seismic Velocity Structure Beneath Both Japanese Islands and the Ocean (Including Japan Sea) Using Offshore Events with NIED Hi-Net Pick Data and NIED F-Net Focal Depth as Well as

Inland Events

Makoto MATSUBARA^{1‡+}, Hiroshi SATO², Kenji UEHIRA¹, Masashi MOCHIZUKI¹, Toshihiko KANAZAWA³

¹National Research Institute for Earth Science and Disaster Resilience, ²The University of Tokyo, ³Association for the Development of Earthquake Prediction

Time 13:30 - 15:30

Chair(s) Fan-Chi LIN, Universith of Utah

Nori NAKATA, University of Oklahoma

SE03-D2-PM1-321B-005 | SE03-A007 (Invited)

Significant Shear and Bulk Attenuation in the Tonga-Lau

Subduction System

Songqiao WEI^{1#+}, Douglas WIENS²
¹Michigan State University, ²Washington University

SE03-D2-PM1-321B-006 | SE03-A047

Local Sharpness and Multiplicity of the 660-km Discontinuities in Izu-Bonin and Kuril Sunduction Zones

Jinfeng HU¹⁺, Xiaobo HE^{1#}
¹Zhejiang University

SE03-D2-PM1-321B-007 | SE03-A017

Joint Inversion for the Lithospheric Structure in East Tibet

Yangfan DENG^{1‡+}, Zhigao YANG², Qiu ZHONG³, Jiangtao LI⁴
¹Guangzhou Institute of Geochemistry, Chinese Academy of Sciences
(GIGCAS), ²China Earthquake Networks Center, ³Chinese Academy of
Sciences, ⁴University of Illinois at Urbana-Champaign

SE03-D2-PM1-321B-008 | SE03-A048

Seismic Evidences for a Low-Velocity-Layer Existing at Depths of 90 - 110 Km in Northern Peru

Yixian ZHENG¹+, Xiaobo HE¹‡
¹Zhejiang University

SE03-D2-PM1-321B-009 | SE03-A013

On the Measurement and Interpretation of XKS Splitting

Parameters

Stephen GAO^{1‡+}, Kelly LIU¹

¹Missouri University of Science and Technology

SE03-D2-PM1-321B-010 | SE03-A032

Constraining Crack Properties with P- and S-Wave Anisotropy

Estimated from Ambient Noise Cross-Correlation Functions

Youcai $TANG^{1+}$, Fenglin $NIU^{1,2\pi}$, Kai TAO^1 , Di WU^1 , Guoliang LI^1 , Haichao CHEN 1

¹China University of Petroleum-Beijing, ²Rice University

SE03-D2-PM1-321B-011 | SE03-A031

Separation of Migration and Tomography Modes of

Full-Waveform Inverison

Di WU¹⁺, Gang YAO²⁺, Youcai TANG¹, Xiaojuan QIAO^{3,4}, Shuangquan CHEN¹

¹China University of Petroleum-Beijing, ²Imperial College London, ³University of Chinese Academy of Sciences, ⁴Chinese Academy of Sciences

SE04 / Dynamic System of Earth: Interactions from Surface to Core

Tue - 05 Jun | MR321B

Time 08:30 - 10:30

Chair(s) Takashi NAKAGAWA, JAMSTEC

Weijia KUANG, NASA-GSFC

SE04-D2-AM1-321B-009 | SE04-A025

Lower Mantle-Sourced Hotspot Trail within the

Australian-Antarctic Rift System

Sang-Bong YI^{1‡+}, Mi Jung LEE¹, Sung-Hyun PARK¹, Seung Hee HAN¹, Yun Seok YANG¹, Hakkyum CHOI¹
¹Korea Polar Research Institute

SE04-D2-AM1-321B-010 | SE04-A002

Simulation of PKP Phases from Coda Interferometry

Benjun WU^{1#+}, Tao WANG¹
¹Nanjing University

SE04-D2-AM1-321B-011 | SE04-A012

Towards Understanding Geomagnetic Secular Variations in

Numerical Dynamo Simulations with Thermal Heterogeneities

Caused by Plate-Mantle System

Takashi NAKAGAWA^{1#+}, Futoshi TAKAHASHI², Hisayoshi SHIMIZU³

¹Japan Agency for Marine-Earth Science and Technology, ²Kyushu University, ³The University of Tokyo

SE04-D2-AM1-321B-012 | SE04-A023

When Will the Earth's Magnetic Field Cease? Implications on Habitability

Weijia KUANG¹‡+, Hisayoshi SHIMIZU², Vladimir AIRAPETIAN³, Erwan MAZARICO¹,4, Antonio GENOVA⁵¹NASA Goddard Space Flight Center, ²The University of Tokyo, ³American University, ⁴Oak Ridge Associated Universities, ⁵Massachusetts Institute of Technology

SE04-D2-AM1-321B-013 | SE04-A022

Shear Softening of Earth's Inner Core Indicated by its High

Poisson's Ratio and Elastic Anisotropy

Zhongqing WU^{1‡+}, Wenzhong WANG¹
¹University of Science and Technology of China

SE04-D2-AM1-321B-014 | SE04-A014

Temporal Changes of the Inner Core Boundary from Waveform Doublets

Yi YANG¹⁺, Xiaodong SONG^{2,3‡}
¹University of Illinois Urbana-Champaign, ²U of Illinois
Urbana-Champaign / Wuhan U, ³Wuhan University

SE04-D2-AM1-321B-015 | SE04-A020 (Invited)

Carbon in Earth's Core: A Mineral Physics Perspective

Bin CHEN^{1#+}, Xiaojing LAI¹
¹University of Hawaii at Manoa

SE11-13 / Nankai Trough Seismogenic Zone Experiment and Related Studies of Tectonics in the Western Pacific

Tue - 05 Jun | MR314

Time 08:30 - 10:30

Chair(s) Masataka KINOSHITA, University of Tokyo

Keir BECKER, University of Miami

SE11-13-D2-AM1-314-001 | SE11-13-A005

Initial Results of IODP NanTroSeize Expedition 380: Borehole Observatory Installation at the Frontal Thrust of the Nankai

Keir BECKER^{1‡+}, Masataka KINOSHITA², Sean TOCZKO³, Toshinori KIMURA³, Yuya MACHIDA³, Alexander ROESNER⁴, Tianhaozhe SUN⁵, Joshua EDGINGTON⁶, Burhan SENYENER⁴ ¹University of Miami, ²The University of Tokyo, ³Japan Agency for Marine-Earth Science and Technology, ⁴University of Bremen, ⁵Pennsylvania State University, ⁶Texas A&M University

SE11-13-D2-AM1-314-002 | SE11-13-A007 (Invited)

Revisit to Frontal Thrust and Splay Fault Activity of the Nankai Accretionary Prism Off the Kii Peninsula and

IODP-NantroSEIZE Exp. 358

Gaku KIMURA1#+, Harold TOBIN2

¹Tokyo University of Marine Science and Technology, ²University of Wisconsin-Madison

SE11-13-D2-AM1-314-003 | SE11-13-A011

New Aspects of Detailed Structures in the Nankai Trough

Seismogenic Zone Revealed by Improved 3D Seismic Images

Kazuya SHIRAISHI¹, Yasuhiro YAMADA¹, Masataka KINOSHITA², Yoshinori SANADA¹, Gaku KIMURA³, Gregory MOORE⁴

¹Japan Agency for Marine-Earth Science and Technology, ²The University of Tokyo, ³Tokyo University of Marine Science and Technology, ⁴University of Hawaii at Manoa

SE11-13-D2-AM1-314-004 | SE11-13-A004

Zone Off Kumano

Geometrical Dependence on the Stress and Slip Tendency Acting on the Subduction Megathrust of Nankai Seismogenic

Masataka KINOSHITA^{1#+}, Kazuya SHIRAISHI², Yoshitaka HASHIMOTO³, Weiren LIN^{2,4}

¹The University of Tokyo, ²Japan Agency for Marine-Earth Science and Technology, ³Kochi University, ⁴Kyoto University

SE11-13-D2-AM1-314-005 | SE11-13-A002 (Invited)

Temporal Changes of Pore Fluid Pressure During Seismic

Cycles Around Megasplay Fault in Subduction Zones

Makoto OTSUBO^{1‡+}, Jeanne L. HARDEBECK², Ayumu MIYAKAWA¹, Asuka YAMAGUCHI³, Gaku KIMURA⁴ ¹National Institute of Advanced Industrial Science and Technology, ²United States Geological Survey, ³The University of Tokyo, ⁴Tokyo

University of Marine Science and Technology

SE11-13-D2-AM1-314-006 | SE11-13-A009 (Invited)

Stress Measurements in Seismogenic Zone: Dependence of Stress Change Patterns Accompanied with Earthquakes on

Locations

Weiren LIN^{1,2‡+}, Kiyotoshi SAKAGUCHI³
¹Kyoto University, ²Japan Agency for Marine-Earth Science and Technology, ³Tohoku University

SE11-13-D2-AM1-314-007 | SE11-13-A008

Paleo-Stress Orientations and Magnitudes from Triaxial Testing and Stress Inversion Analysis in Nankai Accretionry Prism Sediments

Yoshitaka HASHIMOTO $^{1\sharp *}$, Michael STIPP² , Jon LEWIS³ , Frank WUTTKE 4

¹Kochi University, ²University of Innsbruck, ³Indiana University of Pennsylvania, ⁴University of Kiel

Time 11:00 - 12:30

Chair(s) Kyuichi KANAGAWA, Chiba University

Yi-Ching YEH, National Central University

SE11-13-D2-AM2-314-008 | SE11-13-A010

Paleothermal Structure Related to Tectonic Process at the Shikoku Basin on Incoming Plate in the Nankai Inner Accretionary Wedge

Rina FUKUCHI¹²⁺, Asuka YAMAGUCHI², Hisatoshi ITO³, Yuzuru YAMAMOTO⁴, Juichiro ASHI²

¹Atmosphere and Ocean Reseach Institute/ The University of Tokyo, ²The University of Tokyo, ³Central Research Institute of Electric Power Industry, ⁴Japan Agency for Marine-Earth Science and Technology

SE11-13-D2-AM2-314-009 | SE11-13-A006

Expectations for the Deep Megasplay Fault Zone at the Nankai Trough Based on Mechanical Properties of Shallow

Nantroseize Samples

Matt IKARI $^{1\#}$, Alexander ROESNER 1 , Demian SAFFER 2 , Andre HUEPERS 1 , Achim KOPF 1

¹University of Bremen, ²The Pennsylvania State University

SE11-13-D2-AM2-314-010 | SE11-13-A014

Three-Dimensional Mapping and Kinematic Characterization of Mass Transport Deposits Along the Outer Kumano Basin and Nankai Accretionary Wedge, Southwest Japan

Jason LACKEY^{1#+}, Gregory MOORE¹
¹University of Hawaii at Manoa

SE11-13-D2-AM2-314-011 | SE11-13-A019

Submarine Tectonic Activities and Canyon Erosion Interactive

Slope Failures in the Kaoping Slope Area

Yi-Ching YEH^{1‡+}, Chung-Lin TSAI¹, Jing-Fu GAO¹, Yen-Yu CHO¹, Chin-Wei LIANG¹, Shu-Kun HSU¹

¹National Central University

SE11-13-D2-AM2-314-012 | SE11-13-A020

ICT Seafloor Cabled Seismic and Tsunami Observation

System Off Sanriku, Japan

Masanao SHINOHARA^{1‡+}, Tomoaki YAMADA¹, Shin'ichi SAKAI¹, Hajime SHIOBARA¹, Toshihiko KANAZAWA²
¹The University of Tokyo, ²Association for the Development of Earthquake Prediction

SE11-13-D2-AM2-314-013 | SE11-13-A017

Crustal Velocity Structures Across the Taiwan Strait Analyzed from MCS and OBS Data

Tan K. WANG^{1,*}, Jing WANG¹, Yu Hsuan CHENG¹, Ren Jie WEI¹, Zhi Zhao XIE², Yi Feng ZHANG²

¹National Taiwan Ocean University, ²Fujian Earthquake Agency

SE16 / Recent Advances in Understanding Mountain Building Processes: Methodology, Observations, Models and Implications

Tue - 05 Jun | MR321B

Time 16:00 - 18:00

Chair(s) Chih-Tung CHEN, National Central University

Kazuaki OKAMOTO, Saitama University

SE16-D2-PM2-321B-001 | SE16-A018 (Invited)

Complex Plate Configuration and Deformation in Taiwan

Orogeny

Francis WU1#+

¹Binghamton University

SE16-D2-PM2-321B-002 | SE16-A005

Documenting the Plastic-To-Brittle Exhumation History of the

Metamorphic Core of Taiwan

Jon LEWIS1#+, Michael CHOJNACKI2

¹Indiana University of Pennsylvania, ²University of Connecticut

SE16-D2-PM2-321B-003 | SE16-A002

Dynamic Wedge Evolution of the Taiwan Mountain Belt Revealed in Cleavage Formation Age and Rock Thermal History

Chih-Tung CHEN^{1#+}, Yu-Chang CHAN², Ching-Hua LO³, Chia-Yu LU³

¹National Central University, ²Academia Sinica, ³National Taiwan University

SE16-D2-PM2-321B-004 | SE16-A015

Fabric Analysis and Deformation History of Metamorphic Belt and Their Tectonic Implications of the Tananao Complex,

Taiwan

Wei LO¹, Gong-Ruei HO²*+, Wen-Jenq LEE¹¹National Taipei University of Technology, ²National Central University

SE16-D2-PM2-321B-005 | SE16-A001

The Influence of Fluvial Incision on Fault Activities in the Central Segment of the Longmenshan Thrust Belt, Eastern Tibetan Plateau

Xi-Bin TAN1#+

¹China Earthquake Administration

SE16-D2-PM2-321B-006 | SE16-A010 (Invited)

1.74 Ga Felsic Magmatism Formed via Crustal Melting: Investigation of Mylonitic Orthogneisses in the Frontal Zone of the Kathmandu Complex, Central Nepal

Takeshi IMAYAMA1#+, Kazunori ARITA2, Mayuko FUKUYAMA3, Keewook YI4, Ryoichi KAWABATA1 ¹Okayama University of Science, ²Hokkaido University, ³Akita University, 4Korea Basic Science Institute

SE16-D2-PM2-321B-007 | SE16-A020

Dehydration and Deformation Process of Subducted Jurassic Large Oceanic Pleateau - Case Study of the Mikabu Blueschist, Central Shikoku, Japan

Kazuaki OKAMOTO^{1,2#+}

¹Saitama University, ²Tokyo Gakugei University

SE16-D2-PM2-321B-008 | SE16-A003

Magmatic Response to the Interplay of Collisional and Accretionary Orogenies in the Korean Peninsula: Geochronological, Geochemical, and O-Hf Isotopic Evidence from Triassic Plutons

Albert Chang-Sik CHEONG^{1#+}, Hui Je JO¹, C.B. IM² ¹Korea Basic Science Institute, ²

SE21 / Bridging Observations from Geology and **Geodesy to Understand Tectonic Deformation Over Multiple Timescales**

Tue - 05 Jun | MR321A

Time 08:30 - 10:30

Chair(s) Tadafumi OCHI, Geological Survey of Japan, National

> Institute of Advanced Industrial Science and Technology Yu-Nung Nina LIN, Nanyang Technological University

SE21-D2-AM1-321A-001 | SE21-A003

Post-Seismic Deformation of the 2010 Mw 6.9 Yushu, Tibetan Plateau, Earthquake: Geodetic Observations and Modeling Guojie MENG1#+

¹Institute of Earthquake Forecasting, China Earthquake Administration

SE21-D2-AM1-321A-002 | SE21-A002

Localized Deformation Following the April 2016 Kumamoto, Japan, Earthquake Detected by InSAR Manabu HASHIMOTO1#+ ¹Kyoto University

SE21-D2-AM1-321A-003 | SE21-A006 (Invited)

Geology, Kinematic Model and Mechanical Properties on the 3-D Fault Patch of the Rapid Creeping Chihshang Fault: A

Plate Suture Between Luzon Arc and Eurasia in Eastern Taiwan

Jian-Cheng LEE1#+, Chung-Hsiang MU1, Wen-Jeng HUANG2, Zac Yung-Chun LIU3, Manoochehr SHIRZAEI4

¹Academia Sinica, ²National Central University, ³Brigham Young University, ⁴Arizona State University

SE21-D2-AM1-321A-004 | SE21-A024

Effects of Lateral Rheological Heterogeneities on the Far-Field Viscoelastic Postseismic Deformation of the 2011 Tohoku Earthquake

Yan HU1#+, Min WANG2, Bin ZHAO2, Kelin WANG3 ¹University of Science and Technology of China, ²China Earthquake Administration, ³Geological Survey of Canada

SE21-D2-AM1-321A-005 | SE21-A023

Joint Interpolation of 3-Component GPS Velocities Constrained by Elasticity

Leonardo UIEDA1#+, David SANDWELL2, Paul WESSEL1 ¹University of Hawaii at Manoa, ²University of California San Diego

SE21-D2-AM1-321A-006 | SE21-A018

From Decadal Geodetic Time Series and Velocity Fields to High Rate Data Streams and Coseismic Peak Ground Displacements: GNSS Data from the Earthscope Plate

Boundary Observatory (PBO) and Other Regional Networks

David PHILLIPS1#+, Thomas HERRING2, David MENCIN1, Kathleen HODGKINSON1, Tim MELBOURNE3, Mark MURRAY4, Walter SZELIGA3, Christine PUSKAS1, Glen MATTIOLI1, Charles MEERTENS1

¹UNAVCO, ²Massachusetts Institute of Technology, ³Central Washington University, 4New Mexico Tech

SE21-D2-AM1-321A-007 | SE21-A017

Comparing Surface Features, Slip and Seismicity at Multiple Time and Space Scales After the South Napa Earthquake with

the GeoGateway Data Portal and Toolset Interface

Jay PARKER1#+, Andrea DONNELLAN1, Mike HEFLIN1, Robert GRANAT1, Marlon PIERCE2, Jun WANG2, Lisa GRANT-LUDWIG3, John B. RUNDLE4

¹Jet Propulsion Laboratory, California Institute of Technology, ²Indiana University, ³University of California, Irvine, ⁴University of California, Davis

SE21-D2-AM1-321A-008 | SE21-A010 (Invited)

Spatial Variation of Slip Behavior Beneath the Alaska Peninsula Along Aleutian Subduction Zone, and Relation to Seafloor Fabric, Hydration and Subduction Seismicity Shanshan LI1#, Jeff FREYMUELLER1+ ¹University of Alaska Fairbanks

Time 11:00 - 12:30

Chair(s) Aron MELTZNER, Nanyang Technological University

Emma HILL, Earth Observatory of Singapore

SE21-D2-AM2-321A-009 | SE21-A009

Plate Dynamics Near Divergent Boundaries: Recurring Rifting Episodes at the Okinawa Tough and Present-Day Crustal

Movements in SW Ryukyu Arc Kosuke HEKI^{1#+}, Yutaro IWASA¹

¹Hokkaido University

SE21-D2-AM2-321A-010 | SE21-A015

Temporal Change in the Interplate Coupling in the Tokai Region, Central Japan, over the Last 30 Years

Tadafumi OCHI1#+

¹National Institute of Advanced Industrial Science and Technology

SE21-D2-AM2-321A-011 | SE21-A020 (Invited)

Tectonic Deformation over Multiple Timescales Along the

Hikurangi Subduction Margin, New Zealand

Nicola LITCHFIELD^{1‡+}, Laura WALLACE¹, Ursula COCHRAN¹, Sigrún HREINSDÓTTIR¹, Kate CLARK¹, Ian HAMLING¹
¹GNS Science

SE21-D2-AM2-321A-012 | SE21-A021

Relative Sea-Level Changes Recorded by Coral Microatolls Above the Manila Trench in Ilocos Region (West Luzon,

Philippines)

Jennifer WEIL-ACCARDO¹, Aron MELTZNER¹²⁺, Noelynna RAMOS², Kathrine MAXWELL², Ke LIN¹, Yanbin LU¹, Xianfeng WANG¹, Peter PARHAM¹

¹Nanyang Technological University, ²University of the Philippines Diliman

SE21-D2-AM2-321A-013 | SE21-A007 (Invited)

Making the Connection Between Paleogeodesy Observations and the Megathrust Earthquake Cycle: The Role of Geodynamic Models

Kevin P. FURLONG^{1‡+}, Matthew HERMAN², Rob GOVERS² ¹Penn State University, ²Utrecht University

SE22-35 / Earthquakes, Fault Ruptures and Seismic Hazards in Southeast and East Asia and Selected Sedimentary Basins

Tue - 05 Jun | MR314

Time 13:30 - 15:30

Chair(s) Chung-Han CHAN, Earth Observatory of Singapore

SE22-35-D2-PM1-314-022 | SE22-35-A007

Nowcasting Earthquakes and Tsunamis

John B. RUNDLE $^{1\sharp*}$, Donald TURCOTTE 1 , Andrea DONNELLAN 2

¹University of California, Davis, ²Jet Propulsion Laboratory, California Institute of Technology

SE22-35-D2-PM1-314-023 | SE22-35-A015

Toward Uniform Probabilistic Seismic Hazard Assessments for Southeast Asia

Chung-Han CHAN¹**, Yu WANG^{1,2}, Xuhua SHI¹, Teraphan ORNTHAMMARATH³, Pennung WARNITCHAI⁴, Suwith KOSUWAN⁵, Myo THANT^{6,7}, Hong Phuong NGUYEN⁸, Le Minh NGUYEN⁸, Renato SOLIDUM⁹, Masyhur IRSYAM¹⁰, Sri HIDAYATI¹¹, Kerry SIEH¹

¹Nanyang Technological University, ²National Taiwan University, ³Mahidol University, ⁴Asian Institute of Technology, ⁵Department of Mineral Resources, ⁶Monywa University, ⁷Myanmar Earthquake Committee, ⁸Vietnam Academy of Science and Technology, ⁹Philippine Institute of Volcanology and Seismology (PHIVOLCS), ¹⁰Bandung Institute of Technology, ¹¹Geological Agency of Indonesia

SE22-35-D2-PM1-314-024 | SE22-35-A016

Seismic Hazard Assessment Using Geotechnical Characteristics and GIS in Busan City, Korea

Hyunjee LIM^{1‡+}, Rae-Yoon JEONG¹, Seongjun LEE¹, Moon SON¹
¹Pusan National University

SE22-35-D2-PM1-314-025 | SE22-35-A063 (Invited)

Seismology and Earthquake Hazard in the Kanto Basin, Japan Kazuki KOKETSU $^{1\sharp +}$

¹The University of Tokyo

SE22-35-D2-PM1-314-026 | SE22-35-A056

VS30 Empirical Prediction Relationships for the Beijing Plain Area, China

Junju XIE^{1*+}, Paolo ZIMMARO², Xiaojun LI³, Zengping WEN³
¹Institute of Geophysics, China Earthquake Administratioin,
²University of California, Los Angeles, ³Chinese Academy of Sciences

SE22-35-D2-PM1-314-027 | SE22-35-A051

Developing Site Conditions Map of Myanmar for Seismic

Hazard Assessment

Myo THANT^{1,2}, Saw Myat MIN², Ei Mhon Nanthar MYO², Kyaw Zin WIN3, Shinichi MATSUSHIMA4, Chung-Han CHAN5, Soe Thura TUN2, Hiroshi KAWASE4

¹Monywa University, ²Myanmar Earthquake Committee, ³Myanmar Environmental Institute, 4Kyoto University, 5Nanyang Technological University

Time 16:00 - 18:00

Chair(s) Xin WANG, Earth Observatory of Singapore

SE22-35-D2-PM2-314-028 | SE22-35-A069

Multi-Modal Response Spectra Due to Sedimentary Basins and

Their Implications for Hazard

Surendra Nadh SOMALA1#+

¹Indian Institute of Technology Hyderabad

SE22-35-D2-PM2-314-029 | SE22-35-A040

Measurement and Modeling of Ground Motions in Myanmar

for Seismic Hazard Assessment

Yin Myo Min HTWE¹, Tun Lin KYAW¹, Pa Pa TUN¹, Su Hninn HTWE1, Khaing Mar Lar WAI1, Emily WOLIN2#+, Susan HOUGH²

¹Department of Meteorology and Hydrology, ²United States Geological Survey

SE22-35-D2-PM2-314-030 | SE22-35-A059

The Effect of Source Spectral Characteristics and Directivity on the Ground Shaking in Mexico City from the 2017 MW 7.1

Puebla Earthquake

Lingling YE1,2#+, Hiroo KANAMORI3, Thomas HEATON3 ¹Earthquake Research Institute, The University of Tokyo, ²Sun Yat-sen University, ³California Institute of Technology

SE22-35-D2-PM2-314-031 | SE22-35-A062

Site Amplification of the Strong-Motion Stations in Taiwan

Derived from Their Shallow Shear-Wave Velocity Structures

Che-Min LIN1#+, Chun-Hsiang KUO1, Jyun-Yan HUANG2, Chun-Te CHEN3, Kuo-Liang WEN1

¹National Applied Research Laboratories, ²National Center for Research on Earthquake Engineering, 3Academia Sinica

SE22-35-D2-PM2-314-032 | SE22-35-A066

The Effects of Sedimentary Basins on Ground Shaking

Amplitude: Examples from the Los Angeles Basin

Stephen GAO1#+, Kelly LIU1, Paul DAVIS2

¹Missouri University of Science and Technology, ²University of California, Los Angeles

SE22-35-D2-PM2-314-033 | SE22-35-A061

Ambient Noise Seismology, Structure and Ground Motion of

the Jakarta Basin, Indonesia

Phil CUMMINS^{1#}, Athanasius CIPTA²⁺, Erdinc SAYGIN³, Sri WIDIYANTORO4, Masyhur IRSYAM4

¹Australian National University, ²Geological Agency, ³Commonwealth Scientific and Industrial Research Organisation, 4Bandung Institute of Technology

SE22-35-D2-PM2-314-034 | SE22-35-A017

Implementations of Three-Dimensional Curved Grid Finite-Difference Method for Non-Planar Rupture Dynamics

and Seismic Wave Propagation on GPU Devices

Zhengbo LI1#+, Xiaofei CHEN2

¹University of Science and Technology of China, ²Southern University of Science and Technology

SE22-35-D2-PM2-314-035 | SE22-35-A046

Preliminary Results of Dynamic Rupture Simulation of the

2016 Kumamoto, Japan, Earthquake Sequence

Houyun YU1,2#+, Zhenguo ZHANG2, Xiaofei CHEN2, Kazuya ISHIKAWA3, Tatsuro ARAI3, Hongjun SI4

¹University of Science and Technology of China, ²Southern University of Science and Technology, 3Tohoku-Electric Power Co., Inc., ⁴Seismological Research Institute Inc.

SE31-07 / Cenozoic Crustal Deformation, Surface Processes, and Earthquake Hazards of the Qinghai-Tibetan Plateau and Adjacent Regions, with a 10-year Review of the 2008 Wenchuan Earthquake

Tue - 05 Jun | MR319B

08:30 - 10:30 Time

Chair(s) J. Bruce H. SHYU, National Taiwan University

Xiwei XU, China Earthquake Administration

SE31-07-D2-AM1-319B-001 | SE31-07-A029

Earthquake Hazards Related to Active Faults and Mitigation

Actions in China

Xiwei XU1#+, Guihua YU1, Xiyan WU1 ¹China Earthquake Administration

SE31-07-D2-AM1-319B-002 | SE31-07-A030

Three-Dimensional Coseismic Deformation from Large Thrust

Earthquakes on the Edges of the Tibetan Plateau

Eric FIELDING^{1#+}, Mong-Han HUANG², Cunren LIANG³, Brent MINCHEW⁴, Simran SANGHA⁵

¹Jet Propulsion Laboratory, California Institute of Technology, ²University of Maryland College Park, ³California Institute of Technology, 4Massachusetts Institute of Technology, 5University of California, Los Angeles

SE31-07-D2-AM1-319B-003 | SE31-07-A027 (Invited)

Did the 2008 Mw 7.9 Wenchuan Earthquake Really Rupture the Qiangchuan Fault

Bihong FU^{1#+}, Jiaxin DU¹
¹Chinese Academy of Sciences

SE31-07-D2-AM1-319B-004 | SE31-07-A022

Relocation of Mainshock and Aftershock Sequence of Ms7.0

Sichuan Jiuzhaigou Earthquake

Lihua FANG^{1±+}, Jianping WU²
¹Institute of Geophysics, China Earthquake Administration, ²China Earthquake Administration

SE31-07-D2-AM1-319B-005 | SE31-07-A025

Coseismic Displacement of the 2017 Ms 6.9 Jiuzhaigou Earthquake Constraint by Sentinel-1A Radar Images, West Sichuan, China: New Implications for the Termination Partitioning Along the East Kunlun Fault

Zhe SU^{1‡+}, Yongsheng LI², Jyr-Ching HU³, Yinghui YANG⁴
¹Institute of Crustal Dynamics, China Earthquake Administration,
²China Earthquake Administration,
³National Taiwan University,
⁴Southwest Petroleum University

SE31-07-D2-AM1-319B-006 | SE31-07-A018

Late Quaternary Slip Behavior of the Yushu Fault and the 2010 Ms 7.1 Yushu Earthquake, Eastern Tibetan Plateau

Chuanyou LI^{1#+}, Lixing LV¹
¹China Earthquake Administration

SE31-07-D2-AM1-319B-007 | SE31-07-A006 (Invited)

A Panorama of Landslides Triggered by the Gorkha (Nepal) Mw7.8 Earthquake of 25 April 2015

Chong XU1#+

¹China Earthquake Administration

Time 11:00 - 12:30

Chair(s) Bihong FU, Chinese Academy of Sciences

Honglin HE, China Earthquake Administration

SE31-07-D2-AM2-319B-008 | SE31-07-A021 (Invited)

Paleoearthquake History Along the Southern Segment of the Daliangshan Fault Zone in the Southeastern Tibetan Plateau and its Implications

Honglin HE $^{1\pm}$, Yasutaka IKEDA 2 , Zhanyu WEI 1 , Feng SHI 1 , Haoyue SUN 1 , Tomoo ECHIGO 3 , Shisuke OKADA 4 , Yoshiki SHIRAHAMA 5

¹China Earthquake Administration, ²Nara University, ³Geo-Research Institute, ⁴Tohoku University, ⁵Geological Survey of Japan

SE31-07-D2-AM2-319B-009 | SE31-07-A005

Late Cretaceous to Cenozoic Exhumation of the Fuping
Complex, Trans-North China Orogen: New Insights from
Apatite and Zircon (U-Th-[Sm])/He and Apatite Fission Track
Analyses

Jian CHANG^{1‡+}, Nansheng QIU¹
¹China University of Petroleum-Beijing

SE31-07-D2-AM2-319B-010 | SE31-07-A023

Cenozoic Tectonic Evolution of Shanxi Graben System: Evidence from Planation Surfaces and Low-Temperature Thermochronology

Peng SU^{1‡+}, Honglin HE², Xi-Bin TAN², Feng SHI²
¹Institute of Geology, China Earthquake Administration, ²China Earthquake Administration

SE31-07-D2-AM2-319B-011 | SE31-07-A001

Recent Ground Fissures in the Hetao Basin, Inner Mongolia, China

Zhongtai HE1#+

 $^1 Institute\ of\ Crustal\ Dynamics,\ China\ Earthquake\ Administration$

SE31-07-D2-AM2-319B-012 | SE31-07-A004

Strike-Slipping Analogue Experiment with a Curvature

Basement-Fault System

Bin DENG1#+

¹Chengdu University of Technology

Time 13:30 - 15:30

Chair(s) Guihua CHEN, China Earthquake Administration

SE31-07-D2-PM1-319B-013 | SE31-07-A013

Multiple-Stage Growth of the Tibetan Plateau: Insights from Geodynamic Modeling

Mian LIU1,2#+, Yujun SUN2

¹University of Missouri, ²Chinese Academy of Sciences

SE31-07-D2-PM1-319B-014 | SE31-07-A016

Cenozoic Tectonic Evolution of the Eastern Tibetan Plateau:

New Insights from Analogue Modeling

Ming SUN1#+

¹China University of Geosciences(Beijing)

SE31-07-D2-PM1-319B-015 | SE31-07-A024

The Lithospheric Growth of Northern Tibetan Plateau from P and S Receiver Functions

Chen ZHANG¹⁺, Zhen GUO^{1#}, John CHEN²

¹Southern University of Science and Technology, ²Peking University

SE31-07-D2-PM1-319B-016 | SE31-07-A007

Holocene Record of Surface-Rupturing Earthquakes on the Laohushan Fault of the Haiyuan Fault System, China

Guihua CHEN1#+, Kang LI2, Xiwei XU1

¹China Earthquake Administration, ²Institute of Geology, China Earthquake Administration

SE31-07-D2-PM1-319B-017 | SE31-07-A002

Activity and its Implication at the Southern Segment of the Xiaojiang Fault, Southeastern Tibetan Plateau, China Zhujun HAN $^{\rm 1F+}$

¹China Earthquake Administration

SE31-07-D2-PM1-319B-018 | SE31-07-A020

Geometry and Kinematics Characteristics of Normal Faults in

Central-Southern Tibetan Plateau

Zhonghai WU1#+, Guanghao HA1

¹Institute of Geomechanics, Chinese Academy of Geological Sciences

SE31-07-D2-PM1-319B-019 | SE31-07-A019

Current Movements of Red River Fault by GPS Measurements

Jicang $WU^{1\#+}$, Jiexian $WANG^1$, Weiwei WU^1

¹Tongji University

Time 16:00 - 18:00

Chair(s) Fuqiong HUANG, China Earthquake Network Center

Zhong-qi Quentin YUE, The University of Hong Kong

SE31-07-D2-PM2-319B-020 | SE31-07-A036 (Invited)

Tectonic Cycle and Crustal Architecture Model of

Longmenshan Mountains Intra-Continental Orogenic Belt,

Southwest China

Dengfa HE1#+

¹China University of Geosciences

SE31-07-D2-PM2-319B-021 | SE31-07-A042 (Invited)

Determination of Seismic Energy and Magnitudes for the 2008

Wenchuan Earthquake

Ruifeng LIU1#+

 $^1 Institute\ of\ Geophysics,\ China\ Earthquake\ Administration$

SE31-07-D2-PM2-319B-022 | SE31-07-A034

A 10 Year Investigation of the Gas Cause of Wenchuan

Earthquake

Zhongqi Quentin YUE1#+

¹The University of Hong Kong

SE31-07-D2-PM2-319B-023 | SE31-07-A037

Crustal Structure of the Central Longmenshan Fault Zone:

Constraint on Wide-Angle Seismic Data

Xiaofeng TIAN^{1#+}, Fuyun WANG¹, Baofeng LIU¹

¹China Earthquake Administration

SE31-07-D2-PM2-319B-024 | SE31-07-A039

Is the Co-Seismic Effect of 2008 Wenchuan Mw7.9 Earthquake

Detectable by GRACE?

Jin LI^{1#+}, Jianli CHEN², Lu TANG¹, Xiaogong HU¹

¹Chinese Academy of Sciences, ²The University of Texas at Austin

SE31-07-D2-PM2-319B-025 | SE31-07-A035

Study on the Red River Faults Based on the Double-Difference

Seismic Tomography

Yanna ZHAO1#+, Fuyun WANG1, Yong Hong DUAN1

¹China Earthquake Administration

SE31-07-D2-PM2-319B-026 | SE31-07-A040

Experimental Study of Stick-Slip Instability in Earthquake

Faults: implications for the Multiple Rupture Propagation of

the 2008 Ms 8.0 Wenchuan Earthquake in China

Lingli GUO^{1#+}, Liqiang LIU², Yuntao JI², Sanzhong LI¹

¹Ocean University of China, ²China Earthquake Administration

SE31-07-D2-PM2-319B-027 | SE31-07-A043

The Temperature Changes Before and After the 2008

Wenchuan Earthquake Process and Their Implication to

Continental Tectonic

Fuqiong HUANG1#+

¹China Earthquake Network Center

SS03 / Science Driven E-infrastructures and Data Management in Support of Geosciences Research

Tue - 05 Jun | MR317A

Time 13:30 - 15:30

Chair(s) Yue-Gau CHEN, National Taiwan University

Ming-Hsu LI, National Central University

SS03-D2-PM1-317A-001 | SS03-A005 (Invited)

The Belmont Forum E-Infrastructure and Data Management

Project

Robert SAMORS1#+

¹Belmont Forum

SS03-D2-PM1-317A-002 | SS03-A007 (Invited)

Science-Driven E-Infrastructure Innovation for Enabling

Transnational Data Use in Interdisciplinary and

Transdisciplinary Environmental Change Research: A New

Belmont Forum Funding Collaborative Research Action

Jean-Pierre VILOTTE1#+, Ming-Hsu LI2

¹Institut de Physique du Globe de Paris, ²National Central University

SS03-D2-PM1-317A-003 | SS03-A004 (Invited)

Taiwan Earthquake Research Data Center (TECDC)

Wen-Tzong LIANG1#+

¹Academia Sinica

SS03-D2-PM1-317A-004 | SS03-A008 (Invited)

Taiwan Climate Change Information and Knowledge Service Platform

Lee-Yaw LIN¹, Chao-Tzuen CHENG¹⁵+, Huang-Hsiung HSU², Cheng-Ta CHEN³

¹National Science and Technology Center for Disaster Reduction,

²Academia Sinica, ³National Taiwan Normal University

SS03-D2-PM1-317A-005 | SS03-A001 (Invited)

Potential of Conservation Agriculture Production Systems (CAPS) as Climate Smart Technology for Food Security Under Rainfed Uplands of India: A Transdisciplinary Approach

Catherine CHAN1#+

¹University of Hawaii

SS09 / Volcanoes: Nature, Influence, Impact

Tue - 05 Jun | MR323C

Time 13:30 - 15:30

Chair(s) Kazuhisa GOTO, Tohoku University

Florian Max SCHWANDNER, NASA Jet Propulsion

Laboratory

SS09-D2-PM1-323C-001 | SS09-A007 (Invited)

What Life in Volcanic Environments Tells us About the

Emergence of Life and Life Elsewhere

Mitchell SCHULTE^{1#+}

¹National Aeronautics and Space Administration

SS09-D2-PM1-323C-002 | SS09-A001 (Invited)

Lava Lakes in the Solar System

Rosaly LOPES $^{1s+}$, Jani RADEBAUGH 2 , Tracy GREGG 3 , Robert HOWELL 4 , Andrew HARRIS 5

¹Jet Propulsion Laboratory, California Institute of Technology, ²Brigham Young University, ³University at Buffalo, ⁴University of

Wyoming, 5Blaise Pascal University

SS09-D2-PM1-323C-003 | SS09-A013 (Invited)

The Role of the Ocean in Modulating the Dynamics of Silicic Submarine Volcanic Eruptions

Rebecca CAREY¹⁵⁺, Adam SOULE², Michael MANGA³, Richard FISKE⁴, Kenichiro TANI⁵, Kristen FAURIA³, Raymond CAS⁶, Jocelyn MCPHIE¹, Christina LIN³, Sam MITCHELL⁷, Meghan JONES², Chris CONWAY⁵, Wim DEGRUYTER⁸, Behnaz HOSSEINI³, Ryan CAHALAN⁹, James WHITE¹⁰, Martin JUTZELER¹, Richard WYSOCZANSKI¹¹, Bruce HOUGHTON⁷, Yoshihiko TAMURA¹², Iona MCINTOSH¹², Sharon ALLEN¹ ¹University of Tasmania, ²Woods Hole Oceanographic Institute, ³University of California, Berkeley, ⁴Smithsonian Organisation, ⁵National Museum of Nature and Science, ⁶Monash University, ⁷University of Hawaii, ⁸Cardiff University, ⁹Georgia Tech, ¹⁰University of Otago, ¹¹New Zealand Institute for Water and Atmospheric Research, ¹²Japan Agency for Marine-Earth Science and Technology

SS09-D2-PM1-323C-004 | SS09-A005 (Invited)

Dynamics of Water-Volcano Interactions

Steve INGEBRITSEN1#+

¹United States Geological Survey

SS09-D2-PM1-323C-005 | SS09-A006 (Invited)

Volcanic Hazards: Improving the Science and Communication to the Public

Setsuya NAKADA1#+

¹National Research Institute for Earth Scinence and Disaster Resilience

SS09-D2-PM1-323C-006 | SS09-A004 (Invited)

Are Climate Scientists Ready to Observe and Model the Next Big Volcanic Eruption?

Alan ROBOCK1#+

¹Rutgers University

ST13 / Advances in Ionospheric Irregularity and Scintillation Studies

Tue - 05 Jun | MR323C

Time 08:30 - 10:30

Chair(s) Yuichi OTSUKA, Nagoya University

Guozhu LI, Chinese Academy of Sciences

ST13-D2-AM1-323C-001 | ST13-A006

Nighttime Medium-Scale Traveling Ionospheric Disturbances from Airglow Imager and Global Navigation Satellite Systems Observations

Fuqing HUANG¹, Jiuhou LEI¹‡, Xiankang DOU¹, Xiaoli LUAN¹, Jiahao ZHONG¹+

¹University of Science and Technology of China

ST13-D2-AM1-323C-002 | ST13-A020

Satellite Detection of Medium-Scale Traveling Ionospheric

Disturbances

Woo Kyoung LEE1**, Hyosub KIL², Jaeheung PARK¹, Young-Sil KWAK¹, Larry PAXTON²

¹Korea Astronomy and Space Science Institute, ²The Johns Hopkins University Applied Physics Laboratory

ST13-D2-AM1-323C-003 | ST13-A010 (Invited)

GPS Phase Scintillation and Auroral Electrojet Currents

During Geomagnetic Storms

Paul PRIKRYL^{1‡*}, Reza GHODDOUSI-FARD², Knut S. JACOBSEN³, Ari VILJANEN⁴, James WEYGAND⁵, Donald DANSKIN², P. T. JAYACHANDRAN¹, Bharat KUNDURI⁶, Yngvild L. ANDALSVIK³, Martin CONNORS⁷, Tibor DURGONICS⁸

¹University of New Brunswick, ²Natural Resources Canada, ³Norwegian Mapping Authority, ⁴Finnish Meteorological Institute, ⁵University of California, Los Angeles, ⁶Virginia Tech, ⁷Athabasca University, ⁸Technical University of Denmark

ST13-D2-AM1-323C-004 | ST13-A014 (Invited)

Ionospheric Scintillation Observations by Using GEO Satellite

Signals over Low Latitude

Baiqi NING^{1#+}, Lianhuan HU¹ ¹Chinese Academy of Sciences

ST13-D2-AM1-323C-005 | ST13-A021

Mid-Latitude Plasma Bubbles over China and Adjacent Areas

During a Magnetic Storm on 08 September 2017

Ercha A
A $^{1,2\sharp *},$ Siqing LIU $^{\!\scriptscriptstyle 1},$ Aaron RIDLEY
 $^{\!\scriptscriptstyle 2},$ Wengeng HUANG $^{\!\scriptscriptstyle 1},$ Shasha ZOU
 $^{\!\scriptscriptstyle 2}$

¹Chinese Academy of Sciences, ²University of Michigan

ST13-D2-AM1-323C-006 | ST13-A028 (Invited)

Study of the Zonal Structure of Equatorial Plasma Bubbles

Hyosub KIL $^{1\sharp *},$ Larry PAXTON $^{1},$ Woo Kyoung LEE $^{2},$ Young-Sil KWAK 2

¹The Johns Hopkins University Applied Physics Laboratory, ²Korea Astronomy and Space Science Institute

ST13-D2-AM1-323C-007 | ST13-A030 (Invited)

Ionospheric Irregularities Characterization by Ground-Based

and Space-Borne GPS Observations

Irina ZAKHARENKOVA^{1,2#+}, Iurii CHERNIAK³

¹University of Warmia and Mazury, ²Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, ³National Center for Atmospheric Research Time 16:00 - 18:00

Chair(s) Brett CARTER, SPACE Research Centre School of Science

RMIT University

ST13-D2-PM2-323C-008 | ST13-A022

Strong Sporadic E Occurrence Detected by Ground Based GNSS

Wenjie SUN^{1#+}, Baiqi NING¹, Xinan YUE¹, Guozhu LI¹
¹Chinese Academy of Sciences

ST13-D2-PM2-323C-009 | ST13-A015 (Invited)

Understanding the Generation and Movement of Equatorial

Plasma Bubbles During Geomagnetic Storms

Chaosong HUANG1#+

¹Air Force Research Laboratory

ST13-D2-PM2-323C-010 | ST13-A016 (Invited)

Spectral Characteristics of Equatorial Plasma Bubbles

Simulated by High Resolution Bubble Model

Tatsuhiro YOKOYAMA^{1‡+}, Charles RINO², Charles CARRANO²
¹National Institute of Information and Communications Technology,
²Boston College

ST13-D2-PM2-323C-011 | ST13-A024

GNSS Data Service at Institute of Geology and Geophysics,

Chinese Academy of Sciences

Xiukuan ZHAO¹#+, Lianhuan HU¹, Guozhu LI¹ ¹Chinese Academy of Sciences

ST13-D2-PM2-323C-012 | ST13-A018

Simultaneous Observations of Plasma Bubbles by a Low-Cost

Airglow Imager and GNSS Receivers in Ishigaki, Japan

Keisuke HOSOKAWA^{1*}, Kohei TAKAMI¹, Susumu SAITO², Yasunobu OGAWA³, Yuichi OTSUKA⁴, Kazuo SHIOKAWA⁴ ¹University of Electro-Communications, ²Electronic Navigation Research Institute, ³National Institute of Polar Research, ⁴Nagoya University

ST17 / Geospace System Response to Impulse Space Weather Events

Tue - 05 Jun | MR317A

Time 08:30 - 10:30

Chair(s) Jing LIU, HAO/NCAR

Shunrong ZHANG, Haystack Observatory/Massachusetts

Institute of Technology

ST17-D2-AM1-317A-001 | ST17-A013

Ionospheric Disturbances Generated by China's Long March

Rocket Launches

Feng DING^{1#+}, Haitao LIU¹
¹Chinese Academy of Sciences

ST17-D2-AM1-317A-002 | ST17-A030 (Invited)

Latest Results on Solar Eclipse-Induced Variations in the

Ionosphere over the Continental U.S.

Philip ERICKSON $^{1s+}$, Larisa GONCHARENKO 1 , Anthea COSTER 1

¹Massachusetts Institute of Technology

ST17-D2-AM1-317A-003 | ST17-A010 (Invited)

Global Thermospheric and Ionospheric Responses of 21

August 2017 Solar Eclipse Simulated by the High-Resolution

Thermosphere Ionosphere Electrodynamics General

Circulation Model (TIEGCM)

Tong DANG1#+

¹University of Science and Technology of China

ST17-D2-AM1-317A-004 | ST17-A028 (Invited)

In-Situ Observational Evidence of Traveling Ionospheric

Disturbance and Total Electron Content Reduction in the

Topside Ionosphere During the 2017 Eclipse

Andrew YAU¹⁵⁺, Christopher WATSON², Gareth PERRY¹
¹University of Calgary, ²National Oceanic and Atmospheric
Administration

ST17-D2-AM1-317A-005 | ST17-A026 (Invited)

Temperature Changes During Geomagnetic Storms

Alan G. BURNS^{1‡+}, Liying QIAN¹, Richard EASTES²
¹National Center for Atmospheric Research, ²University of Colorado Boulder

ST17-D2-AM1-317A-006 | ST17-A008

Longitudinal Variations of Topside Ionospheric and

Plasmaspheric TEC

Jiahao ZHONG¹+, Jiuhou LEI¹‡, Wenbin WANG², Alan G. BURNS², Xinan YUE³, Xiankang DOU¹

¹University of Science and Technology of China, ²National Center for Atmospheric Research, ³Chinese Academy of Sciences

ST17-D2-AM1-317A-007 | ST17-A002

Different Evolutions Patterns of the Sub-Auroral Polarization

Streams During Storm and Substorms

Fei HE^{1*+}, Xiao-Xin ZHANG², Wenbin WANG³, Weixing WAN⁴
¹Institute of Geology and Geophysics, Chinese Academy of Sciences,
²China Meteorological Administration, ³National Center for
Atmospheric Research, ⁴Chinese Academy of Sciences

ST17-D2-AM1-317A-008 | ST17-A014

Solar Wind-Driven Enhancements and Losses of Radiation Belt

Particles: Van Allen Probes Observations

Allison JAYNES1, Daniel BAKER2#+

¹University of Iowa, ²University of Colorado Boulder

Time 16:00 - 18:00

Chair(s) Wenbin WANG, HAO/NCAR

Jiuhou LEI, University of Science and Technology of China

ST17-D2-PM2-317A-009 | ST17-A018 (Invited)

Geospace System Responses During Different Types of

ICME-Driven Geomagnetic Storms: Coupled

 ${\bf Magnetosphere\text{-}Ionosphere\text{-}Thermosphere\text{-}Simulations\text{-}Using}$

SWMF

Shasha ZOU^{1#+}, Doga OZTURK¹, Aaron RIDLEY¹
¹University of Michigan

ST17-D2-PM2-317A-010 | ST17-A003 (Invited)

Sudden GNSS TEC Response to Shock-Induced

Magnetospheric Compression

Yongqiang HAO^{1‡+}, Quanhan LI¹, Donghe ZHANG¹, Zuo XIAO¹
¹Peking University

ST17-D2-PM2-317A-011 | ST17-A024

Interplanetary Magnetic Field by Component Effects on the

Thermosphere Composition

Jing LIU^{1#+}, Wenbin WANG¹, Alan G. BURNS¹
¹National Center for Atmospheric Research

ST17-D2-PM2-317A-012 | ST17-A027

Can Solar Flare Induce Traveling Ionospheric Disturbances?

Shunrong ZHANG¹‡+, Anthea COSTER¹, Philip ERICKSON¹, Larisa GONCHARENKO¹

¹Massachusetts Institute of Technology

ST17-D2-PM2-317A-013 | ST17-A017 (Invited)

Solar Flare Effects on the Thermosphere and Ionosphere

Liying QIAN^{1‡+}, Phil CHAMBERLIN², Alan G. BURNS¹
¹National Center for Atmospheric Research, ²University of Colorado
Roulder

ST17-D2-PM2-317A-014 | ST17-A012 (Invited)

The Ionospheric and Thermospheric Responses to Great Solar

Flares: Observations and Modeling

Huijun LE^{1‡+}, Yiding CHEN¹, Zhipeng REN¹, Weixing WAN¹ ¹Chinese Academy of Sciences

ST17-D2-PM2-317A-015 | ST17-A016

Regional Differences of the Ionospheric Response to the July

2012 Geomagnetic Storm

Jiawei KUAI¹⁵⁺, Libo LIU², Jiuhou LEI³, Jing LIU⁴
¹Nanjing University of Aeronautics and Astronautics, ²Chinese
Academy of Sciences, ³University of Science and Technology of China,
⁴National Center for Atmospheric Research

ST17-D2-PM2-317A-016 | ST17-A011

High and Middle Latitude Neutral Mesospheric Density

Response to Geomagnetic Storms

Wen YI^{1‡+}, Iain REID^{2,3}, Xianghui XUE¹, Damian MURPHY⁴, Chris HALL⁵, Masaki TSUTSUMI⁶, Baiqi NING⁷, Guozhu LI⁷, Joel YOUNGER^{2,3}, Tingdi CHEN¹, Xiankang DOU¹

¹University of Science and Technology of China, ²ATRAD Pty Ltd, ³University of Adelaide, ⁴Australian Antarctic Division, ⁵University of Tromsoe, ⁶National Institute of Polar Research, ⁷Chinese Academy of Sciences

HS Poster Presentations

Tue - 05 Jun, 13:30 - 15:30 | Ballroom B

HS01-D2-PM1-P-009 | HS01-A004

Short-Duration Rainfall Generation Under Scenarios of

Climate Change and Urbanization

Shien-Tsung CHEN^{1#+}
¹Feng Chia University

HS01-D2-PM1-P-010 | HS01-A005

A Modified Hydrology-Hydraulic Model to Simulate

Surface-Subsurface Hydrologic Dynamics of Low Impact

Development Practices in Urban Catchments

Kun ZHANG¹, Ting Fong May CHUI^{1#+}

¹The University of Hong Kong

HS01-D2-PM1-P-011 | HS01-A008

Total Sediment Transport from an Urbanizing Watershed in

the Upper Yellow River, China

Zhijun WANG1#+

¹Lanzhou University of Technology

HS01-D2-PM1-P-012 | HS01-A018

Hazard, Achievement, and Following Treatment Emphasis

for the Slope Land Erosion in the National Scale

Chonghuan NIU1#+, Yuehong CHEN2

 $^1Ministry\ of\ Water\ Resources,\ ^2International\ Research\ and\ Training$

Center on Erosion and Sedimentation

HS01-D2-PM1-P-013 | HS01-A019

Water Budget Investigation of a Mountain Lake for

Preserving the Endemic Plant in Taiwan

Shang-Shu SHIH1#+

¹National Taiwan University

HS02-D2-PM1-P-006 | HS02-A002

Distribution Patterns of Desert Vegetation Species Diversity

and Relationship to Environmental Factors in the Heihe

River Basin of Northwestern China

Shanjia LI^{1,2#+}, Peixi SU², Zijuan ZHOU²

¹Lanzhou University of Technology, ²Chinese Academy of Sciences

HS02-D2-PM1-P-007 | HS02-A009

Vertical Water Flux Estimated Using Multiple Diurnal

Temperatures with the VFLUX in a Hyporheic Zone

Woo-Hyun JEON1+, Jin-Yong LEE1#

¹Kangwon National University

HS02-D2-PM1-P-008 | HS02-A010

Exploring the Patterns of Water Level Fluctuations and the

Corresponding Influence on the Distribution of Wetland

Vegetation in Poyang Lake, China

Rongrong WAN1#+, Guishan YANG1, Xue DAI1

¹Chinese Academy of Sciences

HS02-D2-PM1-P-009 | HS02-A011

Hydrological Characteristics of Sand Bar in River

Dong Gu KIM1#+, Chan Joo LEE1

¹Korea Institute of Civil Engineering and Building Technology

HS03-D2-PM1-P-016 | HS03-A010

Comparison of Field Observations and Modeling Derived

Soil Moisture Change Based on Rainfall in Haean Basin,

Korea

Jeong Jik KIM1+, Ho Geon LEE1, Jin-Yong LEE1#

¹Kangwon National University

HS03-D2-PM1-P-017 | HS03-A015

Evaluation of Soil Moisture Contents for the Unsaturated

Porous Media Using Numerical Model

Oil KWON1#+, Jang-Hwan CHA2, Jong-Hyun LEE1, Woo-Seok

KIM¹

¹Korea Institute of Civil Engineering and Building Technology,

²Incity Co. Ltd

HS03-D2-PM1-P-018 | HS03-A019

Spatiotemporal Reanalysis of Rainfall Characteristics Using

Radar Data: Landslides on the 27 July 2011 at Seoul, Korea

Changhyun JUN1#+, Jungsoo YOON2

¹Department of Civil Engineering, Xi'an Jiaotong-Liverpool

University, ²Korea Institute of Civil Engineering and Building

Technology

HS03-D2-PM1-P-019 | HS03-A022

Evaluation of Hydrochemical Characteristics in Limestone

Area of Samcheok, Korea

Han-Sun RYU1+, Woo-Hyun JEON1, Jin-Yong LEE1#

¹Kangwon National University

HS03-D2-PM1-P-020 | HS03-A028

Impacts of Calibration Criteria on Parameters and Fluxes

Estimation in Arid and Semi-Arid Catchments Located in

Northern and Central Chile

Nicolas VASQUEZ1, Javier CEPEDA1, Tomas GOMEZ1#+, Pablo

MENDOZA², Ximena VARGAS¹

¹University of Chile, ²Advanced Mining Technology Center

HS04-D2-PM1-P-006 | HS04-A001

Water Management Innovative Platform Using Big Data and

Cloud Computing

Tae-Woong KIM¹*, Jin-Young LEE¹*, Jae-Hyun AHN², Do Hun KIM³

¹Hanyang University, ²Seokyeong University, ³K-water

HS04-D2-PM1-P-007 | HS04-A004

A Method of Estimating Sequential Average Unsaturated Zone Travel Times from Precipitation and Water Table Level

Time Series Data

Jina JEONG1+, Eungyu PARK2+, Weon Shik HAN3, Kue-Young KIM1, Seong-Taek YUN4

¹Korea Institute of Geosciences and Mineral Resources, ²Kyungpook National University, ³Yonsei University, ⁴Korea University

HS04-D2-PM1-P-008 | HS04-A005

Improving Simulation of Soil Moisture in China Using

Modified Meteorological Forcing, Land Surface

Information and CLM4.5

Jianguo LIU^{1‡+}, Zhenghui XIE², Chunxiang SHI³, Binghao JIA²
¹Huaihua Universty, ²Chinese Academy of Sciences, ³China
Meteorological Administration

HS04-D2-PM1-P-009 | HS04-A006

Application of Artificial Neural Networks to Predict

Reservoir Inflow After Rain Stops - A Case Study of Mudan

Reservoir

Jie-Lun CHIANG1#+

¹National Pingtung University of Science and Technology

HS04-D2-PM1-P-010 | HS04-A007

Using Artificial Neural Network in Water Quality Model

Using Meteorology Inputs

Yiheng CHEN1#+, Dawei HAN1

¹University of Bristol

HS05-D2-PM1-P-009 | HS05-A007

Monitoring Fresh Surface Water Bodies in Taiwan Using

Satellite Altimetry and Remote Sensing Imageries

Chiawei LEE $^{1\sharp +}$, Chung-Yen KUO 1 , Ting-Yi YANG 2 , Huan-Chin KAO 1 , Kuo-Hsin TSENG 3

¹National Cheng Kung University, ²Ohio State University, ³National Central University

HS05-D2-PM1-P-010 | HS05-A008

Grace-Assimilated Drought Indicator Data and Services at NASA GES DISC

Hualan RUI^{1‡+}, Carlee LOESER¹, Bruce VOLLMER¹, William TENG¹, Hiroko BEAUDOING², Matthew RODELL²

¹NASA Goddard Earth Sciences Data and Information Services
Center, ²NASA Goddard Space Flight Center

HS05-D2-PM1-P-011 | HS05-A009

A Bayesian Multilevel Approach to Bias Correction of

Weather Radar Rainfall Estimate over South Korea

Tae Jeong KIM¹⁺, Dong-Ryul LEE², Hyun-Han KWON¹⁺
¹Chonbuk National University, ²Korea Institute of Civil Engineering and Building Technology

HS05-D2-PM1-P-012 | HS05-A012

Streamflow Estimation by Composite Use of Satellite

Imagery and Non-Uniform Flow Analysis Model

Jin Gyeom KIM^{1‡+}, Boosik KANG¹

¹Dankook University

HS05-D2-PM1-P-013 | HS05-A015

Application of WRF-HYDRO Model for Real Flood Event of

Mangyeong-River Watershed

Sumiya URANCHIMEG1*, Byung Jin SO1, Jang-Gyeong KIM1, Hyun-Han KWON1#

¹Chonbuk National University

HS05-D2-PM1-P-014 | HS05-A020

Improvement of a Global Water Cycle Model In-Land

Toward Groundwater Resources Sustainability Evaluation Daiya SHIOJIRI^{1‡+}, Kenji TANAKA¹, Shigenobu TANAKA¹

¹Kyoto University

HS05-D2-PM1-P-015 | HS05-A023

Deep Learning-Based Estimation of Phycocyanin and

Chlorophyll-a Concentrations in Inland Waters Using

Hyperspectral Data

Yoon CHA1#+

¹University of Seoul

HS05-D2-PM1-P-016 | HS05-A024

An Improved Approach for Evapotranspiration Estimation

Using Water Balance Equation over Yangtze River Basin

Qiong LI^{1‡+}, Zhicai LUO¹, Bo ZHONG², Hao ZHOU¹
¹Huazhong University of Science and Technology, ²Wuhan
University

HS06-D2-PM1-P-008 | HS06-A002

A Novel Optimization Method for Multi-Reservoir

Operation Policy Derivation in Complex Inter-Basin Water

Transfer System

Wenhua WAN¹⁵⁺, Xiaohui LEI², Xuning GUO³
¹Tsinghua University, ²China Institute of Water Resources and Hydropower Research, ³General Institute of Water Resources and Hydropower Planning and Design

HS06-D2-PM1-P-009 | HS06-A007

Flash Flood Disaster Risk Analysis: A Case Study of Yiyang County in China

Haichen LI^{1‡+}, Tao QIN¹, Weihong LIAO¹
¹China Institute of Water Resources and Hydropower Research

HS06-D2-PM1-P-010 | HS06-A009

Design and Realization of Heihe Water Resources

Dispatching System

Zhiguo GAN1#+, Siyu CAI1

¹China Institute of Water Resources and Hydropower Research

HS06-D2-PM1-P-011 | HS06-A013

Identification and Law Analysis of Main Disturbance Factors

in Real Time Dispatching of the Yellow River Water

Jia WANG¹⁺, Xiaohui LEI^{2±}, Xu WANG², Hao WANG²
¹Sichuan University, ²China Institute of Water Resources and Hydropower Research

HS07-D2-PM1-P-008 | HS07-A005

The Construction and Application of Display Platform for

Integrated Detection System of Heavy Rain Outfield Base

Jintao YE^{1‡+}, Xu GUIRONG¹, Zhou ZHIMIN¹ ¹China Meteorological Administration

HS07-D2-PM1-P-009 | HS07-A009

Radar QPE Enhancement for Flash Flood Forecasting in

Korea

Seok Hwan HWANG^{1#}, Jungsoo YOON¹, Narae KANG¹, ByungHwa OH², Jeongha LEE²

¹Korea Institute of Civil Engineering and Building Technology, ²University of Science and Technology

HS07-D2-PM1-P-010 | HS07-A010

Improvement of Accuracy of Radar Rainfall Using Fuzzy QC

Algorithm

Hui-Seong NOH $^{\mbox{\tiny 15}}$, Narae KANG $^{\mbox{\tiny 1}}$, Seok Hwan HWANG $^{\mbox{\tiny 1}}$, Dong-Ryul LEE $^{\mbox{\tiny 1}}$

¹Korea Institute of Civil Engineering and Building Technology

HS07-D2-PM1-P-011 | HS07-A011

The Change of Spatial-Temporal Reference

Evapotranspiration in Korean Agro-Climatic Zones

Myung-Pyo JUNG^{1‡+}, Soon-Kun CHOI¹, Kyo-Moon SHIM¹, Yongseok KIM¹, Kee-Kyung KANG¹, Eun-Suk JANG¹
¹National Institute of Agricultural Sciences

HS07-D2-PM1-P-012 | HS07-A013

Real-Time Radar Precipitation Synthesis by Statistical

Precipitation Analysis

Hyunjung KIM^{1#}, Sanghun LIM¹, Hui-Seong NOH¹, Bong-Joo IANG¹

¹Korea Institute of Civil Engineering and Building Technology

HS07-D2-PM1-P-013 | HS07-A019

A Hierarchical Bayesian Approach to the Neyman-Scott

Rectangular Pulse Model for a Joint Estimation of Model

Parameters Across Stations

Jang-Gyeong KIM^{1#+}, Hyun-Han KWON¹
¹Chonbuk National University

HS07-D2-PM1-P-014 | HS07-A020

The Radiation Influences Gross Primary Productivity and

Water Use Efficiency More than Temperature and Vapor

Pressure Deficit in Humid Mountainous Forest

Xiangyang SUN1#+

¹Institute of Mountain Hazards and Envrionment

HS08-D2-PM1-P-006 | HS08-A007

A Bayesian Approach to Gumbel Mixture Distribution for

the Estimation of Parameter and its Use to the Rainfall

Frequency Analysis

Hong-Geun CHOI $^{1+}$, Huy NGUYEN DINH 1 , Hyun-Han KWON $^{1\pm}$

¹Chonbuk National University

HS08-D2-PM1-P-007 | HS08-A009

Multi-Model Ensemble Hydrological Simulation of

Yalongjing River Basin Based on Artificial Neural Network

Zhanjie $LI^{1\sharp *}$, Jingshan YU^1 , Guoqiang WANG¹, Wenchao SUN¹, Baolin XUE^1

¹Beijing Normal University

HS09-D2-PM1-P-012 | HS09-A002

An Application of Drought Monitoring over the Semi-Arid

Area Based on Evapotranspiration Drought Index

Lijuan WANG^{1‡+}, Ni GUO², Yang YANG², Die HU², Sha SHA² ¹Institute of Arid Meteorology, China Meteorological Administration, Lanzhou, ²China Meteorological Administration

HS09-D2-PM1-P-013 | HS09-A005

A Study on the Direction of Flood Control Project Using the

Tendency of Potential Flood Damage

Seungjin HONG $^{1s+}$, Hong Jun JOO 2 , Gilho KIM 1 , Cheonkyu CHOI 1 , Kyung Tak KIM 1

¹Korea Institute of Construction Technology, ²Inha University

HS09-D2-PM1-P-014 | HS09-A008

State of Mineral Water Policy and Management in Korea

Byeong Dae LEE1#+

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Optimized Water Allocation Model of Irrigation District

Canal Based on Improved Cuckoo Search

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Response of Water and Nitrogen Losses to Water

Management Practices and Green Manure Application in Paddy Fields

Dongguo SHAO¹⁵⁺, Baoli XU¹, Shu CHEN¹, Longzhang FANG¹ ¹Wuhan University

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Estimation of Spatial Distribution of Hydraulic Conductivity and Specific Yield by Fusion of Hydraulic Tomography and Gravity Measurements

Jui-Pin TSAI^{1#+}, Tian-Chyi YEH², Liang-Cheng CHANG¹, Cheinway HWANG¹, Yuanyuan ZHA³

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Relation Between Fracture Tensor Parameters and Block

Hydraulic Properties of the 2-D Discrete Fracture Network

Jeong-Gi UM^{1#+}, Jisu HAN¹, Taechin CHO¹
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Applicability of Equivalent Continuum Flow Model in

Discrete Fracture Network Media

Jeong-Gi UM¹‡+, Dahye LEE¹, Sookyun WANG¹, Ik WOO² ¹Pukyong National University, ²Kunsan National University

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Estimation of Groundwater-Surface Water Interaction Based on Hydrogeochemical Analysis in Minchu Basin of Central

Taiwan

Wen Tung YANG $^{1\pm}$, Cheng-Haw LEE 1 , Hung-I LIN 1 , Wen-Ray KUNG 1 , Chen-Feng YEH 1

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A Study of Fusing Soft Data to Estimate the Heterogeneous

Hydraulic Conductivity

Shih-Yang CHENG¹⁺, Kuo-Chin HSU^{1‡}
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Integrated Hydrometeorology Measurements on Quantifying Evapotranspiration and Infiltration of a Grass Covered Pilot

I-Chieh TSENG^{1#+}, Ming-Hsu LI¹, Kuan-Yin CHEN¹
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Elucidation of a Flowing Artesian Well Discharge

Mechanism by Microtremor Survey: A Case Study in an

Artesian Well Area of Otsuchi, Iwate Prefecture

Yuji MIYASHITA^{1‡+}, Hideki HAMAMOTO², Shigeki SENNA³, Makoto TANIGUCHI⁴

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Calculation and Quantitative Mapping of Groundwater

Resource in Haean Basin of Korea, with Potential

Applications in Future

Maimoona RAZA¹⁺, Jin-Yong LEE^{1‡}, Sang Woong YUN¹
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Creation of a Detailed Groundwater Quality Map and its

Application to a Water-Adequacy Evaluation for an

Open-Loop Ground Source Heat Exchange System

Takashi KAKIMOTO $^{1\sharp *}$, Hideki HAMAMOTO 1 , Takashi ISHIYAMA 1 , Shoichi HACHINOHE 1

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The Impact of Land Consolidation on the Effect of Artificial Lake Recharge

Jhe-Wei LEE^{1#+}, Yen-Pei LIAO¹, Weicheng LO¹
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The Future of Groundwater Quality Protection in Taiwan

Shyh-Wei CHEN¹, Ping-Hsiung NI¹, Hsien-Wen KO², Yu-Ying CHEN¹, Yen-Yu CHEN³♯+, Sheng Wei WANG³, Ting-Chun CHIEN³

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Development of Smart Groundwater Management System in the Kingdom of Tonga: Utilizing Climate Information in

Response to Shortage of Water

Sun-Kwon YOON $^{\mbox{\tiny 15+}},$ Namsik PARK², Jee-Mun YUK³, Inja JEON $^{\mbox{\tiny 1}}$

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Quality Control of Density Logging for Accurate Density

Measurement of Aquifer

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What's Meaning of Redundant and Non-Redundant

Information in Hydraulic Tomography Analysis

Yong-Lin CHEN $^{1s+}$, Hong Ru LIN 1 , Ming-Wei LIN 1 , Shao-Yang HUANG 1 , Tian-Chyi YEH 2 , Jet-Chau WEN 1

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The Influence of Using Different Baseline Settings on the Rainfall Frequency Analysis Under CMIP3 and CMIP5

Emission Scenarios

Chen-Min KUO¹⁺, Tao-Chang YANG¹, Hung-Wei TSENG¹, Cheng-Hui SUNG¹, Pao-Shan YU² ¹National Cheng Kung University, ²

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Study of Climate Change Impact on Water Resources in Central Taiwan

Jyun-Long LEE^{1‡*}, Chifeng HSIEH¹, Wen-Cheng HUANG¹

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Application of Empirical Mode Decomposition on River Flow

Tai-Yi CHU^{1‡}, Chun-Yao YEN¹, Wen-Cheng HUANG¹¹National Taiwan Ocean University

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Measurement of Velocity Field in Hydraiulic Jumps Using

PIV and BIV

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Identifying Temporal Distribution of Sub-Daily Rainfall in

South Korea Based on Hidden Markov Chain Models

Sewwandhi CHANDRASEKARA1+, Hyun-Han KWON1 1 1Chonbuk National University

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Evaluating the Ensemble Method to Sedimentation at

Riverine with Multi Sediment Transport Models

Che-Chi LIN^{1#+}, Howard H-C HO¹
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Identifying Indicator of Drought Vulnerability Assessment

Considering the Local Environment with Delphi Method

Gyumin LEE1+, Minsung KWON2#, Kyung Soo JUN1

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Natural Attenuation of Chlorinated Solvents and its Risk

Evaluation at the Groundwater Contaminated Site in Japan Yoshishige KAWABE $^{1s+}$

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Risk Assessment for Agricultural Drought of Maize in the

Northwest Region of China Based Different Yield Reduction

Rate

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The Simulation of Heavy Rainfall by Southwesterly Flow

After Typhoon Leaving in Taiwan

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The Risk Assessment of Extreme Air Quality Caused by

Traffic and Weather Conditions in Taipei City, Taiwan

Yuan-Chien LIN1#+, Chun-Yeh LAI1

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The Spatial Estimation of Groundwater Storage Coefficient

by Using Big Data Analysis Methods in Pingtung Plain

Aquifer

Yong-Qing LIN¹⁺, Yuan-Chien LIN^{1#}
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Evaluation of Nitrate Concentration in Groundwater of

Korea for 2001-2013

Arim SEO1+, Jin-Yong LEE1#, Kideok KWON1 ¹Kangwon National University

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Assessment of Flood Vulnerability Outcomes by

Multi-Attribute Utility Functions for a Composite Indicator

Hyun Il CHOI^{1#+}, Jong Seok LEE¹, Min Ho JUNG¹, Yu Rim LEE1, Yongwon SEO1

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The Risk Analysis of Agricultural Damage Based on

Space-Time Classification of Typhoon Characteristics

Wen Hsin WANG1+, Yong-Qing LIN1, Yuan-Chien LIN1# ¹National Central University

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Flash Floods Compared to River Floods - Psychological

Impacts and Implications on Precautionary Behaviour

Jonas LAUDAN^{1#+}, Gert ZÖLLER¹, Annegret THIEKEN¹ ¹University of Potsdam

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Evaluation of Radon Concentrations in Groundwater of the

Haean Basin, Korea

Sung Chan YOON $^{1+}$, Woo-Hyun JEON 1 , Jeon JAE HAK 1 , Kim CHANG SEONG¹, Myeong HYEON AH¹, Jin-Yong LEE^{1#} ¹Kangwon National University

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Apply Empirical Orthogonal Function and Modflow to

Groundwater Recharge Estimation: Take Zhuoshuixi River

Alluvial Fan as Example

Hua-Ting TSENG1#+, Hwa-Lung YU1 ¹National Taiwan University

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The Spatial Resilience Estimation of Groundwater by Using

Signal Analysis Method

En-Dian KUO1+, Yong-Qing LIN1, Yuan-Chien LIN1# ¹National Central University

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Determination of Prioritized Area for Countermeasure

Implementation for Flood Disaster Prevention Using Flood

Disaster Risk Assessment

Insang YU1#+, Hayong KIM1, Sangman JEONG1 ¹Kongju National University

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Individual Building Inundation Simulation for an Urban

Small Watershed by the Tokyo Storm Runoff Model

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Sustainability Assessment of Groundwater Resources in

Hanoi from a Social Perspective

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Science and Technology

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Analysis of Urban Landslides Using Spatial Statistics and

Validation Through Field Investigation

Sunmin LEE1, Moung-Jin LEE1#+ ¹Korea Environment Institute

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Potential Map of a Ground Source Heat Exchanger System

and its Thermal Influence on the Subsurface Thermal

Conditions of Geology and Groundwater

Hideki HAMAMOTO1#+, Yuji MIYASHITA2, Yoshihiro SOMEYA3, Shoichi HACHINOHE1, Takashi KAKIMOTO1,

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Chuo Technical Professional School

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Disaster Reduction of Urban Flooding by Inundation

Mitigation Facilities

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Nan University of Pharmacy and Science

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Heavy Metal Concentrations of Surface Sediments in

Pampanga River, Luzon, Philippines

Michael James CABREROS1#+, Carlo ARCILLA2 ¹National Institute of Geological Sciences, ²University of the Philippines Diliman

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Characteristics of Urban Drainage Networks and Their

Implication on Flood Mitigation

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The Possibility of Practical Applications of Saponin to the

Entire Measures Against Infectious Diseases in Southeast

Asia

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The Potential of Bio Toilets for Environmental Hygiene in

Angkor Krau

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Can Sugar Cane Save Cambodia from Trash Problems?

Shione WATANABE1#+, Yoshio YONEMOTO1

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Investigation on Public Interest in Rivers Based on SNS

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Sendai Nika Junior & Senior High School

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Hydrochemical Features of Karst Groundwater System in

Fangshan, Beijing, North China

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Sciences, ³China University of Petroleum-Beijing

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Statistical Analysis for Long-Term Groundwater Quality

Data from Oil-Contaminated Area

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A Study on Inverse Estimation of Infiltration of Storm Water

Generation Region in the Separated Sewer System with

Time Series Data

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Spatial and Temporal Features of the Frequency of Cloud

Occurrence over China Based on CALIOP

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Water Vapor Transportation over Northwest China in

Summer

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Study for Effect of Soil Temperature on Thermal

Conductivity in a Cropland over the Chinese Loess Plateau

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Diurnal and Seasonal Variations in Surface Parameters over

an Alpine Meadow Ecosystem

Yu ZHANG1#+, Minhong SONG1

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Exploring the Potential of Utilizing High Resolution X-Band

Radar for Urban Rainfall Estimation

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Influence of Irrigation on Water Budget in the Indian

Sub-Continental River Basins

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Study of Terrestrial Water Storage Recharge for Two

Trans-Boundary River Basins of the Indian Subcontinent

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A Nonparametric Multivariate Standardized Drought Index

for Characterizing Socioeconomic Drought

Shengzhi HUANG $^{1\sharp +}$, Qiang HUANG 1 , Lin YE 1 , Beibei HOU 1 , Wei FANG 1

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Assessment of Observational Uncertainties and Model

Performances in Precipitation Metrics in Selected Watershed

Regions of the US

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Estimation of Flood Discharge Based on Observation Data

Considering the Hydrological Characteristics of the Han

Stream Basin in Jeju Island, Korea

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A Novel Machine Learning Approach for Flood

Susceptibility Assessment

Jhih-Huang WANG $^{1\sharp *}$, Gwo-Fong LIN 1 , Chieh-Lin CHEN 1 , Yun-Ru HUANG 1

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Deep Learning Techniques for Hourly Water Level

Forecasting During Typhoons

Yu-Ren CHEN^{1‡+}, Gwo-Fong LIN¹, Jhih-Huang WANG¹
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Integrated Physically Based System for Modeling Shallow Landslide

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Development of the Debris Flow Model with the Flow

Direction Algorithm

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Rainfall Induced-Landslide Susceptibility Analysis Using

GIS and Machine Learning

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Hourly Rainfall Forecasting Using Ensemble Precipitation

Forecasts Through Support Vector Machine and Random

Forest

I-Hang HUANG¹**, Gwo-Fong LIN¹, Ming-Jui CHANG¹, Jhih-Huang WANG¹, Ming-Chang WU²
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Introduction of "Combined Inland-River System for

Reducing Urban Inundation"

Jung-Hwan LEE^{1,2+}, Gi-Moon YUK¹, Ji-Yoon MOK¹, Min-Seok KIM¹, Young-Il MOON^{1#}

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"Development of Advanced Technology for Inundation

Forecasting and Flood Risk in Combined Inland-River"

Introduction of Core Research Results

Young-Il MOON^{1st}, Sung-Hwan HWANG², Gi-Moon YUK¹, Ji-Yoon MOK¹, Byung-Joo SO²

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Case Study on Urban Flood Impact Forecasts in Gangnam

Drainage, Korea

Byong Ju LEE^{1‡+}, Kyoungdo LEE¹, Jongpyo PARK²

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Anomalies Detection on Hourly Precipitation

Sheng-Chi YANG $^{1*+}$, Ming-Chang WU 1 , Hong-Ming KAO 1 , Tsun-Hua YANG 1

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A Study on Real-Time Urban Flood Warning Method in

Urban Stream

Min-Seok KIM¹⁺, Ji-Yoon MOK¹, Gi-Moon YUK¹, Soo-Bin CHUN¹, Ji-Hyeok CHOI¹, Young-Il MOON^{1‡}

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A Study on Simplification of SWMM for Prime Time of Urban Flood Forecasting - A Case Study of Daerim Basin in South Korea

Ji-Hyeok CHOI¹⁺, Jung-Hwan LEE^{1,2}, Gi-Moon YUK¹, Ji-Yoon MOK¹, Young-Il MOON^{1‡}
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Analysis of the Spatial-Temporal Change of the Vegetation Index in the Upper Reach of Han River Basin in 2000-2016

Jinkai LUAN¹, Dengfeng LIU¹²•, Lianpeng ZHANG¹, Hongyi Ll², Qiang HUANG¹, Mu LIN³

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Impacts of Extreme Temperature on Crop Growth in the North China Plain

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Hydrological Changes in a Typical Irrigated Area of the North China Plain Under the Influence of Human Activity Qichao LI^{1z+} , Guangping XI^1

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Spatial-Temporal Patterns of Evapotranspiration Along an Elevation Gradient on Mount Gongga, Southwest China

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Quantifying the Relative Contribution of Climate and

Human Activities on Runoff in the Jialing River

Jing XIA^{1#+}, Guodong LIU¹
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Evaluation of Flow Regime Change and Prediction of its

Impact by Instream Flow Management

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Incorporating Soil Moisture Dynamic Model into the

Machine Learning Technique to Estimate Regional

Evapotranspiration

Guanheng ZHENG^{1‡+}, Huimin LEI¹, Dawen YANG¹
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An Elasticity Index Based Investigation on the Water

Quality-Climate Driver-Land Use System

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Analysis of Precipitation Characteristics on the Loess Plateau

Between 1965 and 2014, Based on High-Density Gauge

Observations

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Spatiotemporal Changes in Extreme Temperature and

Precipitation Events in the Three-Rivers Headwater Region,

China

Yang XI¹⁺, Chiyuan MIAO^{1‡}, Qingyun DUAN¹
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Temporal and Spatial Variation of Hydrological Condition

in the Ziwu River Basin of Han River in China Ziyan LI¹⁺, Dengfeng LIU^{1‡}, Qiang HUANG¹, Tao BAI¹, Shuai

ZHOU¹, Mu LIN²

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A Study on Flow Resistances in High Suspended Sediment

Concentration

Hiroshi KOSEKI^{1#+}, Atsuhiro YOROZUYA¹
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Spatiotemporal Pattern Analysis of Extreme Precipitation of

Poyang Lake Basin, China

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Seasonal Drought Prediction for Fiji Based on

High-Resolution Dynamic Downscaling of Climate Data and

Machine Learning of Long-Range Forecast

Jinyoung RHEE^{1#+}, Hongwei YANG¹
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Development of Irregularly Mixed Grid-Based Spatial

Interpolation Method and Application to Hydrogeological

Data and Numerical Model

Tae Beom KIM $^{1#+}$, Il Hwan KIM 1

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Application of a Calibration Free Dynamic Budyko Model

for Prediction of Flow Duration Curve in Ungauged

Catchments of India

Anita NAG $^{1\#+}$, Basudev BISWAL 1

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The Contribution of Ensemble Streamflow Forecasts to

Water Resources Optimization Scheduling

Jingwen HOU¹⁺, Aizhong YE^{1#}, Qingyun DUAN¹
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Seasonal Drought Forecasting System in the Semi-Arid

Heihe River Basin, Northwestern China

Feng MA^{1#+}, Aizhong YE¹, LIfeng LUO², Qingyun DUAN¹
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Daily Rainfall Simulation and Evaluation Using

Nonhomogeneous Hidden Markov Model

Jae Won JUNG¹⁺, Jisu NAM¹, Soojun KIM¹, Hung Soo KIM¹⁺
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Development of the Assessment Method for Vulnerable

Period of Groundwater Resources for Nakdong River Basin

in Korea Using Multi-Criteria Decision-Making Method

Il Hwan KIM¹⁺, Jeong-Seok YANG^{1‡}, Jae Beom LEE¹
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Optimal Shelter Selection Against Mega Flood Occurrence

Dae Gun HAN¹+, Kyunghun KIM¹, Hung Soo KIM¹‡ ¹Inha University

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 $Future\ Dispersal\ and\ Connectivity\ of\ World's\ Northernmost$

Coral Reefs

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Application of Flood Vulnerability Index for Analyzing

Safety Change of Levee according to Climate Change

Hoo Sang LEE $^{1\sharp*}$, Jae Joon LEE 1 , Jun-Haeng HEO 2 , Sung Ho LEE 1

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Drought Early Warning and Preparedness: A Case Study in

Southern Taiwan

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HS22-D2-PM1-P-046 | HS22-A016

Evaluation of Extreme Rainfall Under Climate Change

Scenario in Korea Peninsula

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HS22-D2-PM1-P-047 | HS22-A039

Projection of Future Change in Storm Surges by Artificial

Neural Network and d4PDF

Yuji ARAKI¹+, Tomohiro YASUDA¹‡, Nobuhito MORI², Sota

NAKAJO3

¹Kansai University, ²Kyoto University, ³Osaka City University

HS22-D2-PM1-P-048 | HS22-A043

Intercomparison of Bias Correction Methods for Runoff

Generation Outputs from Land Surface Models at the Chao

Phraya River Basin

Teerawat RAM-INDRA¹, Patinya HANITTINAN¹‡+, Yasuto TACHIKAWA¹, Yutaka ICHIKAWA¹, Kazuaki YOROZU¹

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HS22-D2-PM1-P-049 | HS22-A046

Statistical Downscaling of AGCM60km Precipitation Based

on Spatial Correlation of AGCM20km Output

Sunmin KIM¹⁸⁺, Yasuto TACHIKAWA², Eiichi NAKAKITA²
¹, ²Kyoto University

HS22-D2-PM1-P-050 | HS22-A058

Climate Change Impacts on Low Flow Regime in the Context of the Variation of Actual Evapotranspiration

Hoyoung SUN¹⁺, Boosik KANG^{1#}
¹Dankook University

HS23-D2-PM1-P-007 | HS23-A002

Effects of Water Deficit on Photosynthetic Characteristics of Spring Wheat Under Plastic-Mulching and Comparison of Light Response Curve Models

Meng DUAN^{1#+}, Xiaomin MAO¹
¹China Agricultural University

HS23-D2-PM1-P-008 | HS23-A003

Optimization of Spatial and Temporal Distribution of Crop

Water Consumption in Middle Reaches of Heihe River Liuyue HE¹⁺, Sufen WANG^{1‡}

¹China Agricultural University

HS23-D2-PM1-P-009 | HS23-A042

Coupling a Water and Energy Model and a Crop Growth Model to Simulate Water-Carbon Fluxes in an Inland River Basin in Northwest China

Jing FU¹⁺, Jun NIU^{1‡}
¹China Agricultural University

HS23-D2-PM1-P-010 | HS23-A045

Understanding Hydrochemical Characteristics of

Groundwater and Stream Water in the Haean Basin Using

Factor and Cluster Analyses

Sang Woong YUN¹, Woo-Hyun JEON¹⁺, Jin-Yong LEE^{1‡}
¹Kangwon National University

HS23-D2-PM1-P-011 | HS23-A050

Estimation of Future Agricultural Water Demand

Considering Land Use Change in Jeju Island, S. Korea

Sung-Ho SONG¹**, Woo- Ho MYOUNG², Jung-Gi AN², Jung-Seok JANG², Jin-Hee BAEK², Cha-Youn JUNG²
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²Korea Rural Community Corporation

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Impacts of Irrigation Methods on Soil Water Percolation in Paddy Fields

Baoli XU $^{1\sharp *}$, Dongguo SHAO $^{\!\scriptscriptstyle 1}$, Xuezhi TAN $^{\!\scriptscriptstyle 2}$, Wenquan GU $^{\!\scriptscriptstyle 1}$, Xia YANG $^{\!\scriptscriptstyle 1}$

¹Wuhan University, ²Sun Yat-sen University

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Assessment of Agriculture Water Resources Carrying

Capacity in Haihe River Basin

Sufen WANG1#+

¹CHINA AGRICULTURAL UNIVERSITY

HS24-D2-PM1-P-008 | HS24-A002

Estimation of Land Surface Heat Fluxes over the Tibetan

Plateau by a Combination Use of Geostationary and

Polar-Orbiting Satellite Data

Lei ZHONG^{1‡+}, Yaoming MA², Weiqiang MA²
¹University of Science and Technology of China, ²Chinese Academy of Sciences

HS24-D2-PM1-P-009 | HS24-A009

A Characteristics Analysis and Assessment of Economic

Damage of Typhoons

Jieming CHOU1#+

¹Beijing Normal University

HS24-D2-PM1-P-010 | HS24-A010

The Effect of Radiative Factors on Climate Change of Third

Pole

Xiaodan GUAN^{1#+}, Jieru MA¹, Jingchen LIU¹
¹Lanzhou University

HS24-D2-PM1-P-011 | HS24-A016

Simulating Hydrological Processes of a Typical Small

Mountainous Catchment in Tibetan Plateau

Zhixu BAI^{1#+}, Yue-Ping XU¹, Suli PAN¹
¹Zhejiang University

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Sensitivity Analysis and Parameter Screening of CLM

Hydrologic Parameters on Tibet Plateau

Wei $GONG^{1s+}$, Qingyun $DUAN^1$, Chong $ZHANG^1$ **Beijing Normal University

HS24-D2-PM1-P-013 | HS24-A019

Lake Level Variations of Nam Co, South-Central Tibetan

Plateau from 2005 to 2017

Shiqiao ZHOU1#+

¹Chinese Academy of Sciences

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GEWEX Activities in Third Pole Environment and its

Relation to Other Global Activities

Petrus (Peter) VAN OEVELEN^{1‡+}, Graeme STEPHENS², Joan CUXART³

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Mitigation Measures from Coastal City Inundation Due to

Climate Change

Won Bum KIM1+, Kwang Ik SON1#

¹Yeungnam University

HS25-D2-PM1-P-008 | HS25-A005

Development and Application of Flood Vulnerability Index

for River Levee

Sung Ho $\mathsf{LEE}^{_1\mathtt{s+}}$, Jae Joon $\mathsf{LEE}^{_1}$, Hoo Sang $\mathsf{LEE}^{_1}$, Jun-Haeng $\mathsf{HEO}^{_2}$

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HS25-D2-PM1-P-009 | HS25-A008

Development of a 2-Dimensional Inundation Model and

Verification Using Satellite Images

Yun Seok CHOI¹, Joo Hun KIM¹, Kyung Tak KIM¹, Seungjin HONG¹‡⁺, Kyusung LEE²

¹Korea Institute of Construction Technology, ²Inha University

HS25-D2-PM1-P-010 | HS25-A009

Experimental Study for Flow Analysis on Road and Gutter

Jung Soo KIM
15+, Sung Ho LEE², Chyung Such HAN³, Sei Eui YOON⁴

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Analysis of the Climate Change Impacts in the Soyanggang

Dam Basin Using RCP Scenarios

Yeonsu DO¹⁺, Gwangseob KIM^{1#}
¹Kyungpook National University

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Flood Risk Index Projection in Korea Using RCP Scenarios

Myojeong KIM1+, Gwangseob KIM1#

¹Kyungpook National University

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One-Parameter Lindley Distribution with Application to

Rainfall Data in Seoul, Korea

Hyunjun AHN¹+, Ju-Young SHIN¹, Sunghun KIM¹, Jun-Haeng HEO¹ $^{\sharp}$

¹Yonsei University

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Climate Change and Debris Flow Activity in Scarp Area: A

Case Study on Goehwa Mt. in Korea

Seok II JEONG¹+, Hong-Teak KIM¹, Eui Youp JUNG², Seung Oh $\mathsf{LEE}^{1\sharp}$

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Estimation of Critical Rainfall for Inundation Risk in Urban

Area

Beom Jin KIM¹+, Kun-Yeun HAN¹#, Hyun Il KIM¹, Ho Jun KEUM¹

¹Kyungpook National University

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Debris Flow Propagation in Mountainous Area Near the Highway

Kun-Yeun HAN $^{1\pm}$, Jae Tae LIM 2 , Heehoon CHOI 3 , Byung-Hyun KIM 4

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Methodologies of Resilience Evaluation for Urban Flood

Risk Mitigation

Ho Jun KEUM¹+, Kun-Yeun HAN¹=, Jae Yeong LEE¹, Beom Jin KIM¹

¹Kyungpook National University

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Analyzing the Change of Surface Water and Groundwater

Systems by Tunnel Construction

Hangtak JEON¹⁺, Chung-Mo LEE¹, Woo-Ri LIM¹, Sul-Min YUN¹, Heung-Jai PARK², Se-Yeong HAMM^{1‡}

¹Pusan National University, ²Inje University

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Flood Inundation Simulation Due to the Levee Breach Under

RCP 4.5 & 8.5 Scenarios - A Case Study of Palbok-Dong in

Jeonju Stream, Korea

Hyung-Ju YOO1+, Seok Il JEONG1, Seung Oh LEE1*
1Hongik University

HS25-D2-PM1-P-020 | HS25-A026

Study on the Development of Damage Function by Flood

Depths Using Damage Data Investigation - Focusing on

School Buildings -

Sang Ho KIM¹*, Chang Hee LEE²*, Shinbum HWANG¹, Taeho II ING¹

¹Sangji University, ²Jungwon University

HS25-D2-PM1-P-021 | HS25-A028

An Analysis on Inundation Characteristics of Tsunami in

Busan Due to Extreme Earthquake Using Delft3D

Dong Hyun KIM¹⁺, Hyung-Ju YOO¹, Seung Oh LEE^{1‡}

¹Hongik University

HS26-D2-PM1-P-014 | HS26-A022

A Joint Estimate of Antarctic Ice Sheet Mass Balance Using

Multi-Geodetic Data Sets

Chunchun GAO $^{1+}$, Benjamin Fong CHAO $^{1+}$, Yang LU 2 , Zizhan ZHANG 2 , Hongling SHI 2

¹Academia Sinica, ²Chinese Academy of Sciences

HS26-D2-PM1-P-015 | HS26-A027

Sea-Ice Thickness and Volume in the Sea of Okhotsk

Revealed from ICESat Data

Sohey NIHASHI^{1‡+}, Nathan KURTZ², Thorsten MARKUS², Kay OHSHIMA³, Kazutaka TATEYAMA⁴, Takenobu TOYOTA³
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Goddard Space Flight Center, ³Hokkaido University, ⁴Kitami
Institute of Technology

HS27-D2-PM1-P-007 | HS27-A002

A Comparison of Slope Erosion Sediment Yield

Characteristics of Yellow Soil in Southwest China and Loess

in Northwest China

Yuehong CHEN1#+, Duihu NING1

¹International Research and Training Center on Erosion and Sedimentation

HS27-D2-PM1-P-008 | HS27-A005

An Experimental Study on the Measurement of Bed Load

Discharge Using a Hydrophone

Kye-Won JUN $^{1\#}$, Jong-Ho CHOI $^{1+}$

¹Kangwon National University

HS27-D2-PM1-P-009 | HS27-A006

The Environmental Impacts of Dredging Operations: A

Review

Tully BOOTH $^{\! 1\sharp}\!$, Ben JARIHANI $^{\! 2+}\!$

¹University of Queensland, ²University of the Sunshine Coast

HS28-D2-PM1-P-006 | HS28-A003

Impacts of Urban Expansion on Summer Rainfall over Pearl

River Delta, South China

Guoru HUANG1#+

¹South China University of Technology

HS28-D2-PM1-P-007 | HS28-A005

Decadal Transition of Moisture Sources and Transport in

Northwestern China During Summer from 1982 to 2010

Lijuan HUA1#+, Linhao ZHONG2

¹University of Chinese Academy of Sciences, ²Chinese Academy of Sciences

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Using Low Flow Recession to Evaluate the Basin of

Storage-Discharge Sensitivity in Taiwan

Chia Chi HUANG^{1#+}, Hsin-Fu YEH¹

¹National Cheng Kung University

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A Climate Informed Flood Inflow Forecasting Model Based

on Bayesian Autoregressive Moving Average Exogenous

Mode

Jin-Guk KIM¹⁺, Minkyu JUNG¹, Hyun-Han KWON^{1‡}

¹Chonbuk National University

HS28-D2-PM1-P-010 | HS28-A017

Analysis of the Changes of Water Disaster Vulnerability

Indices (WDVI) in Asia Region Considering Climate Change

Min Kuk KIM¹+, Jeong-Bae KIM¹, Deg-Hyo BAE¹#

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HS30-D2-PM1-P-011 | HS30-A004

Evaluation on Nonpoint Source Pollution Based on the

Application Swat Model in Fuxinhe River Basin

Lanlan SONG1#+

¹Hohai University

HS30-D2-PM1-P-012 | HS30-A009

Study on Forest Ecological Hydrology in Qilian Mountains

Zhibin HE1#+, Jing FANG1, Jun DU1, Longfei CHEN2

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Eco-Environment and Resources, Chinese Academy of Sciences

HS30-D2-PM1-P-013 | HS30-A010

The Influence of Water and Soil Conservation Dam System

Construction on Water Resources

Weijiang ZHANG1#+

¹Ningxia University

HS30-D2-PM1-P-014 | HS30-A011

Change Analyze on the Extreme Precipitation Events in

Semi-Humid and Semi-Arid: Examples and Lssons from

Liupanshan District of Ningxia in China

Juan LI1#+

¹Ningxia University

HS30-D2-PM1-P-015 | HS30-A012

Numerical Simulation of Salinized Soil Water and Salt

Transport in Low-Lying Land of High Altitude: Examples

and Lessons from Ningxia Province in China

Wenjuan ZHAO1#+

¹Ningxia University

HS30-D2-PM1-P-016 | HS30-A017

Dew Formation Characteristics and its Ecohydrological Effects in a Desert Oasis Ecotone, Northwestern China

Yanli ZHUANG1#+, Wenzhi ZHAO1

¹Chinese Academy of Sciences

HS30-D2-PM1-P-017 | HS30-A018

Simulation of Runoff and Wateshed Erosion Based on
Distribute Hydrological Model in Midstream of the Yellow
River, China

Yuan GUO1#+, Peng DENG2

¹Zhengzhou University, ²Nanjing University of Information Science & Technology

HS30-D2-PM1-P-018 | HS30-A034

Multi-Decadal Changes of Hydroclimatic Conditions in China's Semi-Arid and Arid Areas Inferred from Ground and Satellite Observations

Ke ZHANG^{1#+}

¹Hohai University

HS31-D2-PM1-P-007 | HS31-A006

Challenges and Difficulties of Integrated Study on the Pearl

River Basin and Pearl River Estuary

Xiao FENG^{1#+}, Ji CHEN¹
¹The University of Hong Kong

HS32-D2-PM1-P-007 | HS32-A004

Spatiotemporal Variation of the Meteorological and

Hydrological Droughts in Central Taiwan

Hsin-Li HSU^{1#+}, Hsin-Fu YEH¹
¹National Cheng Kung University

HS32-D2-PM1-P-008 | HS32-A006

Development of Typhoon Damage Forecasting Function

Using Tukey's Ladder of Powers and LOOCV Method.

Bo Rim LEE1#+, Taegyun KIM1

¹Gyeongnam National University of Science and Technology

HS32-D2-PM1-P-009 | HS32-A011

Development of the Loss Function for the Transportation

Facilities Using Flooded Area

Shinbum HWANG^{1‡+}, Sim JUNHYUK¹, Chang Hee LEE², Sang Ho KIM¹

¹Sangji University, ²Jungwon University

HS33-D2-PM1-P-008 | HS33-A001

Construction and Assessment of Storm Sewer Network

Model for Urban Runoff Analysis in Seoul

PARK JONGPYO^{1‡+}, Kyoungdo LEE¹, Heeman KANG²

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HS33-D2-PM1-P-009 | HS33-A007

Catchment Hydrologic Cycle Assessment and Improving

Technology for Climate Change Adaptation

Cheol Hee JANG¹**, Hyeonjun KIM¹, Ilpyo HONG²
¹Korea Institute of Civil Engineering and Building Technology,
²Korea Institute of Construction Technology

HS34-D2-PM1-P-007 | HS34-A001

Estimating Evapotranspiration Components Using the

Three-Temperature Model and Thermal Remote Sensing

Yu Jiu XIONG1#+, Guo Yu QIU², Pei WANG³, Kyaw Tha PAW U⁴

¹Sun Yat-sen University, ²Peking University, ³Beijing Normal University, ⁴University of California Davis

HS34-D2-PM1-P-008 | HS34-A003

Plant Transpiration Simulation in a Subtropical Monsoon

Climate Zone

Xinguang HE^{1s+}, Na LIU¹, Huade GUAN², Thomas N. BUCKLEY³, Zidong LUO¹, Xinping ZHANG¹
¹Hunan Normal University, ²Flinders University, ³University of California

HS34-D2-PM1-P-009 | HS34-A009

The Effect of Phenology, Temperature and Plant Water Stress on the Dynamics of Carbon and Water Exchanges of a

Seasonally Dry Tropical Forest with the Atmosphere

Hugo GUTIERREZ^{1,2‡+}, Jorge UUH-SONDA³, Bernardo FIGUEROA-ESPINOZA³, Luis MENDEZ-BARROSO⁴

¹The University of Texas at El Paso, ²Flinders University,

³Universidad Nacional Autonoma de Mexico, ⁴Instituto Tecnologico de Sonora

HS34-D2-PM1-P-010 | HS34-A012

Examination of Dominant Controlling Factors for Simplifying Transpiration Modeling for a Deciduous Tree

Species in a Subtropical Humid Environment

Zidong LUO^{1#+}, Huade GUAN², Xinping ZHANG¹, Na LIU¹
¹Hunan Normal University, ²Flinders University

ST Poster Presentations

Tue - 05 Jun, 13:30 - 15:30 | Ballroom B

ST01-D2-PM1-P-012 | ST01-A003

A Comparative Study Between a Failed and a Successful

Eruption Initiated from the Same Polarity Inversion Line in

AR 11387

Lijuan LIU $^{1#+}$, Yuming WANG 2 , Zhenjun ZHOU 1 , Karin DISSAUER 3 , Manuela TEMMER 3 , Jun CUI $^{1/4}$

¹Sun Yat-sen University, ²University of Science and Technology of China, ³University of Graz, ⁴Chinese Academy of Sciences

ST01-D2-PM1-P-013 | ST01-A004

Long-Term Behaviors of Flare Activities: Sun vs. Solar-Type Stars

Han HE^{1‡+}, Huaning WANG¹, Mei ZHANG¹, Ahmad MEHRABI², Yan YAN¹, Duo YUN¹

¹Chinese Academy of Sciences, ²Bu Ali Sina University

ST01-D2-PM1-P-014 | ST01-A006

The Origin of Extremely Large EUV Late Phase: Heating of

Gradual Breakout Reconnection

Zhenjun ZHOU1#+, Yuming WANG², Kai LIU², Jie ZHANG³, Xin CHENG⁴, Lijuan LIU¹, Jun CUI¹, 5

¹Sun Yat-sen University, ²University of Science and Technology of China, ³George Mason University, ⁴Nanjing University, ⁵Chinese Academy of Sciences

ST01-D2-PM1-P-015 | ST01-A012

Derivation of Solar Flare Total Spectra from Flare

Geometrical Features

Kyoko WATANABE^{1‡+}, Shohei NISHIMOTO¹, Shinsuke IMADA², Tomoko KAWATE³, Kyoung-Sun LEE⁴
¹National Defense Academy of Japan, ²Nagoya University, ³Japan Aerospace Exploration Agency, ⁴National Astronomical Observatory of Japan

ST01-D2-PM1-P-016 | ST01-A018

Analysis Method Using Visualization Technique for Solar

Flare Forecast Model Based on Convolutional Neural

Network

Taeyoung KIM¹**, Seung Bum YANG², Dohyeon KIM², Cheonyoung PARK³, Myungjin CHOI², Eunsu PARK¹, Kangwoo YI¹, Seulki SHIN¹, Yong-Jae MOON¹

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ST01-D2-PM1-P-017 | ST01-A019

A Weak Coronal Mass Ejection Without Flare Observed

¹Chinese Academy of Sciences

ST02-D2-PM1-P-016 | ST02-A003

Radiation Dose During the Ground Level Enhancement on

10 September 2017

Ryuho KATAOKA^{1‡+}, Sato TATSUHIKO², Shoko MIYAKE³, Daikou SHIOTA⁴, Yuki KUBO⁴

¹National Institute of Polar Research, ²Japan Atomic Energy Agency, ³NIT Ibaraki College, ⁴National Institute of Information and Communications Technology

ST02-D2-PM1-P-017 | ST02-A005

Open Magnetic Flux and the Cosmic-Ray Sun Shadow

Observed with the Tibet Air Shower Array

Kazumasa KAWATA^{1#+}, Tibet ASGAMMA²
¹ICRR, The University of Tokyo, ²N/A

ST02-D2-PM1-P-018 | ST02-A008

Solar Energetic Electrons Detected in the Earth's Cusp

Region by the BD-IES Instrument

Linghua WANG^{1±+}, Qiugang ZONG¹, Quan-Qi SHI², Chuanyi TU¹, Jiansen HE¹, Hui TIAN¹, Robert WIMMER-SCHWEINGRUBER³, Stuart BALE⁴

¹Peking University, ²Shandong University, ³University of Kiel,

⁴University of California, Berkeley

ST02-D2-PM1-P-019 | ST02-A016

The Strongest Acceleration of >40 keV Electrons by

ICME-Driven Shocks at 1 AU

Liu YANG¹⁺, Linghua WANG¹⁺, Gang LI², Robert WIMMER-SCHWEINGRUBER³, Jiansen HE¹, Hui TIAN¹, Chuanyi TU¹

¹Peking University, ²The University of Alabama in Huntsville, ³University of Kiel

ST02-D2-PM1-P-020 | ST02-A017

Acceleration of Suparthermal Electrons at the Earth's Bow Shock

Zixuan LIU¹⁺, Linghua WANG^{1‡}, Jiawei TAO¹, Liu YANG¹
¹Peking University

ST02-D2-PM1-P-021 | ST02-A018

Hard X-Ray Flares Associated with 3He-Rich Solar Energetic

Electron Events

Wen WANG¹, Linghua WANG^{1#+}, Jiawei TAO¹, Liu YANG¹

1Peking University

ST02-D2-PM1-P-022 | ST02-A019

Modeling a Single Sep Event from Multiple Vantage Points Using the iPATH Model

Gang LI^{1*}, Junxiang HU¹, Gary ZANK¹, Xianzhi AO²
¹The University of Alabama in Huntsville, ²Chinese Academy of Sciences

ST03-D2-PM1-P-020 | ST03-A004

Observations and Simulations of Multiband Chorus in the

Earth's Magnetosphere

Xinliang GAO^{1#+}, Quanming LU¹
¹University of Science and Technology of China

ST03-D2-PM1-P-021 | ST03-A010

Electromagnetic Emission Due to Cyclotron Instability as a Possible Source of Non-Thermal Continuum Radiation in Space Plasmas

Miroslav HORKY^{1,2‡+}, Yoshiharu OMURA²
¹Czech Academy of Sciences, ²Kyoto University

ST03-D2-PM1-P-022 | ST03-A012

Particle Diffusion by Obliquely Propagating Broadband Kinetic Alfvén Wave

Cheongrim CHOI^{1*+}, Minho WOO², Dae-Kyu SHIN¹, Peter H. YOON³, Dae-Young LEE¹, Kyungsun PARK¹
¹Chungbuk National University, ²National Fusion Research
Institute, ³University of Maryland

ST03-D2-PM1-P-023 | ST03-A014

Local Generation of High Frequency Plasmaspheric Hiss Observed by Van Allen Probes

Zhaoguo HE^{1#+}, Lunjin CHEN², Xu LIU², Yong CAO¹

¹Harbin Institute of Technology, ²University of Texas at Dallas

ST03-D2-PM1-P-024 | ST03-A016

Periodicities of PsA Main Pulsation and Bursts of Chorus: A Statistical Comparison

Yuki KAWAMURA^{1,+}, Keisuke HOSOKAWA¹, Yasunobu OGAWA², Satoshi KURITA³, John WYGANT⁴, Aaron BRENEMAN⁴, John BONNELL⁵, Craig KLETZING⁶

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ST03-D2-PM1-P-025 | ST03-A024

Relationship Between Lower-Band Chorus, Electrostatic Electron Cyclotron Harmonic Waves and Pulsating Aurora Based on Conjunction Between Arase and Ground-Based Imager

Mizuki FUKIZAWA^{1‡+}, Takeshi SAKANOI¹, Yoshizumi MIYOSHI², Keisuke HOSOKAWA³, Atsushi KUMAMOTO¹, Fuminori TSUCHIYA¹, Kazuo SHIOKAWA², Akira KADOKURA⁴, Yukinaga MIYASHITA⁵, Yoshimasa TANAKA⁴, Yoshiya KASAHARA⁶, Mitsunori OZAKI⁶, Ayako MATSUOKA⁷, Shoya MATSUDA⁸, Mitsuru HIKISHIMA⁷, Shin-Ichiro OYAMA⁹, Yasunobu OGAWA⁴, Satoshi KURITA², Ryoichi FUJII²

¹Tohoku University, ²Nagoya University, ³University of Electro-Communications, ⁴National Institute of Polar Research, ⁵Korea Astronomy and Space Science Institute, ⁶Kanazawa University, ⁷Japan Aerospace Exploration Agency, ⁸ISAS/JAXA, ⁹Institute for Space-Earth Environmental Research ST03-D2-PM1-P-026 | ST03-A028

Nonlinear Behavior of Charged Particles in Ultralow

Frequency Waves

Li LI¹⁺, Xuzhi ZHOU^{1#}, Zihan WANG¹, Qiugang ZONG¹, Robert RANKIN²

¹Peking University, ²University of Alberta

ST03-D2-PM1-P-027 | ST03-A029

Injected Electrons Modulated by ULF Waves: Van Allen

Probes and BD-IES Observations

Xingran CHEN^{1*+}, Qiugang ZONG¹, Xuzhi ZHOU¹
¹Peking University

ST03-D2-PM1-P-028 | ST03-A031

Low Electron Precipitation Enhancements Measurements from STSAT-1

Jongdae SOHN $^{\mbox{\tiny I}**}$, Jae
jin LEE $^{\mbox{\tiny I}}$, Jaeheung PARK $^{\mbox{\tiny I}}$, Yukinaga MIYASHITA
 $^{\mbox{\tiny I}}$

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ST03-D2-PM1-P-029 | ST03-A032

Study of the Modulation of Whistler-Mode Chorus

Generation by ULF Waves

Yuto KATOH^{1‡+}, Lunjin CHEN²
¹Tohoku University, ²University of Texas at Dallas

ST03-D2-PM1-P-030 | ST03-A037

Generation and Micro-Scale Effects of Electrostatic Waves in an Oblique Shock Crossing

Katherine GOODRICH^{1**}, Robert ERGUN², David NEWMAN², Steven SCHWARTZ³, Lynn WILSON⁴, Frederick WILDER², James BURCH⁵, Roy B. TORBERT⁶, Yuri KHOTYAINTSEV⁷, Per-Arne LINDQVIST⁸, Robert STRANGEWAY⁹, Christopher RUSSELL⁹, Daniel GERSHMAN¹⁰, Barbara GILES¹⁰

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ST04-D2-PM1-P-020 | ST04-A001

The Variability of SE2 Tide Extracted from TIMED/SABER Observations

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ST04-D2-PM1-P-021 | ST04-A011

First Observation of Mesosphere Response to the Solar Wind High-Speed Streams

Wen $YI^{1\sharp *}$, Iain REID^{2,3}, Xianghui XUE¹, Joel YOUNGER^{2,3}, Andrew SPARGO³, Damian MURPHY⁴, Xiankang DOU¹, Tingdi CHEN¹

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ST04-D2-PM1-P-022 | ST04-A019

Initial Report on Polar Mesospheric Clouds Observed by Himawari-8

Takuo TSUDA^{1‡+}, Yuta HOZUMI¹, Kento KAWAURA¹, Hidehiko SUZUKI², Keisuke HOSOKAWA¹, Takuji NAKAMURA³

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ST04-D2-PM1-P-023 | ST04-A020

The Response of Ionospheric TEC and 630 nm Airglow

Emissions During the 2016 Stratospheric Sudden Warming

Yi Chung CHIU^{1‡+}, Loren CHANG¹, Yi DUANN¹, Alexei DMITRIEV¹, Irina V. MEDVEDEVA², K. RATOVSKY²
¹National Central University, ²Russian Academy of Sciences

ST04-D2-PM1-P-024 | ST04-A023

Photochemical Model for Atomic Oxygen Ion Retrieval from

Ground-Based Observations of Airglow

Yi DUANN^{1‡+}, Yi Chung CHIU¹, Loren CHANG¹, Irina V. MEDVEDEVA², K. RATOVSKY², Alexei DMITRIEV¹
¹National Central University, ²Russian Academy of Sciences

ST04-D2-PM1-P-025 | ST04-A029

Anticipated Observation of Gravity Waves and Tides by the Upcoming Gold Mission Using a GCM and Glow Model Katelynn GREER^{1‡+}

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ST04-D2-PM1-P-026 | ST04-A030

Annual and Interannual Variations in Global 6.5DWs from

20 to 110 Km During 2002-2016 Observed by TIMED/SABER

Lingqi ZENG^{1‡+}, Yingying HUANG², Shaodong ZHANG³
¹Institute of Geology and Geophysics Chinese Academy of Sciences,
²PLA University of Science and Technology, ³Wuhan University

ST04-D2-PM1-P-027 | ST04-A034

Assessment of Current Modeling Capabilities of the

Ionospheric Climatology: foF2 and hmF2

Larisa GONCHARENKO^{1#+}, Ioanna TSAGOURI², Ja Soon SHIM^{3,4}, Masha M. KUZNETSOVA³, Anna BELEHAKI²
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ST04-D2-PM1-P-028 | ST04-A036

Multi-Instrumental Investigation of Large-Scale Traveling Ionospheric Disturbances Occurred During the 2015 Severe Storms

Iurii CHERNIAK^{1‡+}, Irina ZAKHARENKOVA^{2,3}
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ST05-D2-PM1-P-012 | ST05-A005

Relativistic Electron Precipitation Events at International

Space Station and Their Conjunction Observations

Ryuho KATAOKA 1* , Haruka UENO², Satoshi NAKAHIRA³, Keisuke HOSOKAWA 4 , Yoshizumi MIYOSHI 5

¹National Institute of Polar Research, ²Japan Aerospace Exploration Agency, ³RIKEN Advanced Institute for Computational Science, ⁴University of Electro-Communications, ⁵Nagoya University

ST05-D2-PM1-P-013 | ST05-A011

Observation on Impulse Electric Field Induced by

Interplanetary Shock

Dianjun ZHANG¹, Wenlong LIU¹‡+, Xinlin LI², Theodore SARRIS³

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ST05-D2-PM1-P-014 | ST05-A015

On the Relationship Between Deep Penetration of Energetic Electrons and the Innermost Plasmapause Locations During Magnetic Storms

Leng Ying KHOO^{1*+}, Xinlin LI¹, Hong ZHAO¹, Theodore SARRIS¹, Berhard BLAKE², Adam KELLERMAN³
¹University of Colorado Boulder, ²The Aerospace Corporation, ³Institute of Geophysics and Planetary Physics

ST05-D2-PM1-P-015 | ST05-A023

SSC Induced Global Scale ULF Waves Accelerate

Magnetospheric Ultra-Relativistic Electrons

Yixin HAO¹*, Qiugang ZONG¹, Xuzhi ZHOU¹, Ying LIU¹, Suiyan FU¹, Xingran CHEN¹, Berhard BLAKE², Daniel BAKER³, John BONNELL⁴

¹Peking University, ²The Aerospace Corporation, ³University of Colorado Boulder, ⁴University of California, Berkeley

ST06-D2-PM1-P-008 | ST06-A001

Cross-Scale Coupling in Collisionless Magnetic

Reconnection

Keizo FUJIMOTO^{1#+}
¹Beihang University

ST06-D2-PM1-P-009 | ST06-A007

Small Cross-Tail Scale Dipolarization Fronts in the Earth's

Magnetotail

Huang JING1+, Meng ZHOU2,3+, Huimin LI4, Xiaohua DENG5, Jiang LIU3, Shiyong HUANG5

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ST06-D2-PM1-P-010 | ST06-A011

Oxygen Reflection on the Earthward Propagating

Dipolarization Fronts

Shaojie ZHAO $^{1\sharp +}$, Suiyan FU 1 , Weijie SUN 2 , Xuzhi ZHOU 1 , George PARKS 3 , Zuyin PU 1 , Duo ZHAO 1 , Tong WU 1 , Qiugang ZONG 1 , Fangbo YU 1

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ST06-D2-PM1-P-011 | ST06-A012

Coherent Structures of Magnetosphere in 3D Global MHD

Simulation

Dongsheng CAI^{1#+}
¹University of Tsukuba

ST06-D2-PM1-P-012 | ST06-A013

Impact of the IMF Rotation: 3D Particle Simulations of the

Solar Wind-Terrestrial Magnetosphere Interaction

Dongsheng CAI^{1#+}
¹University of Tsukuba

ST07-D2-PM1-P-015 | ST07-A002

Nighttime Enhancement of Midlatitude Ionosphere and its

Connection to the Plasmasphere

Quanhan LI1+, Yongqiang HAO1 1 , Donghe ZHANG1, Zuo XIAO1

¹Peking University

ST07-D2-PM1-P-016 | ST07-A006

Opposite Latitudinal Dependence of the Pre- and

Post-Midnight Oscillations in the Electron Density of

Midlatitude F-Layer

Jin WANG1#+

¹Wuhan University

ST07-D2-PM1-P-017 | ST07-A009

Global-Scale Observations of the Limb and Disk: Science

Implementation

William MCCLINTOCK^{1±+}, Richard EASTES¹, Laila ANDERSSON¹, Alan BURNS², Mihail CODRESCU³, Robert DANIELL⁴, Scott ENGLAND⁵, Joseph EVANS⁶, Andrey KRYWONOS⁷, Jerry LUMPE⁶, Arthur RICHMOND², David RUSCH¹, Oswald SIEGMUND⁸, Stanley SOLOMON²

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ST07-D2-PM1-P-018 | ST07-A012

Solar Irradiance Variations and Their Effects on the

Ionosphere: Comparative Investigations Between the Solar

Cycle and Solar Rotation Timescales

Yiding CHEN^{1‡+}, Libo LIU¹, Huijun LE¹, Weixing WAN¹ ¹Chinese Academy of Sciences

ST07-D2-PM1-P-019 | ST07-A014

Establishing a Solar EUV Flux Proxy by Using

Thermospheric FUV Emissions and Solar Radio Fluxes

Yongliang ZHANG1#+, Larry PAXTON1

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ST07-D2-PM1-P-020 | ST07-A015

Estimating the Energy Budget of the Polar Wind

Kun LI1#+, Yong WEI1

¹Chinese Academy of Sciences

ST07-D2-PM1-P-021 | ST07-A017

Response of Schumann Resonance to Solar and Geomagnetic

Activities

Akihiro IKEDA^{1#}, Teiji UOZUMI², Akimasa YOSHIKAWA², Akiko FUJIMOTO², Shuji ABE², Hiromasa NOZAWA¹, Manabu SHINOHARA¹

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ST07-D2-PM1-P-022 | ST07-A026

Investigation of the Geomagnetic Responses of Na, Mg, and

Mg+ Layers Based on Resonance Scattering Measurements

Obtained Using the Envisat/SCIAMACHY

Takuo TSUDA¹²⁺, John BURROWS², Christian VON SAVIGNY³, Martin LANGOWSKI³, Takuji NAKAMURA⁴, Mitsumu K. EJIRI⁴, Takanori NISHIYAMA⁴

¹University of Electro-Communications, ²University of Bremen, ³University of Greifswald, ⁴National Institute of Polar Research

ST07-D2-PM1-P-023 | ST07-A030

Plasma Depletion Bays in the Equatorial and Low-Latitude Ionosphere Observed by FORMOSAT-3/COSMIC During 2007-2014

Jann-Yenq (Tiger) LIU $^{1\sharp *},$ F.Y. CHANG $^{1},$ Tzu-Wei FANG $^{2},$ P. K. RAJESH 3

¹National Central University, ²University of Colorado at Boulder, ³National Cheng Kung University

ST08-D2-PM1-P-020 | ST08-A004

The Fine Structure of the Flux Transfer Events Observed by the Magnetospheric Multiscale Mission at the Magnetopause Shimou WANG^{1‡+}, Rongsheng WANG¹, Quanming LU¹ ¹University of Science and Technology of China

ST08-D2-PM1-P-021 | ST08-A005

MMS Observations of Flux Ropes Associated with Magnetic

Reconnection

Shiyong HUANG^{1#+}
¹Wuhan University

ST08-D2-PM1-P-022 | ST08-A007

Particle-in-Cell Simulation of the Reconnection Front

Associated with Asymmetric Magnetic Reconnection

Liangjin SONG¹⁺, Meng ZHOU^{2,3‡}, Xiaohua DENG⁴, Yongyuan YI¹

¹Nanchang University, ²UCLA, ³University of California, Los Angeles, ⁴Wuhan University

ST08-D2-PM1-P-023 | ST08-A011

Formation of Electron Energy Spectra During Magnetic

Reconnection in Laser-Produced Plasma

Kai HUANG^{1,+}, Quanming LU¹, Can HUANG¹, Quanli DONG², Huanyu WANG¹, Feibin FAN¹, Zhengming SHENG³, Jie ZHANG³

¹University of Science and Technology of China, ²Ludong University, ³Shanghai Jiao Tong University

ST08-D2-PM1-P-024 | ST08-A013

MMS Observations of Whistler Waves in Electron Diffusion

Region

Dong CAO¹, Huishan FU¹²⁺, Jinbin CAO¹, Tieyan WANG¹, Daniel GRAHAM², Zuzheng CHEN¹, Fangzheng PENG¹, Shiyong HUANG³, Yuri KHOTYAINTSEV², Mats ANDRE², Chris RUSSELL⁴, Barbara GILES⁵, Per-Arne LINDQVIST⁶, Roy B. TORBERT७, Robert ERGUN®, Olivier LE CONTEL9, James BURCH¹⁰

¹Beihang University, ²Swedish Institute of Space Physics, ³Wuhan University, ⁴University of California, Los Angeles, ⁵NASA Goddard Space Flight Center, ⁶KTH Royal Institute of Technology, ⁷University of New Hampshire, ⁸University of Colorado Boulder, ⁹National Centre for Scientific Research/ Ecole Polytechnique, ¹⁰Southwest Research Institute

ST08-D2-PM1-P-025 | ST08-A018

Whistler Wave Distribution Around X-Line

Dong CAO¹, Huishan FU^{1‡*}, Jinbin CAO¹, Tieyan WANG¹, Zuzheng CHEN¹, Fangzheng PENG¹

¹Beihang University

ST08-D2-PM1-P-026 | ST08-A019

Internal Structures of the Secondary Flux Rope Associated with Dayside Magnetopause Reconnection

Hengyan MAN¹⁺, Meng ZHOU^{2,3±}, Jean BERCHEM³, Mostafa EL-ALAOUI³, Xiaohua DENG⁴, Ye PANG¹, Zhihong ZHONG¹, Christopher RUSSELL³, Cong ZHAO³, Barbara GILES⁵, William PATERSON⁶, Per-Arne LINDQVIST⁷, James BURCH⁸

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ST08-D2-PM1-P-027 | ST08-A022

Electron Jet Detected by MMS at Dipolarization Front

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ST08-D2-PM1-P-028 | ST08-A023

Electron-Scale Measurements of Dipolarization Front

Chengming LIU¹⁺, Huishan FU^{1‡}
¹Beihang University

ST08-D2-PM1-P-029 | ST08-A029

MMS Observations of an Electron Dissipation Region in

Magnetotail Flow Bursts

Huishan FU^{1#+}, Zuzheng CHEN¹
¹Beihang University

ST08-D2-PM1-P-030 | ST08-A031

Evidence for Secondary Flux Rope Generated by the Electron Kelvin-Helmholtz Instability in a Magnetic Reconnection

Diffusion Region

Zhihong ZHONG¹⁺, Rongxin TANG^{1,2+}, Meng ZHOU^{3,4}, Xiaohua DENG⁵, Ye PANG¹, William PATERSON⁶, Barbara GILES⁷, James BURCH⁸, Roy B. TORBERT⁹, Robert ERGUN¹⁰, Yuri KHOTYAINTSEV¹¹, Per-Arne LINDQVIST¹²

¹Nanchang University, ²Memorial University of Newfoundland, ³UCLA, ⁴University of California, Los Angeles, ⁵Wuhan University, ⁶National Aeronautics and Space Administration, ⁷NASA Goddard Space Flight Center, ⁸Southwest Research Institute, ⁹University of New Hampshire, ¹⁰University of Colorado Boulder, ¹¹Swedish Institute of Space Physics, ¹²KTH Royal Institute of Technology ST08-D2-PM1-P-031 | ST08-A034

Observation of Large-Amplitude Mirror Mode Structures at the Dipolarization Front

Huimin LI1#+, Meng ZHOU2,3, Lixin GUO1, Qi CHENG1, Xiongdong YU4

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ST09-D2-PM1-P-008 | ST09-A003

Study on the Variations of the Differential Code Bias Influenced by Temperature Change in Ionosphere GPS TEC Calculating

Chunliang XIA^{1#+}, Xiaomin ZUO¹
¹China University of Geosciences

ST09-D2-PM1-P-009 | ST09-A004

3-D MHD Time-Dependent Model Kernels that Use UCSD's

Iterative Interplanetary Scintillation (IPS) Analysis

Bernard JACKSON $^{1\sharp*}$, Hsiu-Shan YU 1 , Paul HICK 1 , Andrew BUFFINGTON 1 , Dusan ODSTRCIL 2 , Tae KIM 3 , Nikolai POGORELOV 3 , Munetoshi TOKUMARU 4

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ST09-D2-PM1-P-010 | ST09-A006

Real-Time Prediction and Forecast of GSM Bz Fields at Earth

Using the CSSS Model and UCSD IPS Tomography

Hsiu-Shan YU $^{1\pm}$, Bernard JACKSON 1 , Paul HICK 1 , Andrew BUFFINGTON 1 , Gary ZHAO 1 , Munetoshi TOKUMARU 2 , Ken'ichi FUJIKI 2

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ST10-21-D2-PM1-P-009 | ST10-21-A007

Ionospheric Disturbances Triggered by Rocket Launches

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ST10-21-D2-PM1-P-010 | ST10-21-A010

Concentric Traveling Ionospheric Disturbances Triggered by the Launches of SpaceX Falcon 9 Rockets: JASON-3 and FORMOSAT-5 Mission

Min-Yang CHOU $^{1\pm}$, Charles LIN 1 , Ming Hsueh SHEN 1 , Jia YUE 2 , Chia-Hung CHEN 1 , Jann-Yenq LIU 3 , Po-Cheng CHEN 1 , Jia-Ting LIN 1 , Mitsuru MATSUMURA 4

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ST10-21-D2-PM1-P-011 | ST10-21-A011

Atmospheric Disturbance from Stratosphere to

Thermosphere Perturbed by 2011 Tohoku Earthquakes Based on FORMOSAT-3/COSMIC Data

Xiangxiang YAN^{1‡+}, Tao YU¹, Yang-Yi SUN¹, Chunliang XIA¹, Yifan QI¹, Xiaomin ZUO¹, Lihui QIU¹
¹China University of Geosciences

ST10-21-D2-PM1-P-012 | ST10-21-A012

Data Assimilation of Ground-Based GPS and Radio

Occultation Total Electron Content for Global Ionospheric Specification

Chi-Yen LIN $^{1\sharp*}$, Tomoko MATSUO², Jann-Yenq LIU 1 , Charles LIN 3

¹National Central University, ²University of Colorado Boulder, ³National Cheng Kung University

ST11-D2-PM1-P-012 | ST11-A002

Analysis and Design of an S-Band Ground Station to

Support IDEASSat Ionospheric Data Downlink

Wei Hao LUO^{1#+}, Loren CHANG¹
¹National Central University

ST11-D2-PM1-P-013 | ST11-A006

Satellite Constellation in Need of Parameterising Earthquake

Induced Tropospheric - Ionospheric Perturbations

Manifested as Gravity Wave

Devi MINAKSHI¹⁴⁺, Samiron PATGIRI¹, Ananda BARBARA¹, Manoj SAIKIA¹, Anna DEPUEVA², Koichiro OYAMA^{3,4}
¹Gauhati University, ²Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, ³National Cheng Kung University, ⁴Asia Space Environment Research Consortium

ST11-D2-PM1-P-014 | ST11-A010

Space Science Payloads on Board NGSS-1

Kyoung Wook MIN1#+

¹Korea Advanced Institute of Science and Technology

ST11-D2-PM1-P-015 | ST11-A011

Mission Design of Separable 2U Cubesat (KSA-Sat) for

Studying Atmospheric and Ionospheric Coupling and

Inter-Satellite Communication

K. RYU^{1‡}, Sun Mie PARK¹, Yongmin KIM¹, Hong-Young PARK¹, Seong-Ok PARK¹, Chul LEE¹, Kyoung Wook MIN¹⁺ ¹Korea Advanced Institute of Science and Technology

ST11-D2-PM1-P-016 | ST11-A013

Floating Langmuir Probe for Cubesat Platforms

Hui-Kuan FANG^{1#+}, Alfred CHEN¹
¹National Cheng Kung University

ST11-D2-PM1-P-017 | ST11-A016

Development of Small Scale Magnetospheric Ionospheric

Plasma Experiments (SNIPE) Payload for the Space Weather

Jongdae SOHN^{1;*}, Jaejin LEE¹, Junga HWANG¹, Young-Sil KWAK¹, Jaeheung PARK¹, Uk-Won NAM¹, Won-Kee PARK¹
¹Korea Astronomy and Space Science Institute

ST12-23-D2-PM1-P-008 | ST12-23-A002

GPS Detection of the Ionospheric Disturbances over China due to Impacts of Typhoons Rammasum and Matmo Oian SONG^{1‡+}

¹China Meteorological Administration

ST12-23-D2-PM1-P-009 | ST12-23-A008

The Ionospheric Storms in the American Sector and Their Longitudinal Dependence at the Northern Middle Latitudes Liang XU^{1±+}, Wenjing LIU¹
¹Wuhan University

ST12-23-D2-PM1-P-010 | ST12-23-A010

Statistical Relationship Between Coronal Holes and High Speed Streams at Earth: On Forecasting Perspective Bingxian LUO^{1‡+}, Jiancun GONG¹, Siqing LIU¹ ¹Chinese Academy of Sciences

ST12-23-D2-PM1-P-011 | ST12-23-A012

Periodic Properties of Solar Wind Speed and Interplanetary Magnetic Field Measured Near the Earth During Solar Cycle 23 and 24

Kyung-Eun CHOI¹⁺, Dae-Young LEE^{1‡}, Kyungsun PARK¹, Kyung-Chan KIM², Kyu-Cheol CHOI³, Jaehun KIM⁴

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ST13-D2-PM1-P-013 | ST13-A003

Daytime F Region Irregularity Triggered by Rocket Induced Ionospheric Hole over Low Latitude

Guozhu LI¹⁵⁺, Baiqi NING¹, Mangalathayil ABDU², Chi WANG¹, Yuichi OTSUKA³, Jiuhou LEI⁴, Michi NISHIOKA⁵, Takuya TSUGAWA⁵

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ST13-D2-PM1-P-014 | ST13-A009

Low - Latitude Daytime F Region Irregularities Observed in Two Geomagnetically Quiet Days by the Hainan Coherent Scatter Phased Array Radar (HCOPAR)

Gang CHEN^{1#+}
¹Wuhan University

ST13-D2-PM1-P-015 | ST13-A017

An Analysis of Longitudinal Variations of Small-Scale Irregularities of Sporadic E Layers Based on GPS-CHAMP

Occultation Measurements

Jisheng XU^{1#+}, Liang XU¹
¹Wuhan University

ST13-D2-PM1-P-016 | ST13-A019

Unseasonal Equatorial Plasma Bubbles over South-East Asia During July, 2014

Julie CURRIE^{1‡+}, Brett CARTER¹
¹Royal Melbourne Institute of Technology University

ST13-D2-PM1-P-017 | ST13-A027

Using Global Coupled Thermosphere-Ionosphere Modelling to Capture Daily Variability in the Occurrence of Post-Sunset Equatorial Plasma Bubbles

Brett CARTER^{1‡+}, Julie CURRIE¹, Michael TERKILDSEN², Kirco ARSOV², Keith GROVES³, Ronald CATON⁴

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ST14-D2-PM1-P-008 | ST14-A001

On the Misleading Perception of Magnetic Field Lines
Moving Through a Magnetic Reconnection Site
Anthony LUI^{1‡+}

¹Johns Hopkins University

ST14-D2-PM1-P-009 | ST14-A005

A Direct Examination of the Dynamics of Dipolarization Fronts Using MMS

Z. H. YAO^{1‡+}, Jonathan RAE², Ruilong GUO³, Andrew FAZAKERLEY², Christopher OWEN², Rumi NAKAMURA⁴, Wolfgang BAUMJOHANN⁴, Clare WATT⁵, Kyoung-Joo HWANG⁶, Barbara GILES⁶, Chris RUSSELL⁷, Roy B. TORBERT⁸, Ali VARSANI⁴, Huishan FU⁹, Quanqi SHI¹⁰, Xiaojia ZHANG⁷

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ST14-D2-PM1-P-010 | ST14-A007

Electron Dynamics During Magnetic Reconnection in Saturn's Magnetosphere

Ruilong GUO¹⁵⁺, Z. H. YAO², Yong WEI¹
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ST15-D2-PM1-P-009 | ST15-A001

IFEs from Macroscale to Microscale in the Solar Wind

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ST15-D2-PM1-P-010 | ST15-A004

Plasma Observations in the Heliosheath

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ST15-D2-PM1-P-011 | ST15-A010

An Overview of Recent Voyager Data

John RICHARDSON^{1#+}, Voyager TEAM²

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ST15-D2-PM1-P-012 | ST15-A011 (Invited)

Vortices, Waves and Aurorae in the Near Earth Space After

Solar Wind Dynamic Pressure Change

Quanqi SHI1#+

¹Shandong University

ST15-D2-PM1-P-013 | ST15-A014

Origins of Non-Radial Propagation of Eruptive Solar Events

ST16-D2-PM1-P-008 | ST16-A002

Particle Energization in Earth's Van Allen Radiation Belts

Due to Solar Wind Forcing

Hong ZHAO¹, Daniel BAKER^{1‡+}
¹University of Colorado Boulder

ST16-D2-PM1-P-009 | ST16-A004

Formation Process of the Outer Radiation Belt Through

Nonlinear Interaction with Chorus Emissions Localized in

Longitude

Yoshiharu OMURA^{1#+}, Yuko KUBOTA¹ ¹Kyoto University

ST16-D2-PM1-P-010 | ST16-A006

A 1D Simulation of Generation of Electron Cyclotron

Harmonic Waves by a Loss Cone Distribution

Xin TAO1#+

¹University of Science and Technology of China

ST16-D2-PM1-P-011 | ST16-A009

Using Phase Space Density to Explore the Dynamics of the

Radiation Belts

Alexander BOYD^{1‡+}, Drew TURNER², Geoffrey REEVES³, Harlan SPENCE⁴

¹New Mexico Consortium, ²The Aerospace Corporation, ³Los Alamos National Laboratory, ⁴University of New Hampshire

ST16-D2-PM1-P-012 | ST16-A011

The Effect of Magnetic Dip on Radiation Belts

Lunjin CHEN1#+

¹University of Texas at Dallas

ST16-D2-PM1-P-013 | ST16-A014

Statistical Analysis of EMIC Waves Observed by Plasma

Wave Experiment (PWE) Aboard Arase

Shoya MATSUDA^{1#}, Yoshiya KASAHARA², Yoshizumi MIYOSHI³, Reiko NOMURA⁴, Satoshi KURITA³, Mariko TERAMOTO³, Yasumasa KASABA⁵, Keigo ISHISAKA⁶, Masafumi SHOJI³, Ayako MATSUOKA⁴

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ST16-D2-PM1-P-014 | ST16-A015

Radiation Belt Enhancement and Drop-Out Drift-Echoes

Driven by a Solar Wind Dynamic Pressure Pulse: The Role of

Magnetospheric Convection and Plasma Density Structure

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¹Shandong University, ²National Aeronautics and Space Administration, ³University College London, ⁴University of Reading, ⁵University of Alberta

ST16-D2-PM1-P-015 | ST16-A016

High-cadence MMS Observations of Electromagnetic Ion

Cyclotron and Chorus Waves

Maria USANOVA¹⁵⁺, Narges AHMADI¹, David MALASPINA¹, Robert ERGUN¹, Karlheinz TRATTNER¹, Stephen FUSELIER², Roy B. TORBERT³, Barry MAUK⁴, Olivier LE CONTEL⁵, Christopher RUSSELL⁶, James BURCH²

¹University of Colorado Boulder, ²Southwest Research Institute, ³University of New Hampshire, ⁴The Johns Hopkins University Applied Physics Laboratory, ⁵National Centre for Scientific Research/ Ecole Polytechnique, ⁶University of California, Los Angeles

ST17-D2-PM1-P-017 | ST17-A001

The Effects of the IMF Bz Period Oscillation on the

Ionosphere and Thermosphere

Kedeng ZHANG^{1*+}, Jing LIU², Wenbin WANG², Hui WANG¹ Wuhan University, ²National Center for Atmospheric Research

ST17-D2-PM1-P-018 | ST17-A004

The Magnetosphere's Response to a Remarkable Solar Wind Pressure Pulse

Yi QI^{1±+}, Chris RUSSELL¹, Hairong LAI¹, Pete RILEY²
¹University of California, Los Angeles, ²Predictive Science Inc.

ST17-D2-PM1-P-019 | ST17-A007

Ionospheric and Thermospheric Response to the 27-Day

Variations of Solar EUV Flux: Observations and Simulations

Dexin REN1+, Jiuhou LEI1#

¹University of Science and Technology of China

ST17-D2-PM1-P-020 | ST17-A020

A Comparison of Quiet-Time Thermospheric Winds

Between FPI Observations and Model Calculations

Guoying JIANG^{1‡+}, Jiyao XU¹, Wenbin WANG², Wei YUAN¹, Shunrong ZHANG³, Tao YU⁴, Xiao-Xin ZHANG⁵, Cong HUANG⁵, Robert B. KERR⁶, Weijun LIU¹, Qinzeng LI¹

¹Chinese Academy of Sciences, ²National Center for Atmospheric Research, ³Massachusetts Institute of Technology, ⁴China University of Geosciences, ⁵China Meteorological Administration, ⁶Scientific Solutions Inc.

ST17-D2-PM1-P-021 | ST17-A021

M-I-T System Response to the Solar Wind Dynamic Pressure Enhancement on March 17, 2015 Through Global Numerical Simulations

Doga OZTURK1*+, Shasha ZOU1, Aaron RIDLEY1, James SLAVIN1

¹University of Michigan

ST17-D2-PM1-P-022 | ST17-A022

Modeling Study of Midlatitude Ionospheric Peaks in Total

Electron Content Under Solar Minimum Condition

Chunhua JIANG $^{1s+}$, Wenbin WANG 2 , Guobin YANG 1 , Jing LIU 2 , Zhao ZHENGYU 1

¹Wuhan University, ²National Center for Atmospheric Research

ST17-D2-PM1-P-023 | ST17-A023

A Comparison Study of NO Cooling Between

TIMED/SABER Data and TIEGCM Outputs

Zheng LI1**, Delores KNIPP², Wenbin WANG², Cheng SHENG² 1 Nanjing University of Information Science , 2 National Center for Atmospheric Research

ST17-D2-PM1-P-024 | ST17-A025

The Physical Mechanism Driving the Effects of a

Geomagnetic Storm on the Mesosphere and Lower

Thermosphere Temperature at Middle Latitudes

Jingyuan LI^{1‡+}, Wenbin WANG², Jianyong LU³, Tao YUAN⁴, Jia YUE⁵, Xiao LIU⁶, Kedeng ZHANG⁷, Alan G. BURNS², Zheng LI¹

¹Nanjing University of Information Science, ²National Center for Atmospheric Research, ³Nanjing University of Information Science & Technology, ⁴Utah State University, ⁵Hampton University, ⁶Henan Normal University, ⁷Wuhan University

ST19-D2-PM1-P-015 | ST19-A006

The Wave Driver of Relativistic Microbursts Through

Ground Observations

Emma DOUMA¹⁵⁺, Craig RODGER¹, Mark CLILVERD², Aaron HENDRY¹, Mark ENGEBRETSON³, Marc LESSARD⁴
¹University of Otago, ²The British Antarctic Survey, ³Augsburg College, ⁴University of New Hampshire

ST19-D2-PM1-P-016 | ST19-A009

Sub-Relativistic Electron Precipitation Associated with

Pulsating Aurora Observed by VLF Radio Propagation

During Recovery Phase of Substorm on 27 March 2017

Fuminori TSUCHIYA¹, Asuka HIRAI¹, Takahiro OBARA¹, Hiroaki MISAWA¹, Satoshi KURITA², Kazuo SHIOKAWA², Yoshizumi MIYOSHI², Martin CONNORS³

¹Tohoku University, ²Nagoya University, ³Athabasca University

ST19-D2-PM1-P-017 | ST19-A010

Temporal and Spatial Correspondence of Pc1/EMIC Waves and Energetic Electron Precipitation with Ground-Based

Observation on 27 March, 2017

Asuka HIRAI¹⁵⁺, Fuminori TSUCHIYA¹, Takahiro OBARA¹, Hiroaki MISAWA¹, Kazuo SHIOKAWA², Yoshizumi MIYOSHI², Satoshi KURITA², Martin CONNORS³ ¹Tohoku University, ²Nagoya University, ³Athabasca University

ST20-D2-PM1-P-015 | ST20-A002

Effect of Spatio-Temporal Radial Expansion and Contraction

on the Coronal Loop Oscillations

Dae Jung YU^{1#+}, Dong-Hun LEE¹
¹Kyung Hee University

ST20-D2-PM1-P-016 | ST20-A004

Magnetic Flux Emergence from the Convection Zone to the Corona: Coupling the Solar Convective Dynamo and the Solar Atmosphere

Feng CHEN^{1‡+}, Matthias REMPEL², Yuhong FAN²
¹University of Colorado Boulder, ²National Center for Atmospheric Research

ST20-D2-PM1-P-017 | ST20-A011

Observed Instability Constraints on Electron Heat Flux in the Solar Wind

Yuguang TONG $^{1z+}$, Stuart BALE 1 , Chadi SALEM 1 , Marc PULUPA 1

¹University of California, Berkeley

ST20-D2-PM1-P-018 | ST20-A013

Generation of Multi-Scale Pressure Balanced Structures in 3D Compressible Plasma Turbulence and Comparison with the Observations

Li-Ping YANG¹*-, Jiansen HE¹, Chuanyi TU¹, Shengtai Ll², Lei ZHANG³, Eckart MARSCH⁴, Linghua WANG¹, Xin WANG¹, Xueshang FENG³

¹Peking University, ²Los Alamos National Laboratory, ³Chinese Academy of Sciences, ⁴University at Kiel

ST20-D2-PM1-P-019 | ST20-A014

Different Formation Mechanisms of the Concurrent Cool and

Warm Jets by Magnetic Flux Emerging in Solar Atmosphere

Li-Ping YANG^{1#+}, Jiansen HE¹, Hardi PETER², Chuanyi TU¹, Linghua WANG¹, Lei ZHANG³, Limei YAN³ ¹Peking University, ²Max-Planck Institute for Solar System

Research, ³Chinese Academy of Sciences

ST20-D2-PM1-P-020 | ST20-A017

Possible Noise Nature of Elsäser Variable Z- in Highly

Alfvénic Solar Wind Fluctuations

Xin WANG¹+, Chuanyi TU²+, Jiansen HE², Linghua WANG², Shuo YAO³, Lei ZHANG⁴

¹Beihang University, ²Peking University, ³China University of Geosciences, ⁴Chinese Academy of Sciences

ST20-D2-PM1-P-021 | ST20-A018

Thermal Responses in a Wave-Heated Coronal Loop

Takuma MATSUMOTO1#+

¹Nagoya University

ST20-D2-PM1-P-022 | ST20-A021

In What Magnetic Environment are Coronal Loop Plasmas

Located?

Daye LIM¹, Kap-Sung KIM¹**, Sibaek YI¹, Gwang-Son CHOE¹ ** *Kyung Hee University*

ST20-D2-PM1-P-023 | ST20-A025

The Kinetic Alfvén Wave Instability in the Electron

Beam-Return Current System and Application to Some

Processes in Solar Flare Loops

Ling CHEN1#+

¹Chinese Academy of Sciences

ST22-D2-PM1-P-017 | ST22-A002

Solar 27-Day Rotational Period Detected in Wide-Area

Lightning Activity in Japan

Hiroko MIYAHARA¹ª+, Ryuho KATAOKA², Toshio TERASAWA³, Yukihiro TAKAHASHI⁴, Mitsuteru SATO⁴¹Humanities and Sciences/Musashino Art University, ²National Institute of Polar Research, ³The University of Tokyo, ⁴Hokkaido University

ST22-D2-PM1-P-018 | ST22-A003

Variation of Relative Humidity in Central Japan During the

Little Ice Age and its Relation to Solar Activity

Hiroko MIYAHARA^{1‡+}, Wataru SAKASHITA², Yusuke YOKOYAMA³, Takahiro AZE³, Takeshi NAKATSUKA⁴
¹Humanities and Sciences/Musashino Art University, ²University of Tsukuba, ³The University of Tokyo, ⁴Research Institute for Humanity and Nature

ST22-D2-PM1-P-019 | ST22-A005

Influence of the IMF Cone Angle on Invariant Latitudes of Polar Region Footprints of FACs in the Magnetotail: Cluster Observation

Zhengwei CHENG^{1‡+}, Jiankui SHI¹, Jichun ZHANG²
¹Chinese Academy of Sciences, ²University of New Hampshire

ST22-D2-PM1-P-020 | ST22-A008

Comparisons and Implications of Supermag and Traditional Auroral Electrojet Indices During Major Geomagnetic Storms

Jiancun GONG^{1#+}, Bingxian LUO¹, Siqing LIU¹
¹Chinese Academy of Sciences

ST22-D2-PM1-P-021 | ST22-A009

The Dynamic State Transition of a Solar Eruption in Active Region 12158

Hwanhee LEE^{1#+}, Tetsuya MAGARA¹
¹Kyung Hee University

ST22-D2-PM1-P-022 | ST22-A011

Parametric Study Using MHD Simulation to Investigate How a CME Interacts with Ambient Solar Wind in the

Interplanetary Space

Junmo AN¹, Tetsuya MAGARA¹, Yong-Jae MOON¹

¹Kyung Hee University

ST22-D2-PM1-P-023 | ST22-A012

Kinetic Scale Magnetic Holes and Peaks in the Terrestrial

Magnetosheath

Shutao YAO¹+, Quan-Qi SHI¹+, Ruilong GUO², Zhonghua YAO³, Anmin TIAN¹, A. W. DEGELING¹, Weijie SUN², Ji LIU¹-², Xiaogang WANG⁴, Qiugang ZONG⁴, Hui ZHANG⁵, Zuyin PU⁴, Linghua WANG⁴, Suiyan FU⁴, Chijie XIAO⁴, Feng YONGYONG⁶, Chris RUSSELL७, Barbara GILES⁵ ¹Shandong University, ²Chinese Academy of Sciences, ³Université de

¹Shandong University, ²Chinese Academy of Sciences, ³Université à Liège, ⁴Peking University, ⁵University of Alaska Fairbanks, ⁶National Space Science Center, ⁷University of California, Los Angeles, ⁸NASA Goddard Space Flight Center

ST22-D2-PM1-P-024 | ST22-A013

Test Particle Simulation for Magnetic Holes

Ji LIU^{1,2+}, Shutao YAO², Quan-Qi SHI²⁺, Xiaogang WANG³, Feng YONGYONG⁴, Xin TAO⁵, Qiugang ZONG³, Chijie XIAO³, Suiyan FU³, Zuyin PU³

¹Chinese Academy of Sciences, ²Shandong University, ³Peking University, ⁴National Space Science Center, ⁵University of Science and Technology of China

ST22-D2-PM1-P-025 | ST22-A016

Decomposition of the Wave Elements of the Global

High-Correlation Pi 2

Teiji UOZUMI^{1**}, Akimasa YOSHIKAWA¹, Shin OHTANI², Dmitry BAISHEV³, Alexey MOISEEV³, Boris SHEVTSOV⁴
¹Kyushu University, ²The Johns Hopkins University, ³Siberian Branch of the Russian Academy of Sciences, ⁴Far Eastern Branch of Russian Academy of Sciences

ST22-D2-PM1-P-026 | ST22-A017

Differentiated Oxygen and Hydrogen Ion Global 3-D
Distributions in the Inner Magnetosphere Reconstructed
from TWINS ENA Images During Two Magnetic Storms
Xiang-Yao ZENG¹⁺, Shuying MA^{1#}, Rong-Pu HU¹, Liang XU¹
¹Wuhan University

ST22-D2-PM1-P-027 | ST22-A025

The Research on Prediction of Proton Using Deep Learning Seung Bum YANG^{1‡+}, Taeyoung KIM², Dohyeon KIM¹, Soyeon KANG¹, Myungjin CHOI¹ ¹InSpace Co., Ltd, ²Kyung Hee University

ST22-D2-PM1-P-028 | ST22-A028

How Much Magnetic Helicity Influx Can We Estimate with a Footpoint Tracking Method During a Magnetic Flux

Emergence?

Gwang-Son CHOE^{1#+}, Sibaek YI¹
¹Kyung Hee University

ST22-D2-PM1-P-029 | ST22-A032

Effect of Interplanetary By-Polarity Changes on Auroral Luminosity

Kan LIOU¹‡+, Elizabeth MITCHELL¹, Chin-Chun WU²¹The Johns Hopkins University Applied Physics Laboratory, ²U.S. Naval Research Laboratory

ST22-D2-PM1-P-030 | ST22-A034

Do Inner Planets Modulate the Space Environment at 1 AU from the Sun?

Jung Hee KIM¹, Heon Young CHANG^{1#+}
¹Kyungpook National University

ST-PS15-D2-PM1-P-022 | ST-PS15-A002

Mutual Impedance Technique for Electron Density

Measurement Around Jupiter's Moons (Europe, Calisto and

Ganymede) on JUICE Mission: MIME Instrument

Jean Louis RAUCH^{1,*}, Pierre HENRI¹, Jan-Erik WAHLUND², Olivier LE DUFF¹, Ousmane SENE¹, Fabrice COLIN¹, Tedjani HACHEMI¹, Dominique LAGOUTTE¹, Nicolas GILET¹, Lennart AHLEN², Jan BERGMAN², Reine GILL², Walter PUCCIO²

¹National Center for Scientific Research, ²Swedish Institute of Space Physics

ST-PS15-D2-PM1-P-023 | ST-PS15-A004

Single-Axis Ion Velocity Analyzer (SAIV) for Sounding Rocket Mission

Ke-Shen LIU¹⁸⁺, Hui-Kuan FANG¹, Ting-Chou WU¹, Wen-Hao CHEN¹, Alfred CHEN¹
¹National Cheng Kung University

ST-PS15-D2-PM1-P-024 | ST-PS15-A008

Water Detection at a Planetary Object with a Neutron

Detector

Nobuyuki HASEBE^{1‡+}, Hiroshi NAGAOKA², Masayuki NAITO¹, Junya ISHII¹, Hiroki KUSANO², Kyeong Ja KIM³, José A. Matias LOPES⁴

¹Waseda University, ²Japan Aerospace Exploration Agency, ³Korea Institute of Geoscience and Mineral Resources, ⁴University of Coimbra

ST-PS15-D2-PM1-P-025 | ST-PS15-A009

Feasibility Study for Detecting Atomic Oxygen Exospheres of TRAPPIST-1d, e, and f Using a UV Space Telescope

Naoya OSADA¹⁵⁺, Shingo KAMEDA¹, Hitoshi FUJIWARA², Go MURAKAMI³, Masahiro IKOMA⁴, Keigo ENYA³, Norio NARITA⁵

¹Rikkyo University, ²Seikei University, ³Japan Aerospace Exploration Agency, ⁴The University of Tokyo, ⁵National Astronomical Observatory of Japan ST-PS15-D2-PM1-P-026 | ST-PS15-A012

Intensified Retarding Potential Analyzer (IRPA) for

Sounding Rocket Mission

Ting-Chou WU $^{1#}$, Hui-Kuan FANG 1 , Ke-Shen LIU 1 , Wen-Hao CHEN 1 , Alfred CHEN 1

¹National Cheng Kung University

ST-PS15-D2-PM1-P-027 | ST-PS15-A014

Investigation of the Solar System Disc Structure During the

Cruising Phase of the OKEANOS Mission

Takahiro IWATA¹^{‡+}, Tatsuaki OKADA¹, Shuji MATSUURA², Kohji TSUMURA³, Hajime YANO¹, Ayako MATSUOKA¹, Reiko NOMURA¹, Daisuke YONETOKU⁴, Tatehiro MIHARA⁵, Yoko KEBUKAWA⁶, Motoo ITO⁻, Makoto YOSHIKAWA¹, Jun MATSUMOTO¹, Toshihiro CHUJO¹, Osamu MORI¹¹Japan Aerospace Exploration Agency, ²Kwansei Gakuin University, ³Tohoku University, ⁴Kanazawa University, ⁵RIKEN Advanced Institute for Computational Science, ⁶Yokohama National University, ¬Japan Agency for Marine-Earth Science and Technology

ST-PS15-D2-PM1-P-028 | ST-PS15-A015

The Telescience Exploration Subsystem of Chang'e-3

Mission

Xiaoxia ZHANG^{1‡+}, Chun-Lai LI¹, Jianjun LIU¹, Wei ZUO¹, Wenrui WANG¹, Yaying XIONG¹

¹Chinese Academy of Sciences

ST-PS15-D2-PM1-P-029 | ST-PS15-A017

The Circumpolar Stratospheric Telescope FUJIN for

Observations of Planets

Makoto TAGUCHI^{1,*}*, Yukihiro TAKAHASHI², Masataka IMAI², Yasuhiro SHOJI³, Toshihiko NAKANO⁴, Yukiko SHIRAFUJI¹

¹Rikkyo University, ²Hokkaido University, ³Osaka University, ⁴National Institute of Technology

ST-PS15-D2-PM1-P-030 | ST-PS15-A023

SS-520-3 Sounding Rocket Experiment Targeting the Ion

Outflow over the Cusp Region: Status Update

Yoshifumi SAITO^{1‡+}, Yasunobu OGAWA², Hirotsugu KOJIMA³
¹Japan Aerospace Exploration Agency, ²National Institute of Polar
Research, ³Kyoto University

ST-PS15-D2-PM1-P-031 | ST-PS15-A037

Development of a Flight Software Engineering Model of a

Next Generation Solar Coronagraph for Ballon-Borne

Experiments

Jongyeob PARK¹⁵⁺, Sunghwan CHOI¹, Jihun KIM¹, Be-Ho JANG¹, Su-Chan BONG¹, Ji-Hye BAEK¹, Heesu YANG¹, Young-Deuk PARK¹, Kyungsuk CHO¹

¹Korea Astronomy and Space Science Institute

ST-PS15-D2-PM1-P-032 | ST-PS15-A041

Auroral and Airglow Imagers in Visible and Far Ultra-Violet

Wavelengths for of Future Sounding Rocket and Small

Satellite Missions

Takeshi SAKANOI¹*, Yoshizumi MIYOSHI², Kazushi ASAMURA³, Keisuke HOSOKAWA⁴, Masafumi HIRAHARA², Yoshifumi SAITO³, Takuo TSUDA⁴, Mizuki FUKIZAWA¹, Naoshi YAGI¹

¹Tohoku University, ²Nagoya University, ³Japan Aerospace Exploration Agency, ⁴University of Electro-Communications

ST-PS15-D2-PM1-P-033 | ST-PS15-A042

Solar Orbiter Science Operations: Not a Typical Heliophysics

Mission

Andrew WALSH^{1*}, Anik DE GROOF¹, David WILLIAMS¹, Yannis ZOUGANELIS¹, Daniel MUELLER¹
¹European Space Agency



Presentations 6 JUN, 2018 WEDNESDAY

Day 3 - 06 Jun 2018, Wednesday Program Overview

06 Jun 2018, Wednesday				
Time / Room	AM1	AM2	PM1	PM2
	08:30 - 10:30	11:00 - 12:30	13:30 - 15:30	16:00 - 18:00
MR301	HS21 (p215)	HS28 (p218)	HS17 (p214)	HS17 (p215)
MR302A	PS06 (p229)		PS06 (p230)	PS02 (p229)
MR302B	AS35 (p208)		IG13 (p222)	SE09 (p240)
MR303A	AS33 (p206)			AS33 (p207)
MR303B	AS37 (p208)			AS37 (p209)
MR304A	PS17 (p231)	PS17 (p232)	PS17 (p233)	PS17 (p234)
MR304B	BG07 (p211)	KL-BG (p9), DL-BG (p6)		BG10-IG (p211)
MR314	SE26 (p243)	SE26 (p243)	SE25-40 (p242)	SE25-40 (p243)
MR315	AS26-BG (p204)	KL-AS (p9), DL-AS (p5)		
MR317A	ST22 (p250)	ST22 (p250)	ST22 (p251)	ST14 (p247)
MR317B	OS14 (p225)	OS19 (p226)	OS24 (p228)	OS24 (p228)
MR318A	HS09 (p212)	HS09 (p212)	HS26 (p216)	HS26 (p217)
MR318B	HS12 (p214)	HS25 (p216)	HS10 (p213)	HS10 (p213)
MR319A	AS29 (p205)		SS08 (p244)	AS29 (p206)
MR319B	SE08 (p239)	SE08 (p240)	SE06-30-39 (p238)	SE06-30-39 (p239)
MR321A	SE02 (p238)	SE01 (p236)	SE01 (p237)	SE01 (p237)
MR321B	SE15 (p240)	SE15 (p241)	SE23 (p241)	
MR322A	OS03 (p223)	OS03 (p223)	OS17 (p226)	
MR322B	IG09 (p221)	IG22 (p222)	IG08 (p220)	IG08 (p221)
MR323A	IG03 (p218)		IG03 (p219)	IG03 (p219)
MR323B	PS12 (p231)	PS21 (p236)	PS20 (p234)	PS20 (p235)
MR323C	ST15 (p247)	ST08 (p245)	ST08 (p245)	ST08 (p246)
MR324	OS21 (p227)		OS13 (p224)	OS13 (p224)
MR325A	AS06 (p202)	SS12 (p245)		AS06 (p203)
MR325B	AS03 (p202)	ST19 (p249)	ST19 (p249)	ST16 (p248)
MR326A	AS07 (p203)			AS07 (p204)
MR326B	AS40 (p209)			AS40 (p210)
Ballroom B			BG Posters (p269)	
			AS2 Posters (p252)	

Sessions & Conveners

* Main Convener

AS03-Multi-scale Climate Variability Over Asia and Surrounding Oceans

*Tim LI University of Hawaii, Renhe ZHANG Fudan University, Tomoe NASUNO Japan Agency for Marine-Earth Science and Technology, Jong-Seong KUG Pohang University of Science and Technology, Song YANG Sun Yat-sen University

AS06-Application of Cloud-resolving Model Simulations for

Studying Cloud-related Processes in Climate

*Wei-Kuo TAO NASA Goddard Space Flight Center, Chung-Hsiung SUI National Taiwan University, Masaki SATOH The University of Tokyo, Pay-Liam LIN National Central University, Qinghong ZHANG Peking University

AS07-Behavior of Monsoon in the Current and Future

Climate: Comparisons Among Different Monsoon Regions

*Wen CHEN Chinese Academy of Sciences, Congwen ZHU Chinese Academy of Meteorological Sciences, Lin WANG Chinese Academy of Sciences, Patama SINGHRUCK Chulalongkorn University, Hirokazu ENDO Japan Meteorological Agency

AS26-BG-Vegetation-air Pollution Interaction at the

Urban-rural Interface

*Saewung KIM University of California, Irvine, Meehye LEE Korea University, Xuemei WANG Jinan University

AS29-Precipitation Extremes - Observations, Modelling,

Projections

*Akiyo YATAGAI Hirosaki University, Tosiyuki NAKAEGAWA Japan Meteorological Agency, Akio KITOH Japan Meteorological Business Support Center, Patama SINGHRUCK Chulalongkorn University, Vinay KUMAR Texas A&M University

AS33-Multi-sensor Observations of Severe Storms and

Disaster Reduction

*Eiichi NAKAKITA Kyoto University, Kazuhisa TSUBOKI Nagoya University, Satoru OISHI Kobe University, Kenji SUZUKI Yamaguchi University, Katsuhiro NAKAGAWA National Institute of Information and Communications Technology

AS35-Mountain and Island Effects on Airflow, Precipitation,

Weather, and Climate

*Cheng-Ku YU National Taiwan University, Yuh-Lang LIN North Carolina A&T State University, Yileng CHEN University of Hawaii at Manoa, United States, Tetsuya TAKEMI Kyoto University

AS37-Earth System Models: Development, Validation and

Uncertainties

*Xiaohong LIU University of Wyoming, Zhaohui LIN Chinese Academy of Sciences, Shaocheng XIE Lawrence Livermore National Laboratory, Yi MING National Oceanic and Atmospheric Administration, Huang-Hsiung HSU Academia Sinica

AS40-Results from the 2016 KORUS-AQ and Related Field

Studies in Asia

*James CRAWFORD NASA Langley Research Center, Imsuk JANG National Institute of Environmental Research, Cheol-Hee KIM Pusan National University, Louisa EMMONS National Center for Atmospheric Research, Xinrong REN NOAA Air Resources Laboratory

BG07-Biogeochemistry of Metal -mineral/microbe

Interactions in Aquatic and Terrestrial Ecosystems

*Punyasloke BHADURY Indian Institute of Science Education and Research Kolkata, Bhoopesh MISHRA University of Leeds

BG10-IG-Modeling the Biogeochemical Cycle in the Earth

System: from Local to Regional and Global Scales

*Long CAO Zhejiang University, Atul JAIN University of Illinois at Urbana-Champaign, Yangchun LI Chinese Academy of Sciences, Duoying JI Beijing Normal University

HS09-Water Resources Planning, Management and

Decision-making Under Hydrological Uncertainty

*Yung-Chia HSU National Cheng Kung University, Gene Jiing-Yun YOU National Taiwan University, Yi-Ming KUO China University of Geosciences, Shien-Tsung CHEN Feng Chia University

HS10-Near Surface Investigation and Modeling for

Groundwater Resources Assessment

*Wenfu CHEN Chia Nan University, Jui-Pin TSAI National Chiao Tung University, Liang-Cheng CHANG National Chiao Tung University, Chuen-Fa NI National Central University, Ping-Yu CHANG National Central University,

HS12-Risk Assessment Related to Hydrological, Climatic,

and Environmental Changes

*Tsang-Jung CHANG National Taiwan University, Hwa-Lung YU National Taiwan University, Howard H-C HO National Taiwan University

HS17-Ecohydrological Processes and Modelling in a

Changing Environment

*Huimin LEI Tsinghua University, Bellie SIVAKUMAR University of New South Wales, Ji CHEN The University of Hong Kong, Dawen YANG Tsinghua University, Quan ZHANG Wuhan University

HS21-Monthly to Seasonal Projection of Extreme

Climatic/hydrological Events

*Ji CHEN The University of Hong Kong, Hung Soo KIM Inha University, Bellie SIVAKUMAR University of New South Wales

HS25-Hydrologic Prediction and Measures Considering

Extreme Climate Conditions

*Kun-Yeun HAN Kyungpook National University, Jun-Haeng HEO Yonsei University, Jaeeung YI Ajou University, Yeonsang HWANG Arkansas State University

HS26-Global Cryosphere and Its Challenges

*Yong ZHANG Hunan University of Science and Technology, Hiroyuki ENOMOTO National Institute of Polar Research, Shiyin LIU Yunnan University, Jing MING Max Planck Institute for Chemistry

HS28-Impacts of Climate Change on Floods, Droughts, and

Water Availability in Asian Countries

*Yongqin David CHEN The Chinese University of Hong Kong, Jianfeng LI Hong Kong Baptist University, Thian Yew GAN Research Ambassador, Qiang ZHANG Beijing Normal University

IG03-Interdisciplinary Tsunami Science

*Yuichiro TANIOKA Hokkaido University, Stuart WEINSTEIN NOAA, Yoshiki YAMAZAKI University of Hawaii, Tomoyuki TAKAHASHI Kansai University, Yusuke YAMANAKA The University of Tokyo

IG08-Data-driven Modeling in Geoscience

*Takane HORI Japan Agency for Marine-Earth Science and Technology, Dmitri KONDRASHOV University of California, Los Angeles, Hiromichi NAGAO The University of Tokyo, Tatsu KUWATANI Japan Agency for Marine-Earth Science and Technology, Shinya NAKANO The Institute of Statistical Mathematics

IG09-Big data, point cloud, and geospatial analytics in geosciences

*Uma DAS Indian Institute of Information Technology Kalyani, Sanat Kumar DAS Bose Institute, Yuichi S. HAYAKAWA The University of Tokyo, Chandra Shekhar DUBEY Delhi University

IG13-Where History and Geology Intercept:

Multidisciplinary Approaches to Extending Our Chronology

of Catastrophic Geologic Events

*Christopher HARPEL US Geological Survey, Fiona WILLIAMSON National University of Singapore, Florian M. SCHWANDNER Jet Propulsion Laboratory, California Institute of Technology, Aron MELTZNER Nanyang Technological University

IG22-Pre-earthquake Anomalies, Earthquake Predictability,

10 Years Commemoration 2008 M8.0 Wehchuan Earthquake,

Kickoff Chinese Seismo-electromagnetic Satellite

*Jann-Yenq (Tiger) LIU National Central University, Katsumi HATTORI Chiba University, Dimitar OUZOUNOV Chapman University

OS03-Enso and Iod Theory, Impact and Prediction

*Tao LIAN State Oceanic Administration, Tao LIAN State Oceanic Administration, Dake CHEN State Oceanic Administration,

OS13-High-resolution Ocean and Ocean-atmosphere

Coupled Models: Advances and Challenges

*Zhenya SONG State Oceanic Administration, Xiaomeng HUANG Tsinghua University, Yu-heng TSENG National Taiwan University, Chan Joo JANG Korea Institute of Ocean Science and Technology, Enrique CURCHITSER Rutgers University

OS14-Progress in Ocean Heat Uptake and Sea Level Studies

*Xuebin ZHANG CSIRO Oceans and Atmosphere, Xianyao CHEN Ocean University of China, Shuhei MASUDA Japan Agency for Marine-Earth Science and Technology, Lijing CHENG Chinese Academy of Sciences

OS17-The Oceanic Energy Cascade: from Mesoscale,

Submesoscale to Small-scale Turbulence

*Yisen ZHONG Shanghai Jiao Tong University, Zhiyu LIU Xiamen University, Bo QIU University of Hawaii, Toshiyuki HIBIYA The University of Tokyo, Zhenya SONG State Oceanic Administration

OS19-Marine Debris – from Modelling to Management to Microplastics

*Serena LEE Griffith University, Mark MANUEL National Oceanic and Atmospheric Administration, Charles LEMCKERT University of Canberra

OS21-Submesoscale Processes and Their Parameterizations

*Changming DONG Nanjing University of Information Science & Technology, Sung Yong KIM Korea Advanced Institute of Science and Technology, Baylor FOX-KEMPER Brown University, Qingxuan YANG Ocean University of China

OS24-Coastal Hazards: Impacts of Tropical Storms and

Tsunamis

*Xiping YU Tsinghua University, Linlin LI Nanyang Technological University, Philip Li-Fan LIU National University of Singapore, Harry YEH Oregon State University, Zhenhua HUANG University of Hawaii at Manoa

PS02-Volcanism and Tectonism Across the Solar System

*Anezina SOLOMONIDOU Jet Propulsion Laboratory, California Institute of Technology, Rosaly LOPES-GAUTIER Jet Propulsion Laboratory, California Institute of Technology, Florian M. SCHWANDNER Jet Propulsion Laboratory, California Institute of Technology

PS06-Magnetospheres, Atmospheres, Exopheres of Outer

Planets and Their Satellites

*Norbert KRUPP Max Planck Institute for Solar System Research, Linda SPILKER Jet Propulsion Laboratory, Scott BOLTON Southwest Research Institute, Sushil ATREYA University of Michigan

PS12-From Dust to Planets: the First Hundred Million Years of the Solar System

*Ramon BRASSER Earth Life Science Institute, Stephen MOJZSIS University of Colorado Boulder, Meenakshi WADHWA Arizona State University, Liping QIN University of Science and Technology of China

PS17-Aeronomy and Plasma Physics of Planetary

Environments

*Robert LILLIS University of California Berkeley, Jun CUI Sun Yat-sen University, Dominique DELCOURT French National Centre for Scientific Research, Shotaro SAKAI The University of Tokyo, Varun SHEEL Physical Research Laboratory

PS20-Missions and Surveys: Drivers of Future Solar System

*Henry H. HSIEH Planetary Science Institute, Jian-Yang LI Planetary Science Institute, Makoto YOSHIKAWA Japan Aerospace Exploration Agency

PS21-Physical and Dynamical Evolution of the

Post-formation Solar System

*Henry H. HSIEH Planetary Science Institute, Ramon BRASSER Earth Life Science Institute, Norbert SCHORGHOFER Planetary Science Institute, Bin YANG Chinese Academy of Sciences, Xiao-Ping LU Macau University of Science & Technology

SE01-Paleomagnetism and Rock Magnetism Applied to Solving Geological, Geophysical, and Environmental Problems

*Martin CHADIMA Advanced Geoscience Instruments Company, Xixi ZHAO University of California Santa Cruz, Yuhji YAMAMOTO Kochi University, Satria BIJAKSANA Institut Teknologi Bandung, Emilio HERRERO-BERVERA University of Hawaii at Manoa

SE02-Seismic Modelling and Imaging: from Global to Local Scales

*Ping TONG Nanyang Technological University, Shengji WEI Nanyang Technological University, Xu YANG University of California, Santa Barbara, Chin-Wu CHEN National Taiwan University

SE06-30-39-Faults and Earthquakes: Networks, Precursors and Monitoring Systems

*Fuqiong HUANG China Earthquake Network Center, Horst ZWINGMANN Kyoto University, Han YUE Beijing University, Xian LU China Earthquake Networks Center

SE08-Earthquake Hydrology, Geochemistry and Hydroseismology

*Fuqiong HUANG China Earthquake Network Center, Kuofong MA TaiPei University, Yasuyuki KANO Kyoto University, Narayan Prasad DEWANGAN Sarguja University, Yan ZHANG Chinese Academy of Sciences

SE09-Paleo- & Historical Earthquake Research and

Quantitative Analysis of Seismicity

*Kenji SATAKE The University of Tokyo, Javed MALIK Indian Institute of Technology Kanpur, Jian WANG China Earthquake Administration

SE15-Landslide Identification, Prediction, and Monitoring

Using Multi-disciplinary Technologies

*Chih-Chung CHUNG National Central University, Che-Ming YANG National Chiao Tung University, Xuan Luan TRUONG Department of Geoinformatics, Hanoi University of Mining and Geology, Chyi-Tyi LEE National Central University

SE23-Electromagnetic Methods Applied to Studies of Crustal and Mantle Dynamics

*Noriko TADA Japan Agency for Marine-Earth Science and Technology, Hiroshi ICHIHARA Nagoya University, Qinghua HUANG Peking University, Eric ATTIAS University of Southampton, Grant CALDWELL GNS science

SE25-40-New Advance on Tectonics of SE Asia

*Xixi ZHAO University of California Santa Cruz, Baochun HUANG Peking University, Mian LIU University of Missouri, Raymond RUSSO University of Florida

SE26-Cenozoic Deformation of Orogenic Belts in Asia: a

Multiscale Spatial and Temporal Investigation

*Huiping ZHANG China Earthquake Administration, Kristin MORELL University of California, Santa Barbara, Wenjun ZHENG Sun Yat-sen University, Zhikun REN China Earthquake Administration, Renjie ZHOU University of Queensland

SS08-Interdisciplinary suduction zone research initiatives

*Gerald BAWDEN National Aeronautics and Space Administration (NASA), Jack A. KAYE National Aeronautics and Space Administration (NASA)

SS12-Workshop on Earth Girl Volcano

*Isaac KERLOW Nanyang Technological University, Helena ALBERT Nanyang Technological University

ST08-Magnetic Reconnection at Electron Scale: Observations and Simulations

*Huishan FU Beihang University, Quanming LU University of Science and Technology of China, Meng ZHOU UCLA, Masahiro HOSHINO The University of Tokyo, James BURCH Southwest Research Institute

ST14-Energy Dissipation and Conversion in Space Plasmas

*Anthony LUI Johns Hopkins University, Z. H. YAO University of Liege

ST15-Evolution and Effects of Large Solar Transients

Throughout Geospace and the Heliosphere

*John RICHARDSON Massachusetts Institute of Technology, Chi WANG Chinese Academy of Sciences, Iver CAIRNS University of Sydney

ST16-Observations and Simulations of Radiation Belt

Dynamics

*Allison JAYNES University of Iowa, Anthony CHAN Rice University, Xin TAO University of Science and Technology of China, Alexander BOYD New Mexico Consortium

ST19-Causes and Consequences of Magnetospheric Particle

Losses

*Weichao TU West Virginia University, Binbin NI Wuhan University, Mei-Ching FOK NASA Goddard Space Flight Center, Hong ZHAO University of Colorado Boulder

ST22-General Session in Solar and Terrestrial Sciences

*Mario BISI Science & Technology Facilities Council, Linghua WANG Peking University, Shasha ZOU University of Michigan, Gang LI The University of Alabama in Huntsville, Quanqi SHI Shandong University

AS03 / Multi-scale Climate Variability Over Asia and Surrounding Oceans

Wed - 06 Jun | MR325B

Time 08:30 - 10:30

Chair(s) Shuanglin LI, IAP

Y. KAJIKAWA, RIKEN

AS03-D3-AM1-325B-026 | AS03-A031 (Invited)

Mechanisms of Multi-Decadal Droughts over the Eastern

China During the Last Millennium

Liang NING¹**, Jian LIU², Mi YAN², Weiyi SUN², Chunhan JIN², Lu LIU², Kefan CHEN²

 1 Nanjing Normal University & University of Massachusetts, 2 Nanjing Normal University

AS03-D3-AM1-325B-027 | AS03-A022 (Invited)

Structure and Dynamics of Decadal Anomalies in the Wintertime Midlatitude North Pacific Ocean-Atmosphere System

Jiabei FANG^{1#+}

¹Nanjing University

AS03-D3-AM1-325B-028 | AS03-A027

Interdecadal Explosive Cyclone Activity Associated with the Increased Frequency of Winter Storm Events in Hokkaido,

Takumi TSUKIJIHARA $^{1\pm *}$, Ryuichi KAWAMURA 1 , Tetsuya KAWANO 1

¹Kyushu University

AS03-D3-AM1-325B-029 | AS03-A082 (Invited)

On the Role of External Forcing in the Extra-Tropical Annular Variability

Yu NIE¹, Yang ZHANG^{2*+}, Gang CHEN³, Xiu-Qun YANG²
¹China Meteorological Administration, ²Nanjing University,
³University of California

AS03-D3-AM1-325B-030 | AS03-A091 (Invited)

Interannual to Centennial Variability of the Asian Summer

Precipitation over the Past 544 Years

Hui SHI¹⁺, Bin WANG^{2±}, Edward COOK³, Jian LIU⁴, Fei LIU⁵
¹University of Hawaii Manoa, ²University of Hawaii, ³Columbia
University, ⁴Nanjing Normal University, ⁵Nanjing University of
Information Science

AS03-D3-AM1-325B-031 | AS03-A096

Identification of the Pacific Multidecadal Internal Variability

Hua CHEN1#+, Edwin SCHNEIDER2, Donglin HE3

¹Nanjing University of Information Science and Tech, ²George Mason University, ³Nanjing University of Information Science & Technology AS03-D3-AM1-325B-032 | AS03-A067 (Invited)

Origin of Early-Spring Central Pacific Warming as the 1982-83

El Nino Precursor

Ji-Won KIM1+, Soon-Il AN1#

¹Yonsei University

AS03-D3-AM1-325B-033 | AS03-A094

Quantifying the Contributions of Model Processes to the

Temperature Anomalies in Response to the Restoring Sea

Surface Temperature over Tropical Eastern Pacific with

Community Earth System Model

Bo LIU1#+, Tianjun ZHOU2

¹China University of Geosciences, ²Chinese Academy of Sciences

AS06 / Application of Cloud-resolving Model Simulations for Studying Cloud-related Processes in Climate

Wed - 06 Jun | MR325A

Time 08:30 - 10:30

Chair(s) Pay-Liam LIN, National Central University

Wei-Kuo TAO, NASA Goddard Space Flight Center

AS06-D3-AM1-325A-001 | AS06-A029 (Invited)

A Comparison of Alternative Dynamical Frameworks for

Global Cloud-Resolving Models

David RANDALL1#+, Celal KONOR1, Ross HEIKES1, Joon-Hee $\rm JUNG^1$

¹Colorado State University

AS06-D3-AM1-325A-002 | AS06-A017

Simulations of Tropical Intraseasonal and Weather Events in

December 2016

Chung-Hsiung SUI1#+

¹National Taiwan University

AS06-D3-AM1-325A-003 | AS06-A031

Intraseasonal Variability in a Cloud-Permitting Equatorial

Aqua-Planet with Uniform Sea-Surface Temperature

Marat KHAIROUTDINOV1#+

¹Stony Brook University

AS06-D3-AM1-325A-004 | AS06-A011

Examination of Scale-Awareness of Convection in

Cloud-Resolving Model for Convection Parameterization

Development

Guang ZHANG1#+

¹Tsinghua University

AS06-D3-AM1-325A-005 | AS06-A019

A Parameter-Sweep Nudging Experiment on the Influence of Vertical Structure of Environmental Winds on Deep Moist Convection

Shigeo YODEN¹#+, Hoang-Hai BUI², Eriko NISHIMOTO³
¹Kyoto University, ²Vietnam National University, ³Japan Agency for Marine-Earth Science and Technology

AS06-D3-AM1-325A-006 | AS06-A018

Impacts of Large Scale Flow Field on Diurnal Variation of Mesoscale Circulation and Precipitation During Mei-Yu Season

Pay-Liam LIN $^{1\sharp *}$, Chung-Yin WANG 1 , Yi-Leng CHEN 2 , Chuan-Chi TU 1

¹National Central University, ²University of Hawaii at Manoa

AS06-D3-AM1-325A-007 | AS06-A020

An Examination of Cumulus Convection Schemes in the WRF

Model Using the Goddard Cumulus Ensemble Model

Myong-In LEE^{1‡+}, Sung-Yoon KIM¹, Wei-Kuo TAO²
¹Ulsan National Institute of Science and Technology, ²NASA Goddard
Space Flight Center

AS06-D3-AM1-325A-008 | AS06-A026

Radiative-Convective Equilibrium Study with a Global Nonhydrostatic Model: Sensitivity of High Clouds to Cloud Microphysics and Vertical Resolution

Tomoki OHNO^{1±+}, Masaki SATOH²
¹Japan Agency for Marine-Earth Science and Technology, ²The University of Tokyo

Time 16:00 - 18:00

Chair(s) Masaki SATOH, University Tokyo

Wei-Kuo TAO, NASA Goddard Space Flight Center

AS06-D3-PM2-325A-009 | AS06-A003

A Cloud-Resolving Model Study on the Effects of the Surface Heat Fluxes on the Cloud Development and Behavior over the Tibetan Plateau

Jinghua CHEN1#+

¹Nanjing University of Information Science and Technology

AS06-D3-PM2-325A-010 | AS06-A006

Microphysics in Goddard Multi-Scale Modeling Systems Wei-Kuo $TAO^{1\sharp +}$

¹NASA Goddard Space Flight Center

AS06-D3-PM2-325A-011 | AS06-A010

Impact of Precipitating Ice Hydrometeors on Longwave Radiative Forcing Estimated by a Global Cloud-System Resolving Model

Ying-Wen CHEN¹, Tatsuya SEIKI², Chihiro KODAMA², Masaki SATOH¹‡*, Akira NODA²

¹The University of Tokyo, ²Japan Agency for Marine-Earth Science and Technology

AS06-D3-PM2-325A-012 | AS06-A005

The Impact of Land-Atmosphere Interactions on the Diurnal Intensity of Precipitation over Tropical Islands

Chien-Ming WU^{1#+}, Po-Yen CHEN¹
¹National Taiwan University

AS06-D3-PM2-325A-013 | AS06-A034

Constrain Ice-Phase Microphysics Using Global Precipitation Measurement (GPM) Satellite Observations

Xiaowen LI^{1,2‡+}, Takamichi IGUCHI³, Wei-Kuo TAO²
¹Morgan State University, ²NASA Goddard Space Flight Center,
³University of Maryland

AS06-D3-PM2-325A-014 | AS06-A013

A Critical Evaluation of the Cloud Modeling Capability of WRF Model in Comparison with Multiple Satellite Retrievals Bingqi YI^{1‡+}

¹Sun Yat-sen University

AS07 / Behavior of Monsoon in the Current and Future Climate: Comparisons Among Different Monsoon Regions

Wed - 06 Jun | MR326A

Time 08:30 - 10:30

Chair(s) Wen CHEN, Chinese Academy of Sciences

Hirokazu ENDO, Meteorological Research Institute

AS07-D3-AM1-326A-001 | AS07-A028 (Invited)

Definition and Division of the Global Monsoon

Weihong QIAN^{1#+}
¹Peking University

AS07-D3-AM1-326A-002 | AS07-A038

A Hierarchy of Idealized Monsoons in an Intermediate Moist GCM

Wenyu ZHOU^{1±+}, Shang-Ping XIE²
¹Scripps Institution of Oceanography, ²University of California San Diego

AS07-D3-AM1-326A-003 | AS07-A035

The Patterns of Meteorological Fields to Identify Intraseasonal

Precipitation Variability in Central America

Huikyo LEE^{1#+}, Danielle GROENEN², Carlos MECHOSO³
¹Jet Propulsion Laboratory, California Institute of Technology, ²Florida State University, ³University of California, Los Angeles

AS07-D3-AM1-326A-004 | AS07-A022

The Characteristics of the Quasi-Biweekly Pacific-Japan Teleconnection and its Possible Trigger Mechanism in Boreal Summer

Yu ZHU^{1‡+}, Zhiping WEN^{1,2}, Yuanyuan GUO¹, Xiuzhen LI¹, Ruidan CHEN¹, Yunting QIAO¹
¹Sun Yat-sen University, ²Fudan University

AS07-D3-AM1-326A-005 | AS07-A005

Evaluation and Improvement of East-Asian Summer Monsoon Climate Forecasting in BCC and MOHC Seasonal Prediction Systems

Ying LIU^{1‡+}, Hong-Li REN¹
¹China Meteorological Administration

AS07-D3-AM1-326A-006 | AS07-A001

The Definition and Synoptic Characteristic Analysis of Circulation Index of Spring Persistent Rainfall

Bo ZHANG^{1#+}, Ronghua JIN¹
¹China Meteorological Administration

Time 16:00 - 18:00

Chair(s) Zhiping WEN, Sun Yat-Sen University

AS07-D3-PM2-326A-007 | AS07-A044 (Invited)

Can We Predict Changes in the Land Monsoon Rainfall a

Decade in Advance

Bin WANG^{1#+}, Juan LI¹
¹University of Hawaii

AS07-D3-PM2-326A-008 | AS07-A017

An Inter-Decadal Increase in Summer Sea Level Pressure over the Mongolian Region Around the Early 1990s

Zhiping WEN^{1,2#+}, Haiyan ZHANG¹, Renguang WU³
¹Sun Yat-sen University, ²Fudan University, ³Chinese Academy of Sciences

AS07-D3-PM2-326A-009 | AS07-A025

Interdecadal Variations of the Silk Road Pattern and its

Associations with Eurasian Summer Climate

Lin WANG^{1‡+}, Peiqiang XU¹, Wen CHEN¹, Yong LIU¹
¹Chinese Academy of Sciences

AS07-D3-PM2-326A-010 | AS07-A026

Variations of Asian Monsoon in the Global Warming

Background

Zhiyan ZUO1#+

¹Chinese Academy of Meteorological Sciences

AS07-D3-PM2-326A-011 | AS07-A023

PDO Modulation of the ENSO Impact on the Summer South Asian High

Wen CHEN1#+

¹Chinese Academy of Sciences

AS07-D3-PM2-326A-012 | AS07-A018

ENSO-South China Sea Summer Monsoon Interaction

Modulated by the Atlantic Multidecadal Oscillation

Ke FAN^{1‡+}, Yi FAN¹, Zhiqing XU¹, Shuanglin LI^{1,2}
¹Chinese Academy of Sciences, ²China University of Geosciences

AS07-D3-PM2-326A-014 | AS07-A041

Decadal Transition of Interannual Mode of Moisture

Circulation-Bonding to Different Evolution of ENSO

Xiuzhen LI^{1#+}, Deliang CHEN², Zhiping WEN^{1,3}
¹Sun Yat-sen University, ²University of Gothenburg, ³Fudan University

AS07-D3-PM2-326A-013 | AS07-A030

Structural Changes of the Pacific-Japan Pattern in the Late 1990s

Peiqiang XU1+, Lin WANG1+, Wen CHEN1, Juan FENG1, Yuyun LIU1

¹Chinese Academy of Sciences

AS26-BG / Vegetation-air Pollution Interaction at the Urban-rural Interface

Wed - 06 Jun | MR315

Time 08:30 - 10:30

Chair(s) Xuemei WANG, Jinan University

AS26-BG-D3-AM1-315-001 | AS26-BG-A016

Annual Fluxes of NO and N2O from a Maize Field in

Northeast China

Chenxia $SU^{\scriptscriptstyle 1}$, Yunting $FANG^{\scriptscriptstyle 1\sharp\star}$, Zhi QUAN $^{\scriptscriptstyle 1}$, Yi $SHI^{\scriptscriptstyle 1}$, Weixing $ZHU^{\scriptscriptstyle 2}$

¹Chinese Academy of Sciences, ²State University of New York at Binghamton

AS26-BG-D3-AM1-315-002 | AS26-BG-A012

Annual Net Flux of Mercury from the Atmosphere to Biomass of Major Crops in China

Zhangwei WANG^{1‡+}, Xiaoshan ZHANG², Zhenchuan NIU², Jian CHEN²

¹Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, ²Chinese Academy of Sciences

AS26-BG-D3-AM1-315-003 | AS26-BG-A001

Regional to Global Biogenic Isoprene Emission Responses to

Changes in Vegetation from 2000 to 2015

Xuemei WANG^{1;+}, Weihua CHEN², Alex GUENTHER³, Youhua CHEN⁴, Dasa GU³, Ming CHANG¹, Shengzhen ZHOU², Luoling WU², Yiqiang ZHANG⁵

¹Jinan University, ²Sun Yat-sen University, ³University of California, Irvine, ⁴Chinese Academy of Sciences, ⁵Ministry of Environmental Protection

AS26-BG-D3-AM1-315-004 | AS26-BG-A006 (Invited)

Estimation of Biogenic VOCs Emissions During the

KORUS-AQ Aircraft Field Campaign

Jung-Hun WOO¹‡+, Yungu LEE¹, Younha KIM¹, Jinsu KIM¹, Yang-Dam EO¹

¹Konkuk University

AS26-BG-D3-AM1-315-005 | AS26-BG-A004

Vertical Time and Spatial Scales of Bvoc Oxidation in a

Polluted Forest Area

Saewung KIM¹#+, Alex GUENTHER¹, Roger SECO¹, Dasa GU¹, Daun JEONG¹, Dianne SANCHEZ¹

¹University of California, Irvine

AS26-BG-D3-AM1-315-006 | AS26-BG-A010

Source Signatures from Combined Isotopic Analyses of PM2.5

Carbonaceous and Nitrogen Aerosols at the Peri-Urban

Taehwa Research Forest in South Korea

Saehee LIM¹⁵⁺, Claudia CZIMCZIK², Meehye LEE¹, T-K JOO¹, Xiaomei XU², Saewung KIM²

¹Korea University, ²University of California, Irvine

AS26-BG-D3-AM1-315-007 | AS26-BG-A011

Identifying Ammonia Hotspots in China Using a National

Observation Network Yuepeng PAN^{1#+}

¹Institute of Atmospheric Physics, Chinese Academy of Sciences

AS29 / Precipitation Extremes - Observations, Modelling, Projections

Wed - 06 Jun | MR319A

Time 08:30 - 10:30

Chair(s) Pinhas ALPERT, Tel Aviv University

Toshiyuki NAKAEGAWA, Japan Meteorological Agency

AS29-D3-AM1-319A-005 | AS29-A041

Improving APHRODITE Algorithm for Assessing Precipitation

Extremes - Check End of a Day -

Akiyo YATAGAI¹⁵⁺, Sunil KUMAR¹, Minami MASUDA¹, Mio MAEDA¹, Natsuko YASUTOMI²

¹Hirosaki University, ²Kyoto University

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AS29-D3-AM1-319A-006 | AS29-A001

Decadal Changes of Summer Heavy Rainfall in China Jilong CHEN¹⁵⁺

¹Chinese Academy of Sciences

AS29-D3-AM1-319A-007 | AS29-A042

Climatology of Hail Frequency and Size in China, 1980-2015

Xiaofei LI^{1#+}, Qinghong ZHANG¹

¹Peking University

AS29-D3-AM1-319A-008 | AS29-A044

Contribution of Global Warming to Frequency of Heavy

Rainfall in Kyushu Island, Japan, Using D4PDF Historical and

Non-Warming Simulations

Hiroaki KAWASE^{1‡+}, Yukiko IMADA¹, Hidetaka SASAKI¹, Tosiyuki NAKAEGAWA¹, Akihiko MURATA¹, Masaya NOSAKA¹

¹Japan Meteorological Agency

AS29-D3-AM1-319A-009 | AS29-A008

Roles of SST Versus Internal Atmospheric Variability in

Winter Extreme Precipitation Along the U.S. West Coast

Lu DONG^{1;+}, L. Ruby LEUNG¹, Fengfei SONG¹, Jian LU¹
¹Pacific Northwest National Laboratory

AS29-D3-AM1-319A-010 | AS29-A052

Simulation of Cloudbursts, Their Mechanisms and Properties

over Monsoonal Region

Vinay KUMAR^{1#+}, J.R. KULKARNI², Bhaskar GUNTURU^{3,4}, Nayna DESHPANDE², Akiyo YATAGAI⁵, Sarvesh DUBEY⁶, D.R. KOTHAWALE²

¹Texas A&M University Corpus Christi, ²Indian Institute of Tropical Meteorology, ³King Abdullah University of Science and Technology, ⁴Massachusetts Institute of Technology, ⁵Hirosaki University, ⁶Florida State University

Time 16:00 - 18:00

Chair(s) Akio KITOH, Japan Meteorological Agency

AS29-D3-PM2-319A-011 | AS29-A020

Impacts of Half a Degree Additional Warming on the Asian

Summer Monsoon Rainfall

Donghyun LEE¹⁵⁺, Seung-Ki MIN¹, Erich FISCHER², Hideo SHIOGAMA³, Ingo BETHKE⁴, Ludwig LIERHAMMER⁵, John F SCINOCCA⁶

¹Pohang University of Science and Technology, ²ETH Zurich, ³National Institute for Environmental Studies, ⁴Uni Research, ⁵German Climate Computing Center (DKRZ), ⁶Canadian Centre for Climate Modelling and Analysis

AS29-D3-PM2-319A-012 | AS29-A014

Evaluation of Precipitation Extremes Associated with Tropical

Cyclones Simulated by MRI-AGCM3.2

Akio KITOH1#+

¹Japan Meteorological Business Support Center

AS29-D3-PM2-319A-013 | AS29-A054

Estimating Uncertainties of Projected East Asian Extreme

Precipitation Changes

Daniel J. BEFORT $^{1\sharp +}$, Kevin HODGES 2 , Michael WALZ 1 , Gregor C. LECKEBUSCH 1

¹University of Birmingham, ²University of Reading

AS29-D3-PM2-319A-014 | AS29-A003

The Influence of Graupel/Hail Parameters on Simulation of a

Convective System over Coastal South China in Summer

Chunwei GUO1#+

 ${}^{\scriptscriptstyle 1} Institute\ of\ Urban\ Meteorology, China\ Meteorological\ Administration$

AS29-D3-PM2-319A-015 | AS29-A047

Challenges in Predictions of Precipitation 21st Century

Extremes over the Mideast

Pinhas ALPERT1#+

¹Tel Aviv University

AS29-D3-PM2-319A-016 | AS29-A031

The Relationship Between Near-Surface Air Temperature and

Extreme Precipitation in the CESM

Xiaoming SUN1#+, Guiling WANG1

¹University of Connecticut

AS29-D3-PM2-319A-017 | AS29-A038

Does the Sensitivity of Extreme Precipitation Follow the CC

Scaling?

Ji NIE^{1‡+}, Adam SOBEL², Shuguang WANG², Daniel SHAEVITZ²
¹Peking University, ²Columbia University

AS33 / Multi-sensor Observations of Severe Storms and Disaster Reduction

Wed - 06 Jun | MR303A

Time 08:30 - 10:30

Chair(s) Eiichi NAKAKITA, Kyoto University

AS33-D3-AM1-303A-001 | AS33-A011

Integrated Research on State-of-the-Art Multi-Sensors In-Situ

Observation of Storm Genesis and Reduction of Serious

Disaster Due to Heavy Rainfall

Eiichi NAKAKITA¹⁵⁺, Satoru OISHI^{2,3}, Kazuhisa TSUBOKI⁴, Katsuhiro NAKAGAWA⁵, Kenji SUZUKI⁶, Tadayasu OHIGASHI¹, Kosei YAMAGUCHI¹, Mariko OGAWA², Kazuyoshi SOUMA⁷, Seiji KAWAMURA⁵, Yoshiharu SUZUKI⁸, Hiroyuki HASHIGUCHI¹, Hironori IWAI⁵, Taro SHINODA⁴, Yasutaka WAKAZUKI⁹, Masayuki K. YAMAMOTO⁵, Aritoshi MASUDA¹⁰, Tomoo USHIO¹¹, Ahoro ADACHI¹²

¹Kyoto University, ²Kobe University, ³RIKEN Advanced Institute for Computational Science, ⁴Nagoya University, ⁵National Institute of Information and Communications Technology, ⁶Yamaguchi University, ⁷University of Yamanashi, ⁸Hosei University, ⁹Ibaraki University, ¹⁰Japan Weather Association, ¹¹Osaka University, ¹²Japan Meteorological Agency

AS33-D3-AM1-303A-002 | AS33-A025 (Invited)

Field Observations of Lifecycle of Cumulonimbus and Social

Experiments in the Tokyo Metropolitan Area, Japan

Koyuru IWANAMI^{15*}, Shin-Ichi SUZUKI¹, Takeshi MAESAKA¹, Shingo SHIMIZU¹, Yukari SHUSSE¹, Namiko SAKURAI¹, Kohin HIRANO¹, Ken-Ichi SHIMOSE¹, Ryohei KATO¹, Tsuyoshi NAKATANI¹, Ryohei MISUMI¹, Kaori KIEDA¹, Yasushi UJI¹

¹National Research Institute for Earth Science and Disaster Resilience

AS33-D3-AM1-303A-003 | AS33-A029

Vertical Distributions of Liquid/Solid Hydrometeors in Early Developing Stage of Convective Clouds Observed by

Videosondes

Kenji SUZUKI^{1#+}

¹Yamaguchi University

AS33-D3-AM1-303A-004 | AS33-A006

Study on Particle Size Distribution and Volume Estimation of Ice Particles in Cumulus by Electromagnetic Wave Scattering

Analysis of Dual Frequency MP Radar

Mariko OGAWA^{1#+}, Takuya SATO¹, Satoru OISHI^{1,2}
¹Kobe University, ²RIKEN Advanced Institute for Computational
Science

AS33-D3-AM1-303A-005 | AS33-A027 (Invited)

High Ice Crystal Concentration and High Electrification in Hokuriku Winter Clouds - Overview of a Sonde Observation Campaign -

Soichiro SUGIMOTO^{1±+}, Tsutomu TAKAHASHI², Kenji SUZUKI³, Tetsuya KAWANO², Mitsuharu NOMURA¹ ¹Central Research Institute of Electric Power Industry, ²Kyushu University, ³Yamaguchi University

AS33-D3-AM1-303A-006 | AS33-A030

Characteristics of a Positive KDP-Peak Layer Above the Melting Level in a Stratiform Region Observed by a Ka-Band

Radar and Bolloon-Borne Particle Observation

Taro SHINODA^{1‡+}, Tomohiro NAGAYA¹, Tadayasu OHIGASHI², Kenji SUZUKI³, Kosei YAMAGUCHI², Hiroyuki YAMADA⁴, Seiji KAWAMURA⁵, Kazuhisa TSUBOKI¹, Eiichi NAKAKITA² ¹Nagoya University, ²Kyoto University, ³Yamaguchi University, ⁴University of the Ryukyus, ⁵National Institute of Information and Communications Technology

AS33-D3-AM1-303A-007 | AS33-A005

Characteristics of Particle Size Distributions of a

Stratocumulus Cloud Undetected by a Ka-Band Radar

Atsumi MURASAKI¹±+, Taro SHINODA¹, Tadayasu OHIGASHI¹, Kenji SUZUKI², Kosei YAMAGUCHI³, Hiroyuki YAMADA⁴, Seiji KAWAMURA⁵, Kazuhisa TSUBOKI¹, Eiichi NAKAKITA³¹Nagoya University, ²Yamaguchi University, ³Kyoto University, ⁴University of the Ryukyus, ⁵National Institute of Information and Communications Technology

AS33-D3-AM1-303A-008 | AS33-A036

Short-Term Precipitation Prediction Applying Upstream
Low-Level Humidification Scheme to Cloud-Resolving Model
Simulations

Yasutaka WAKAZUKI^{1,2#+}, Daichi IGARASHI¹
¹Ibaraki University, ²Japan Agency for Marine-Earth Science and Technology

Time 16:00 - 18:00

Chair(s) Mariko OGAWA, Kobe University

Kenji SUZUKI, Yamaguchi University Kosei YAMAGUCHI, Kyoto University

AS33-D3-PM2-303A-009 | AS33-A031

Three-Dimensional Structure of Convective Clouds Measured

by Phased Array Weather Radar Every 30 Seconds

Shinsuke SATOH^{1‡+}, Yukie MORODA^{1,2}, Hironori IWAI¹, Seiji KAWAMURA¹, Hanado HIROSHI¹, Katsuhiro NAKAGAWA¹, Fumihiko MIZUTANI³, Tomoo USHIO⁴, Takemasa MIYOSHI^{5,6}
¹National Institute of Information and Communications Technology,
²Nagoya University, ³Toshiba, ⁴Tokyo Metropolitan University,
⁵RIKEN Advanced Institute for Computational Science, ⁶University of Maryland

AS33-D3-PM2-303A-010 | AS33-A035

Dual Phased Array Radar Analysis of Tornadic Storm

Associated with Typhoon Nanmadol (2017)

Toru ADACHI1#+

¹Meteorological Research Institute

AS33-D3-PM2-303A-011 | AS33-A002

Design of X-Band Polarimetric Phased Array Weather Radar System

Hiroshi KIKUCHI^{1‡*}, Tomoo USHIO¹, Fumihiko MIZUTANI², Masakazu WADA², Nobuhiro TAKAHASHI³ ¹Tokyo Metropolitan University, ²Toshiba, ³Nagoya University

AS33-D3-PM2-303A-012 | AS33-A034 (Invited)

Water Vapor Estimation Using Digital Terrestrial Broadcasting

Waves for Prediction of Localized Heavy Rainstorms

Seiji KAWAMURA^{1‡}, Hanado HIROSHI¹, Takeharu KOUKETSU¹, Hiroki OHTA¹, Toshio IGUCHI¹
¹National Institute of Information and Communications Technology

AS33-D3-PM2-303A-013 | AS33-A015

A Study on Utilization of GNSS for Rainfall Prediction
Masahiro KISHIMOTO¹⁵⁺, Mariko OGAWA¹, Satoru OISHI^{1,2}
¹Kobe University, ²RIKEN Advanced Institute for Computational
Science

AS33-D3-PM2-303A-014 | AS33-A001

Forecasting Both Mature Stage and Initiation of a Line-Shaped Mesoscale Convective System by Assimilation of Polarimetric Radar Data

Kosei YAMAGUCHI^{1#+}, Eiichi NAKAKITA¹, Kohei FURUTA¹, Yosuke HORIIKE¹

 $^1Kyoto\ University$

AS33-D3-PM2-303A-015 | AS33-A017

Analysis of Urban Effect on Storm Genesis by Development of

Urban Meteorological Model Based on Large Eddy Simulation

Tomohiro TSUCHIHASHI¹⁵⁺, Eiichi NAKAKITA¹, Kosei YAMAGUCHI¹, Kazuya TAKAMI²

¹Kyoto University, ²Railway Technical Research Institute

AS33-D3-PM2-303A-016 | AS33-A021

Development of the Early Detection System of Baby Rain Cell

in a Localized Torrential Rainfall and/or Linear Rainband

Using the Phased Array Weather Radar

Katsuhiro NAKAGAWA^{1,2+}, Katsuhyuki KATAYAMA², Aritoshi MASUDA², Hanado HIROSHI¹, Koji ZETTSU¹, Eiichi NAKAKITA³

¹National Institute of Information and Communications Technology, ²Japan Weather Association, ³Kyoto University

AS35 / Mountain and Island Effects on Airflow, Precipitation, Weather, and Climate

Wed - 06 Jun | MR302B

Time 08:30 - 10:30

Chair(s) Yi-Leng CHEN, University of Hawaii at Manoa

Chien-Ming WU, National Taiwan University

AS35-D3-AM1-302B-008 | AS35-A024

Cold Air Intrusion and Heavy Rain in Northern Taiwan: A

Case Study of 20-21 May 2014

Ben JOU¹‡+, Shou Liang YU¹, Radiant Rong-Guan HSIU¹, Yucheng KAO², Wenchau LEE³

¹National Taiwan University, ²Taipei City Fire Department, ³National Center for Atmospheric Research

AS35-D3-AM1-302B-009 | AS35-A004

Idealized Cloud-Resolving Simulations of Mei-Yu Rainfall in

Taiwan Under Uniform Southwesterly Flow

Chung-Chieh WANG^{1‡+}, Pi-Yu CHUANG¹, Shi-Ting CHEN¹ National Taiwan Normal University

AS35-D3-AM1-302B-010 | AS35-A020 (Invited)

Urbanization and its Impact on Precipitation over Northern

Taiwan

Chuan-Yao LIN^{1‡+}, Chiung-Jui SU¹, Yangfan SHENG¹
¹Academia Sinica

AS35-D3-AM1-302B-011 | AS35-A002

The Interactions Between Atmosphere and Complex

Orographic Land: Diurnal Cycle of Low-Level Clouds and Fog at Xitou

Chien-Ming WU $^{\mbox{\tiny 15+}},$ Min-Ken HSIEH $^{\mbox{\tiny 1}},$ Po-Hsiung LIN $^{\mbox{\tiny 1}},$ Shih-Hao SU $^{\mbox{\tiny 1}}$

¹National Taiwan University

AS35-D3-AM1-302B-012 | AS35-A014

Investigations of the Local Air Flow over the Complex Terrain in Taiwan

Fang-Yi CHENG^{1#+}, Yu-Tzu WANG¹
¹National Central University

AS35-D3-AM1-302B-013 | AS35-A013

A New Approach of Downscaling by Using Multi-Grid 3DVAR

Jen-Hsin TENG^{1‡+}, Chien-Hsuen WANG¹, Yuanfu XIE²
¹Central Weather Bureau, ²Chinese Academy of Meteorological Sciences

AS35-D3-AM1-302B-014 | AS35-A003

A Case Study of the Initiation of Parallel Back-Building

Convection Lines over Complex Terrain on the South Side of Meiyu Front

Qiwei WANG^{1#+}, Yi ZHANG¹, Kefeng ZHU¹, Ming XUE^{1,2}

¹Nanjing University, ²University of Oklahoma

AS35-D3-AM1-302B-015 | AS35-A023

Effects of Trade Wind Strength on Airflow and Weather over Oahu

Feng HSIAO^{1#+}, Yi-Leng CHEN¹
¹University of Hawaii at Manoa

AS37 / Earth System Models: Development, Validation and Uncertainties

Wed - 06 Jun | MR303B

Time 08:30 - 10:30

Chair(s) Huang-Hsiung HSU, Academia Sinica

AS37-D3-AM1-303B-007 | AS37-A028 (Invited)

Taking a Deep Breath in Model Development: Identifying Opportunities for Addressing Some Persistent Biases in Earth System Models

Philip RASCH1#+

¹Pacific Northwest National Laboratory

AS37-D3-AM1-303B-008 | AS37-A030 (Invited)

Preliminary Evaluation of Systematic Biases in a FV3-Powered Global Cloud-Permitting Model with Horizontal Resolutions Ranging from 13-km to 3 Km

Shian-Jiann LIN^{1#+}, Linjiong ZHOU², Xi CHEN², Baoqiang XIANG³

¹National Oceanic and Atmospheric Administration, ²Princeton University, ³University Corporation for Atmospheric Research

AS37-D3-AM1-303B-009 | AS37-A029

Toward a Better Understanding of Cloud and Convective Processes Simulated in the E3SM Atmospheric Model Version

1

Shaocheng XIE1#+

 $^1Lawrence\ Livermore\ National\ Laboratory$

AS37-D3-AM1-303B-010 | AS37-A043

Tropical Cyclone Simulations with E3SM V1: General

Characteristics and Sensitivity to Resolution and Convective

Parameterization

Wuyin LIN $^{_{18+}}$, Shaocheng XIE 2 , Mark TAYLOR 3 , Hsi-Yen MA 2 , Qi TANG 2

¹Brookhaven National Laboratory, ²Lawrence Livermore National Laboratory, ³Sandia National Laboratories

AS37-D3-AM1-303B-011 | AS37-A027

Three-Moment Representation of Rain in a Cloud

Microphysics Model

Jiwen FAN¹*+, Marco PAUKERT¹, Philip RASCH¹, Hugh MORRISON², Jason MILBRANDT³, Alexander KHAIN⁴, Kobby SHPUND⁴

¹Pacific Northwest National Laboratory, ²National Center for Atmospheric Research, ³Environment and Climate Canada, ⁴The Hebrew University of Jerusalem

AS37-D3-AM1-303B-012 | AS37-A026

Evaluate High-Resolution E3SM V1 Atmosphere Model

Simulations over the Contiguous United States

Qi TANG^{1#+}, Shaocheng XIE¹, Chris GOLAZ¹, Wuyin LIN²
¹Lawrence Livermore National Laboratory, ²Brookhaven National Laboratory

AS37-D3-AM1-303B-013 | AS37-A003

The NUIST Earth System Model (NESM) Version 3:

Description and Preliminary Evaluation

Jian CAO1#+, Bin WANG2

¹Nanjing University of Information Science, ²University of Hawaii

Time 16:00 - 18:00

Chair(s) Shaocheng XIE, Lawrence Livermore National Laboratory

Xiaohong LIU, University of Wyoming

AS37-D3-PM2-303B-014 | AS37-A013

Uncertainties in Representing Cross-Scale Interactions Among

Climate, Hydrology, and Agriculture in Earth-System Models Fei CHEN $^{1\sharp +},$ Fei CHEN 1

¹National Center for Atmospheric Research

AS37-D3-PM2-303B-015 | AS37-A036

Impact of Dust Emission Scheme on the Dust Cycle and

Radiative Forcing Simulation in CESM

Zhaohui LIN1#+, Chenglai WU2

¹Chinese Academy of Sciences, ²University of Wyoming

AS37-D3-PM2-303B-016 | AS37-A005

Systematic Assessment of Mesoscale Convective Systems in

MPAS Variable Resolution Climate Simulations over North

America

Zhe $\mathsf{FENG^{1\sharp *}}$, Koichi SAKAGUCHI¹, L. Ruby LEUNG¹, Cameron HOMEYER²

¹Pacific Northwest National Laboratory, ²University of Oklahoma

AS37-D3-PM2-303B-017 | AS37-A012

Model Developments in a Multi-Scale Modeling Framework

(MMF): An Explicit Aerosol Treatment and the Predicted

Particle Properties (P3) Microphysics

Guangxing LIN1#+, Steve GHAN1, Jiwen FAN1

¹Pacific Northwest National Laboratory

AS37-D3-PM2-303B-018 | AS37-A033

Systematic, Process-Based Model Evaluation for Extremes in

Earth System Models

Gregor C. LECKEBUSCH^{1#+}, Daniel J. BEFORT¹, Michael WALZ¹,

Kevin HODGES²

¹University of Birmingham, ²University of Reading

AS37-D3-PM2-303B-019 | AS37-A021

Evaluation and Application of Ocean Data Assimilation in

CAS-ESM-C

Renping LIN $^{1+}$, Jiang ZHU $^{1\#}$, Fei ZHENG 1 , Xiao DONG 1

¹Chinese Academy of Sciences

AS37-D3-PM2-303B-020 | AS37-A039

Sensitivity of Tropical Ascent, High Clouds, and Precipitation

to Warming and Deep Convective Parameters in CESM

 $Kathleen \ SCHIRO^{_{1\sharp+}}, \ Hui \ SU^{_1}, \ Jonathan \ JIANG^{_1}, \ J. \ David$

NEELIN², Baird LANGENBRUNNER³

¹Jet Propulsion Laboratory, California Institute of Technology,

²University of California, Los Angeles, ³University of California, Irvine

AS40 / Results from the 2016 KORUS-AQ and Related Field Studies in Asia

Wed - 06 Jun | MR326B

Time 08:30 - 10:30

Chair(s) James CRAWFORD, NASA Langley Research Center

Cheol-Hee KIM, Pusan National University

AS40-D3-AM1-326B-001 | AS40-A028

Factors Influencing Ozone Variability in Major Cities in Korea

Limseok CHANG¹ 1 *, Jeong-Soo KIM¹, Deok-Rae KIM¹, Yonghee LEE¹, Ara CHO¹, Hyunju PARK¹, Taehee KIM¹

¹National Institute of Environmental Research

AS40-D3-AM1-326B-002 | AS40-A013

Observation-Based Modelling and Analysis of Ozone

Production in the Seoul Metropolitan Area During

KORUS-AQ

Jason SCHROEDER1#+

¹National Aeronautics and Space Administration

AS40-D3-AM1-326B-003 | AS40-A007

Evaluation of Simulated VOCs During the KORUS-AQ

Campaign and Their Effect on Ozone Production in Korea

Yujin OK¹^{‡+}, Rokjin J. PARK¹, Donald BLAKE², William BRUNE³, Andrew WEINHEIMER⁴, Alan FRIED⁵, James CRAWFORD⁶, Jason SCHROEDER⁶

¹Seoul National University, ²University of California, Irvine, ³Pennsylvania State University, ⁴National Center for Atmospheric Research, ⁵University of Colorado Boulder, ⁶NASA Langley Research Center

AS40-D3-AM1-326B-004 | AS40-A024

Urban and Industrial VOC Signatures in the Seoul Region During KORUS-AQ

Isobel SIMPSON^{1,5}*, Donald BLAKE¹, Nicola BLAKE¹, Simone MEINARDI¹, Barbara BARLETTA¹, Louisa EMMONS², Jason SCHROEDER³, David PETERSON⁴, Christoph KNOTE⁵, Jung-Hun WOO⁶

¹University of California, Irvine, ²National Center for Atmospheric Research, ³NASA Langley Research Center, ⁴Naval Research Laboratory, ⁵Ludwig Maximilian University, ⁶Konkuk University

AS40-D3-AM1-326B-005 | AS40-A021

Contribution of Local Emissions of Aromatic Compounds to Secondary Organic Aerosol Formation over the Korean

Peninsula

Christoph KNOTE¹⁸⁺, Benjamin NAULT², Pedro CAMPUZANO-JOST², Jose-Luis JIMENEZ², Jin-Seok KIM³, Yungu LEE³, Jung-Hun WOO³, Soojin LEE⁴, Dongwook KIM⁴, Changmin CHO⁴, Kyung-Eun MIN⁴

¹Ludwig Maximilian University of Munich, ²University of Colorado, Boulder, ³Konkuk University, ⁴Gwangju Institute of Science and Technology

AS40-D3-AM1-326B-006 | AS40-A008 (Invited)

Air Chemistry Modeling Issues that We Have Learned from the KORUS-AQ Campaign

Rokjin J. PARK1#+

¹Seoul National University

Time 16:00 - 18:00

Chair(s) Louisa EMMONS, National Center for Atmospheric

Research

Limseok CHANG, National Institute of Environmental

Research

AS40-D3-PM2-326B-007 | AS40-A020

Evaluation of the Large Point Source Emissions in the

KORUS-AQ Version 2.0 Emissions Inventory

Jung-Hun WOO¹‡*, Younha KIM¹, Minwoo PARK¹, Rokjin J. PARK², Louisa EMMONS³

¹Konkuk University, ²Seoul National University, ³National Center for Atmospheric Research

AS40-D3-PM2-326B-008 | AS40-A004

CO Source Contributions and Combustion Characteristics

During KORUS-AQ

Wenfu TANG^{1,*+}, Avelino ARELLANO¹, Louisa EMMONS², Benjamin GAUBERT²

¹University of Arizona, ²National Center for Atmospheric Research

AS40-D3-PM2-326B-009 | AS40-A019

Integrated Assessment of Air Quality Improvement Plan for

Korea and China

Younha KIM^{1‡+}, Jung-Hun WOO¹, Zbigniew KLIMONT², Markus AMANN², Jinsu KIM¹

¹Konkuk University, ²International Institute for Applied Systems Analysis

AS40-D3-PM2-326B-010 | AS40-A022

Long - Range Transport and Vertical Structure of Air

Pollutants During the 2016 KORUS-AQ Field Study:

Meteorological Controls on Transport Pathway and Air Quality

in Downwind Regions

Hyo-Jung LEE 1* , Hyun-Young JO 1 , Shin-Young PARK 1 , Yu-Jin JO 1 , Sang-Woo KIM 2 , Taehyoung LEE 3 , Jun-Young AHN 4 , Si-Wan KIM 5 , Jung-Hun WOO 6 , Cheol-Hee KIM 1

¹Pusan National University, ²Seoul National University, ³Hankuk University of Foreign Studies, ⁴National Institute of Environmental Research, ⁵Yonsei University, ⁶Konkuk University

AS40-D3-PM2-326B-011 | AS40-A001

Production and Loss of Sulfate on the Sea Surface During its

Transport from Eastern China to South Korea

Wonbae JEON
15+, Hwa Woon LEE¹, Yunsoo CHOI², Jeonghyeok MUN¹

¹Pusan National University, ²University of Houston

AS40-D3-PM2-326B-012 | AS40-A010

Chemistry of New Particle Growth During Spring Time in the Seoul Metropolitan Area, Korea

Hwajin KIM1#+

¹Korea Institute of Science and Technology

AS40-D3-PM2-326B-013 | AS40-A027

Tropospheric Ozone Profile Maps from the Synergic

Observation of AIRS and OMI: Updates on Validation and

Science Application for KORUS-AQ

Dejian FU 1* , Kazuyuki MIYAZAKI 2 , Susan KULAWIK 3 , Kevin BOWMAN 1 , John WORDEN 1 , Robert HERMAN 1 , Greg OSTERMAN 1

¹Jet Propulsion Laboratory, California Institute of Technology, ²Japan Agency for Marine-Earth Science and Technology, ³Bay Area Environmental Research Institute

BG07 / Biogeochemistry of Metal –mineral/microbe Interactions in Aquatic and Terrestrial Ecosystems

Wed - 06 Jun | MR304B

Time 08:30 - 10:30

Chair(s) Punyasloke BHADURY, Indian Institute of Science

Education and Research Kolkata

Bhoopesh MISHRA, University of Leeds

BG07-D3-AM1-304B-001 | BG07-A003 (Invited)

The Characterization and Importance of Sulfhydryl Binding Sites within Bacterial Cell Envelopes

Jeremy FEIN^{1#+}, Qiang YU¹
¹University of Notre Dame

BG07-D3-AM1-304B-002 | BG07-A004 (Invited)

Behavior of Various Elements at Earth Surface in the Presence of Microbes and Humic Substances

Yoshio TAKAHASHI^{1#+}
¹The University of Tokyo

BG07-D3-AM1-304B-003 | BG07-A007

Microbes Mediated Biogeochemical Processes in Acidic and Metal Rich Mine Drainage of Malanjkhand Copper Project, India

Abhishek GUPTA1#+

¹Indian Institute of Technology Kharagpur

BG07-D3-AM1-304B-004 | BG07-A011

Geomicrobiological Influence on Arsenic (As) Mobilization Process in As-Contaminated Bengal Groundwater: Genomic and Ecophysiological Perspective

Balaram MOHAPATRA^{1#+}, Pinaki SAR¹
¹Indian Institute of Technology Kharagpur

BG10-IG / Modeling the Biogeochemical Cycle in the Earth System: from Local to Regional and Global Scales

Wed - 06 Jun | MR304B

Time 16:00 - 18:00

Chair(s) Atul JAIN, University of Illinois at Urbana Champaign

BG10-IG-D3-PM2-304B-001 | BG10-IG-A008 (Invited)

Modelling of Sources and Sinks Budgets of Atmospheric CH4 for the Period of 1995-2016

Naveen CHANDRA^{1‡+}, Prabir PATRA^{1,2}, Akihiko ITO³, Masayuki TAKIGAWA¹, Shingo WATANABE¹ ¹Japan Agency for Marine-Earth Science and Technology, ²Tohoku University, ³National Institute for Environmental Studies BG10-IG-D3-PM2-304B-002 | BG10-IG-A003

Anthropogenic Phosphorus Inputs to a River Basin and Their Impacts on Phosphorus Fluxes Along its

Upstream-Downstream Continuum

Wangshou ZHANG^{1#+}
¹Chinese Academy of Sciences

BG10-IG-D3-PM2-304B-003 | BG10-IG-A016 (Invited)

Evaluation of Biogeochemical Cycles of CMIP5 Models Using the ILAMB Benchmarking System

Nathan COLLIER^{1#+}, Forrest HOFFMAN^{1,2}, James RANDERSON³, Gretchen KEPPEL-ALEKS⁴, Dave LAWRENCE⁵, Bill RILEY⁶

¹Oak Ridge National Laboratory, ²University of Tennessee, Knoxville, ³University of California, Irvine, ⁴University of Michigan, ⁵National Center for Atmospheric Research, ⁶Lawrence Berkley National Laboratory

BG10-IG-D3-PM2-304B-004 | BG10-IG-A006

Difference of the Trends of Air-Sea CO2 Exchange Fluxes Between the Northern and Southern Hemisphere Oceans in CMIP5 Models

Yangchun LI^{1#+}, Yongfu XU¹
¹Chinese Academy of Sciences

BG10-IG-D3-PM2-304B-005 | BG10-IG-A017

Uncertainty in Earth System Models: Benchmarks for Ocean

Model Performance and Validation
Oluwaseun OGUNRO^{1#+} Scott ELLIO

Oluwaseun OGUNRO $^{15+}$, Scott ELLIOTT 2 , Nathan COLLIER 1 , Oliver WINGENTER 3 , Clara DEAL 4 , Weiwei FU 5 , Forrest HOFFMAN 1,6

¹Oak Ridge National Laboratory, ²Los Alamos National Laboratory, ³New Mexico Tech, ⁴University of Alaska, ⁵University of California, Irvine, ⁶University of Tennessee, Knoxville

BG10-IG-D3-PM2-304B-006 | BG10-IG-A013

Incorporation of "omics" Information into the Soil
Biogeochemical Model: A Novel Model Scheme to Regulate
Microbial Functions and Soil Carbon Dynamics in Response to
Environmental Change

Yang SONG^{1#+}, Qiuming YAO¹, Gangsheng WANG¹, Xiaojuan YANG¹, Chongle PAN¹, Melanie MAYES¹

¹Oak Ridge National Lab

HS09 / Water Resources Planning, Management and Decision-making Under Hydrological Uncertainty

Wed - 06 Jun | MR318A

Time 08:30 - 10:30

Chair(s) Yi-Ming KUO, China University of Geosciences

HS09-D3-AM1-318A-001 | HS09-A001

Addressing Salinity Accumulation in the Hetao Basin, Yellow

River, Inner Mongolia

Ian WHITE $^{1s+}$, Jicai ZENG 2 , Jinzhong YANG 2 , Jian YU 3 , Tingbao XU 1 , Xin MA 3

¹Australian National University, ²Wuhan University, ³Water Resources Research Institute of Inner Mongolia

HS09-D3-AM1-318A-002 | HS09-A003

A Framework for Water Resources System Operations: The South-to-North Water Transfer Project Case Study

Mingna WANG1#+

¹China Institute of Water Resources and Hydropower Research

HS09-D3-AM1-318A-003 | HS09-A006

Theoretical Model of Prerelease Operation Under Inflow

Variation and Uncertainty

Cheng-Han KUO1+, Gene Jiing-Yun YOU1# 1 National Taiwan University

HS09-D3-AM1-318A-004 | HS09-A007

Non-Stationarity of Extreme Value Time Series

Juei-Chia HSU¹⁺, Gene Jiing-Yun YOU^{1‡}
¹National Taiwan University

HS09-D3-AM1-318A-005 | HS09-A010

Water Resources and Land Management of Crop Distribution in Uzbekistan

Temur KHUJANAZAROV¹**, Kenji TANAKA¹, Yoshiya TOUGE², Kristina TODERICH³

¹Kyoto University, ²Tohoku University, ³International Center for Biosaline Agriculture for Central Asia and Caucasus

HS09-D3-AM1-318A-006 | HS09-A014

Sustainability Evaluation of the Ecological Water Transfer and

Rehabilitation Project: From Local People's Responses to

Ecological Effectiveness in Inland River Basins in Northwest

China

Yu WANG1#+

¹Lanzhou University of Technology

HS09-D3-AM1-318A-007 | HS09-A015

Water Sustainability Assessment in the Sanjiangyuan Region

Under Changing Climate

Shenbei ZHOU^{1#+}
¹Hohai University

Time 11:00 - 12:30

Chair(s) Yi-Ming KUO, China University of Geosciences

HS09-D3-AM2-318A-008 | HS09-A018

Simulation of Water and Nutrient Budget in Rice Paddy

Considering Conservation Farming

Soon-Kun CHOI^{1,‡+}, Kim-Kyeong KIM¹, Jaehak JEONG², Dongho CHOI¹, Seong-Chang HONG¹, Seung-Oh HUR¹

¹National Institute of Agricultural Sciences, ²Texas A&M University

HS09-D3-AM2-318A-009 | HS09-A019

Storm-Centered ARF Characteristics in the Context of Return

Periods and Spatio-Temporal Scales of Storm Events

Eunji KIM¹⁺, Boosik KANG^{2#}

1, 2Dankook University

HS09-D3-AM2-318A-010 | HS09-A020

Hydrologic Analysis Using Long-Term Simulated Stream

Flows in Urban Lake Watersheds

Bryan Clark HERNANDEZ^{1#+}, Eugene HERRERA²

 1 University of the Philippines, 2 University of the Philippines-Diliman

HS09-D3-AM2-318A-011 | HS09-A021

Identifying Strategies to Share Water Between Two Basins

Under Changing Climates and Demand Patterns: A Case Study

in Southern India

Riddhi SINGH1#+, Sai VEENA1

¹Indian Institute of Technology Bombay

HS10 / Near Surface Investigation and Modeling for Groundwater Resources Assessment

Wed - 06 Jun | MR318B

Time 13:30 - 15:30

Chair(s) Wen-Fu CHEN, Chia Nan University of Pharmacy &

Science

Jet-Chau WEN, National Yunlin University of Science

and Technology

HS10-D3-PM1-318B-001 | HS10-A010 (Invited)

Uniqueness, Scale, and Resolution Issues in Groundwater

Model Parameter Identification

Tian-Chyi YEH1#

¹University of Arizona

HS10-D3-PM1-318B-002 | HS10-A005

The Groundwater Vertical Velocity in the Recharge Zone of

Chianan Plain, Southwestern Taiwan

Wenfu CHEN¹⁵⁺, Juier CHEN², Wan-Chung LU², Chi Chao HUANG², Yunshuen WANG²

¹Chia Nan University, ²Central Geological Survey

HS10-D3-PM1-318B-003 | HS10-A030

The Responses of Precipitation and Streamflow to Recent

Climate Variation in Frigid and Subtropical Zones

Kuo-Chin HSU^{1**} , B.-T. WANG¹, Dadim GRIGOREV², H.-W. $TSENG^1$, Roald $DZHAMALOV^2$

¹National Cheng Kung University, ²Water Problem Institute

HS10-D3-PM1-318B-004 | HS10-A007

Implementation of Regression Kriging Method to Assess Spatial-Temporal Interactions Between Groundwater Levels and Recharge in Choushui River Groundwater Basin in

Western Taiwan

Chuen-Fa NI¹²+, Lamtupa NAINGGOLAN¹, I-Hsien LEE¹, Chi-Ping LIN¹, Wei-Ci LI¹

¹National Central University

HS10-D3-PM1-318B-005 | HS10-A021

Estimation and Uncertainty Analysis of Watershed Scale

Groundwater Recharge - A Case Study of the Choushui River

Watershed, Taiwan

Kai Yuan KE^{1#+}, Yih-Chi TAN¹, Pingfen SONG¹ ¹National Taiwan University

HS10-D3-PM1-318B-006 | HS10-A022

New Insight into Timescale of Water and Solutes Transport Across a Regional Aquitard Inferred from Cl and Stable

Isotope

Dongmei $HAN^{1#}$, Guoliang CAO^2 , Andrew $LOVE^3$, Stacey PRISESTLEY 3

¹Chinese Academy of Sciences, ²Institute of Water Resources and Hydropower Research, ³Flinders University

HS10-D3-PM1-318B-007 | HS10-A025

Evaluation of Groundwater Quality Spatial Variability in

Gimcheon Region, South Korea

Mesfin Benti TOLERA^{1,2+}, Il Moon CHUNG³⁺, Sun Woo CHANG³
¹University of Science and Technology-Korea Institute of Civil
Engineering and Building Technology, ²Adama Science and
Technology University, ³Korea Institute of Civil Engineering and
Building Technology

Time 16:00 - 18:00

Chair(s) Ping-Yu CHANG, National Central University

Chuen-Fa NI, National Central University

HS10-D3-PM2-318B-008 | HS10-A026 (Invited)

A Data Assimilation Appraoch for the Hydraulic Conductivity Estimation

Hwa-Lung YU¹, Ting-Hsin CHANG¹, Chang-Xuan XU¹, Hua-Ting TSENG^{1‡+}
¹National Taiwan University

3

HS10-D3-PM2-318B-009 | HS10-A029

Presence of Boron in the Puebla Valley Aquifer System,

Mexico North America

Pedro Francicsco RODRIGUEZ ESPINOSA^{1‡+}, Estefania MARTINEZ TAVERA², Esteban Rodrigo CANO-AZNAR³ ¹Instituto Politecnico Nacional, ²Universidad Popular Autónoma del Estado de Puebla (UPAEP), ³National Polytechnic Institute

HS10-D3-PM2-318B-010 | HS10-A017

In-Situ Phenomenological Succession Between Underground

Electric Potential and Pore Water Pressure in a Potential

Deep-Seated Landslide Site of Taipin Mountain, Ilan, Taiwan

Chih-Yu KUO¹⁵⁺, Chien-Chih CHEN², Ya-Ju HSU¹, Rou-Fei CHEN³, Ching-Weei LIN⁴, Pi-Wen TSAI⁵, An-Bin HUANG⁶

¹Academia Sinica, ²National Central University, ³Chinese Culture University, ⁴National Cheng Kung University, ⁵National Taiwan Normal University, ⁶National Chiao Tung University

HS10-D3-PM2-318B-011 | HS10-A006

Let's Play Groundwater Models Online

Chuen-Fa NI^{1#+}, I-Hsien LEE¹, Chi-Ping LIN¹, Wei-Ci LI¹ ¹National Central University

HS10-D3-PM2-318B-012 | HS10-A002

Estimating the Groundwater Table and Specific Yield with the Resistivity Method in the Minzu Basin of Central Taiwan

Ping-Yu CHANG1#+

¹National Central University

HS10-D3-PM2-318B-013 | HS10-A031

The Potential of the Unsaturated Zone in Groundwater

Recharge in Arid and Semiarid Areas

Tianming HUANG^{1#+}, Zhonghe PANG², Shuo YANG²
¹Institute of Geology and Geophysics, Chinese Academy of Sciences,
²Chinese Academy of Sciences

HS10-D3-PM2-318B-014 | HS10-A015

Prediction of the Groundwater Level with Complex and Irregular Influential Factors Using Artificial Neural Network Models

Sanghoon LEE1*, Heejung KIM1, Kang-Kun LEE1*, Ho-Yeong KIM2, Vinh BUI TRONG3

¹Seoul National University, ²BCMP Korea, ³Bach Khoa University

HS12 / Risk Assessment Related to Hydrological, Climatic, and Environmental Changes

Wed - 06 Jun | MR318B

Time 08:30 - 10:30

Chair(s) Tsang-Jung CHANG, National Taiwan University

Hwa-Lung YU, National Taiwan University

HS12-D3-AM1-318B-001 | HS12-A011

A Joint Stochastic-Deterministic Approach for Low-Flow Risk Assessment and Uncertainty Analysis in the Lancang River Basin

Ping XIE¹, Jiangyan ZHAO^{1#+}, Ziyi WU¹, Yanfang SANG² ¹Wuhan University, ²Chinese Academy of Sciences

HS12-D3-AM1-318B-002 | HS12-A019

A Scenario-Neutral Assessment of Water Scarcity in a Snowmelt-Driven Agricultural River Basin Under Climate Change

Hossam MOURSI¹, Daeha KIM^{2#+}, Jagath KALUARACHCHI³
¹North Carolina State University, ²Asia-Pacific Economic Cooperation
Climate Center, ³Utah State University

HS12-D3-AM1-318B-003 | HS12-A022

Reducing Risks of Water Shortage by Applying Bayesian Maximum Entropy Method for Dynamically Allocate Water Resource

Chia-Hung HUNG^{1‡+}, Hwa-Lung YU¹
¹National Taiwan University

HS12-D3-AM1-318B-004 | HS12-A028

Drought Risk Assessment by Using Drought

Severity-Duration-Frequency Curves: A Case Study in Taiwan

Chung-Ting CHEN¹⁺, Hung-Wei TSENG¹, Chen-Min KUO¹, Tao-Chang YANG¹, Pao-Shan YU^{2‡}

¹National Cheng Kung University, ²

HS12-D3-AM1-318B-005 | HS12-A007

Quantitative Study on Early Warning Indices of Sudden Water

Pollution Risk in Plain River Network

Dayong LI^{1#+}
¹Hohai University

HS12-D3-AM1-318B-006 | HS12-A023

Risk Assessment of Tsunami-Induced Groundwater Salinization in the Niijima Island, Japan, Under the

Anticipated Tsunami by the Nankai Trough Earthquake

Jiaqi LIU^{1#+}, Tomochika TOKUNAGA¹

¹The University of Tokyo

HS12-D3-AM1-318B-007 | HS12-A027

Estimation and Analysis of Extreme Climate Indices for Asia

Megacities Under Climate Change

Jeong-Bae KIM¹+, Deg-Hyo BAE¹#
¹Sejong University

HS17 / Ecohydrological Processes and Modelling in a Changing Environment

Wed - 06 Jun | MR301

Time 13:30 - 15:30

Chair(s) Huimin LEI, Tsinghua University

Bellie SIVAKUMAR, University of New South Wales

HS17-D3-PM1-301-001 | HS17-A004 (Invited)

Aridity and Global Warming

Michael RODERICK1#+

¹The Australian National University

HS17-D3-PM1-301-002 | HS17-A005 (Invited)

Spatial Distribution of Soil Organic Carbon and its Association with Hydrogeomorphological Variables in a Native Vegetation

Catchment

Huade GUAN^{1‡+}, Erick BESTLAND¹, Yong ZHANG², Gabriel SHEPHERD¹, Muriel LAVY³, Hugo GUTIERREZ¹.⁴, Hongjie XIE⁵¹Flinders University, ²Hunan University of Science and Technology, ³Politecnico Di Torino, ⁴The University of Texas at El Paso, ⁵The University of Texas at San Antonio

HS17-D3-PM1-301-003 | HS17-A017

Contribution of Climatic and Non-Climatic Forcings to US

Runoff Changes for the Period 1950-2010

Jiafu MAO¹⁺, Whitney FORBES², Mingzhou JIN², Shih-Chieh KAO¹, Wenting FU³, Xiaoying SHI¹, Daniel RICCIUTO¹, Peter THORNTON¹, Aurélien RIBES⁴, Yutao WANG⁵, Shilong PIAO⁶, Tianbao ZHAO⁷, Christopher SCHWALM⁸, Forrest HOFFMAN^{1,2}, Joshua FISHER⁹, Akihiko ITO¹⁰, Benjamin POULTER¹¹, Yuanyuan FANG¹², Hanqin TIAN¹³, Atul JAIN¹⁴

¹Oak Ridge National Laboratory, ²University of Tennessee, Knoxville, ³The University of Texas at Austin, ⁴Météo-France/ National Center for Scientific Research, ⁵Fudan-Tyndall Centre, ⁶Peking University, ⁷Chinese Academy of Sciences, ⁸Woods Hole Research Center, ⁹Jet Propulsion Laboratory, California Institute of Technology, ¹⁰National Institute for Environmental Studies, ¹¹National Aeronautics and Space Administration, ¹²Carnegie Institution for Science, ¹³Auburn University, ¹⁴University of Illinois, Urbana

HS17-D3-PM1-301-004 | HS17-A023

Modeling Soil Moisture for an Integrated Basin-Scale

Hydrological and Agricultural Model

Kumiko TSUJIMOTO^{1#+}, Tetsu OHTA² ¹Okayama University, ²N/A

HS17-D3-PM1-301-005 | HS17-A020

Spatiotemporal Analysis of the Hydro-Biogeochemical

Processes in a Typical Loess Watershed

Yiping $WU^{1\#+}$

¹Xi'an Jiaotong University

Time 16:00 - 18:00

Chair(s) Huimin LEI, Tsinghua University

Ji CHEN, The University of Hong Kong

HS17-D3-PM2-301-006 | HS17-A022

Investigating the Effects of CO2 and Human Intervention on

the Water Cycle

Xiaoying SHI $^{1\pm}$, Katherine CALVIN 2 , Andrew JONES 3 , Benjamin BOND-LAMBERTY 2 , Alan DI VITTORIO 3 , Jiafu MAO 1 , Peter THORNTON 1

¹Oak Ridge National Laboratory, ²Pacific Northwest National Laboratory, ³Lawrence Berkeley National Laboratory

HS17-D3-PM2-301-007 | HS17-A006

Investigating the New Nonlinear Complementary Method in Estimating Land-Surface Evaporation Under Different Terrain

Conditions

Zhipin AI^{1*+}, Qinxue WANG¹, Yonghui YANG²
¹National Institute for Environmental Studies, ²Chinese Academy of Sciences

HS17-D3-PM2-301-008 | HS17-A003

Interactions of Vegetation Dynamics and Hydrological

Processes in the Upper Heihe River Basin on the

Qinghai-Tibetan Plateau

Bing GAO^{1‡+}, Dawen YANG², Yue QIN², Yuhan WANG²
¹China University of Geosciences, ²Tsinghua University

HS17-D3-PM2-301-009 | HS17-A019

Optimizing Global Temperature and Water Cycle of an Earth

System Model of Intermediate Complexity with Surrogate

Model-Based Multi-Objective Optimization

Wei GONG^{1#+}, Qingyun DUAN¹, Yuhan SHI¹
¹Beijing Normal University

HS17-D3-PM2-301-010 | HS17-A012

Hydrological Effects of Change in Forest Coverage Induced by

Climate Change

Qinli YANG¹⁺, Heng ZHANG¹, Guoqing WANG^{2‡}, Yaoyao LAN¹, Wanshan PENG¹, Junming SHAO¹

¹University of Electronic Science and Technology of China, ²Nanjing Hydraulic Research Institute

HS21 / Monthly to Seasonal Projection of Extreme Climatic/hydrological Events

Wed - 06 Jun | MR301

Time 08:30 - 10:30

Chair(s) Hung Soo KIM, Inha University

HS21-D3-AM1-301-001 | HS21-A011

Clustering Analysis of Snowfall Station Using K-Means

Algorithm

Munseok LEE^{1#+}, Gunhui CHUNG²

¹Hoseo University, ²Water Resources Laboratory

HS21-D3-AM1-301-002 | HS21-A012

Evaluation of Runoff in Urban Stormwater Pipe Network

Under the Peak Rainfall Change

Jinwoo LEE^{1‡+}, Gunhui CHUNG²

¹Hoseo University, ²Water Resources Laboratory

HS21-D3-AM1-301-003 | HS21-A016

Estimation of Interevent Time Definition Considering

Nonlinearity of Rainfall Data

Kyunghun KIM¹⁺, Dae Gun HAN¹, Hung Soo KIM^{1‡}

¹Inha University

HS21-D3-AM1-301-004 | HS21-A019

A Comparison of Inflow Forecasting Methods for Shihmen

Reservoir in Taiwan

Horng CHEN¹⁺, Hung-Wei TSENG¹, Chen-Min KUO¹, Tao-Chang YANG¹, Pao-Shan YU^{2±}
¹National Cheng Kung University, ²

HS21-D3-AM1-301-005 | HS21-A003 (Invited)

Seasonal Streamflow Forecasting in Taiwan Using Derived

Climate Variables

Chia-Jeng CHEN1#+

¹National Chung Hsing University

HS21-D3-AM1-301-006 | HS21-A004

Can Rainfall be Predicted at Decadal Timescales?

Ashish SHARMA^{1‡+}, Dipayan CHOUDHURY¹, Alexander SEN GUPTA¹, Rajeshwar MEHROTRA¹, Bellie SIVAKUMAR^{1,2}
¹University of New South Wales, ²Indian Institute of Technology Bombay

HS21-D3-AM1-301-007 | HS21-A008 (Invited)

Predicting U. S. Drought Monitor Using a Categorical

Modeling Framework

Zengchao HAO1#+

¹Beijing Normal University

HS21-D3-AM1-301-008 | HS21-A009 (Invited)

Prediction of Quarterly Streamflow Using Drought Forecasting and Copula-Based Bayesian Network Method

Sangho LEE^{1#+}, Youngkyu JIN¹

¹Pukyong National University

HS25 / Hydrologic Prediction and Measures Considering Extreme Climate Conditions

Wed - 06 Jun | MR318B

Time 11:00 - 12:30

Chair(s) Kun Yeun HAN, Kyungpook National University

Jun Haeng HEO, Yonsei University

HS25-D3-AM2-318B-001 | HS25-A001

Application of Bayesian Networks to Probabilistic Hydrological Drought Forecasting Considering Drought

Propagation

Ji-Yae SHIN¹+, Hyun-Han KWON², Joo Heon LEE³, Tae-Woong

¹Hanyang University, ²Chonbuk National University, ³Joongbu University HS25-D3-AM2-318B-002 | HS25-A027

Realtime River Stage Prediction with ANN Based on Only

Upstream Observation Data

Sunmin KIM1#+, Yasuto TACHIKAWA2

1, 2Kyoto University

HS25-D3-AM2-318B-003 | HS25-A018

Data-Driven Flood Prediction Model Considering Drainage

Network and Rainfall Conditions

Hyun II KIM¹+, Ho Jun KEUM¹, Jae Yeong LEE¹, Kun-Yeun HAN¹+

¹Kyungpook National University

HS25-D3-AM2-318B-004 | HS25-A006

Development of Monitoring System for Management of Storm

Flood Disaster

Ah Long SON $^{1\#*}$, Hyoung-Seong PARK 1 , Jung-Tak LIM 1 , Jinyi PARK 1

¹National Disaster Management Institute

HS25-D3-AM2-318B-005 | HS25-A012

Distributed Parameter Muskingum-Cunge Flood Routing

Mode

Kang Min KOO¹⁺, Kyung Soo JUN^{1#}
¹Sungkyunkwan University

HS25-D3-AM2-318B-006 | HS25-A015

Flood Damage Cause Analysis and Restoration Plan in Urban

Area by Applying 2-D Model

Jae Yeong LEE1+, Beom Jin KIM1, Hyun Il KIM1, Kun-Yeun HAN1#

¹Kyungpook National University

HS26 / Global Cryosphere and Its Challenges

Wed - 06 Jun | MR318A

Time 13:30 - 15:30

Chair(s) Shiyin LIU, Yunan University

Yong ZHANG, Hunan University of Science and

Technology

HS26-D3-PM1-318A-001 | HS26-A028 (Invited)

Progress and Tendency of Cryospheric Hydrology Research

Yongjian DING1#+, Shengxia WANG1

¹Chinese Academy of Sciences

HS26-D3-PM1-318A-002 | HS26-A005 (Invited)

Exploring the Ground Ice Recharge Near Permafrost Table on the Central Qinghai-Tibet Plateau Using Chemical and Isotopic Data

Tonghua WU1#+

¹Chinese Academy of Sciences

HS26-D3-PM1-318A-003 | HS26-A009

Simulation of Soil Thermal Conductivity within Active Layer at Tanggula Site in Qinghai-Tibet Plateau, China

Ren LI1#+

¹Chinese Academy of Sciences

HS26-D3-PM1-318A-004 | HS26-A011

The Characteristic of Surface Velocities of Glaciers in the Upper Indus River Along Karakoram Highway

Zongli JIANG1#+, Shiyin LIU2

¹Hunan University of Science and Technology, ²Yunnan University

HS26-D3-PM1-318A-005 | HS26-A014

Study on Inland River Basin Oasis Changes Under Glacier Changes

Shengxia WANG1#+

¹Chinese Academy of Sciences

HS26-D3-PM1-318A-006 | HS26-A017

Error Correction and Uncertainty Analysis of Estimation of

Glacial Mass Balance Based on Geodetic Measurement

Junfeng WEI
1z²+, Zongli JIANG¹, Xin WANG¹, Shiyin LIU², Yong ZHANG¹

¹Hunan University of Science and Technology, ²Yunnan University

Time 16:00 - 18:00

Chair(s) Yong ZHANG, Hunan University of Science and

Technology

HS26-D3-PM2-318A-007 | HS26-A012 (Invited)

Monitoring and Simulation of Hydrothermal Conditions Indicating the Deteriorating Stability of a Perennially Frozen Moraine Dam in the Himalayas

Xin WANG^{1‡+}, Shiyin LIU², Yongjian DING³, Junfeng WEI¹
¹Hunan University of Science and Technology, ²Yunnan University,
³Chinese Academy of Sciences

HS26-D3-PM2-318A-008 | HS26-A026 (Invited)

Fate of Glaciers on the Tibetan Plateau by 2100

Keqin DUAN^{1#+}

¹Shanxi Normal University

HS26-D3-PM2-318A-009 | HS26-A015

Modelling Glacier Mass Balance on the Mount Gongga in the

Southeastern Tibetan Plateau

Yong ZHANG $^{1#+}$, Xin WANG 1 , Zongli JIANG 1 , Junfeng WEI 1 , Shiyin LIU 2

¹Hunan University of Science and Technology, ²Yunnan University

HS26-D3-PM2-318A-010 | HS26-A019

Quantified Mass Loss of Ice Core and its Climatic Signals in

the Northeastern Tibetan Plateau, China

Wentao DU¹, Shichang KANG¹, Xiang QIN¹, Weijun SUN¹, Jizu CHEN¹, Yushuo LIU¹, Xiaoqing CUI¹

¹Chinese Academy of Sciences

HS26-D3-PM2-318A-011 | HS26-A021

Melting Glaciers Stimulate Mercury Cycling in High Altitudes

in the Tibetan Plateau

Qianggong ZHANG1#+

¹Chinese Academy of Sciences

HS26-D3-PM2-318A-012 | HS26-A023

Microstructural Analysis of Frozen Clay with Different Water

Content and Temperature by Cryo-SEM

Chengsong YANG¹**, Dan WANG², Hui BING², Lianhai ZHANG², Jimin YAO²

¹Northwest Institute of Eco-Environment and Resources, CAS,

²Chinese Academy of Sciences

HS26-D3-PM2-318A-013 | HS26-A024

High-Altitude Permafrost on Tropical Volcanoes on Hawaii Island

Norbert SCHORGHOFER^{1‡+}, Steven BUSINGER², Matthias LEOPOLD³, Amanda MORELLI⁴, Kenji YOSHIKAWA⁵

¹Planetary Science Institute, ²University of Hawaii, ³University of Western Australia, ⁴Universidade Federal de Sao Paulo, ⁵University of Alaska

HS28 / Impacts of Climate Change on Floods, Droughts, and Water Availability in Asian Countries

Wed - 06 Jun | MR301

Time 11:00 - 12:30

Chair(s) Yongqin David CHEN, The Chinese University of Hong

Kong

Jianfeng LI, Hong Kong Baptist University Thian Yew GAN, University of Alberta

HS28-D3-AM2-301-001 | HS28-A008 (Invited)

Impacts of Climate Change on Water Availability of the Ten Major Water Zones of China

Guoqing WANG¹**, Jianyun ZHANG¹, Qinli YANG², Zhenxin BAO¹, Junliang JIN¹, Tiesheng GUAN¹ ¹Nanjing Hydraulic Research Institute, ²University of Electronic Science and Technology of China

HS28-D3-AM2-301-002 | HS28-A016

Analysis of the Variations of Water Availability in Asia Monsoon Region Under Climate Change

Jae Yeong HEO¹⁺, Jeong-Bae KIM², Deg-Hyo BAE^{2‡}

¹, ²Sejong University

HS28-D3-AM2-301-003 | HS28-A013

Projections of Floods and Water Availability Under Climate

Change Across China in the 21st Century

Yongqin David CHEN^{1‡+}, Jianfeng LI², Qiang ZHANG³
¹The Chinese University of Hong Kong, ²Hong Kong Baptist
University, ³Beijing Normal University

HS28-D3-AM2-301-004 | HS28-A015

Projection of Joint Probabilistic Behaviors of Floods and Droughts Across China

Jianfeng LI^{1s+}, Yongqin David CHEN², Qiang ZHANG³
¹Hong Kong Baptist University, ²The Chinese University of Hong Kong, ³Beijing Normal University

HS28-D3-AM2-301-005 | HS28-A002

Water Property Around the Mekong's Water, Tonlé Sap Lake and Angkor, Cambodia - Implication for the Ancient

Prosperous Angkor -

Hodaka KAWAHATA^{1#+}
¹The University of Tokyo

IG03 / Interdisciplinary Tsunami Science

Wed - 06 Jun | MR323A

Time 08:30 - 10:30

Chair(s) Tomoyuki TAKAHASHI, Kansai University

IG03-D3-AM1-323A-001 | IG03-A026

Physics-Based Simulation Pipeline for Tsunami Early Warning

John WILSON $^{1\sharp *}$, John RUNDLE 1 , Andrea DONNELLAN 2 , Tony SONG 3 , Attila KOMJATHY 2 , Steven WARD 4

¹University of California, Davis, ²Jet Propulsion Laboratory, California Institute of Technology, ³California Institute of Technology, ⁴University of California Santa Cruz

IG03-D3-AM1-323A-002 | IG03-A003

Tsunami Data Assimilation with Sparse Observation Yuchen WANG^{1#+}, Kenji SATAKE¹, Takuto MAEDA¹ ¹The University of Tokyo

IG03-D3-AM1-323A-003 | IG03-A024

Consideration of Real-Time Tsunami Forecast for Outer-Rise Earthquakes

Naotaka YAMAMOTO CHIKASADA^{1#+}, Toshitaka BABA²
¹National Research Institute for Earth Science and Disaster Resilience (NIED), ²Tokushima University

IG03-D3-AM1-323A-004 | IG03-A014

A New Automated Method for Real-Time Tsunami Source

Estimation Using Seafloor Pressure Sensor Network in Japan Mayu INOUE^{1#+}, Yuichiro TANIOKA¹, Yusuke YAMANAKA² ¹Hokkaido University, ²The University of Tokyo

IG03-D3-AM1-323A-005 | IG03-A034

Early Stage of Preparation of Tsunami Scenario Database
Using High-Speed GPU Version of Namidance Tsunami
Simulation Code in Terms of Disaster Resilience Actions in

Takamatsu City, Japan

Ceren OZER SOZDINLER¹, Yoshiyuki KANEDA¹, Takane HORI², Taro ARIKAWA³, Bora YALCINER⁴, Andrey ZAITSEV⁵, Ahmet YALCINER⁴

¹Kagawa University, ²Japan Agency for Marine-Earth Science and Technology, ³Chuo University, ⁴Middle East Technical University, ⁵Special Research Bureau for Automation of Marine Researches

IG03-D3-AM1-323A-006 | IG03-A002

Development of the Tsunami Observation and Prediction System Using Ocean Radar and Others at Hamaoka NPS Yoshihito TANAKA^{1‡+}, Tomoyuki TAKAHASHI² ¹Chubu Electric Power Co., Inc., ²Kansai University IG03-D3-AM1-323A-007 | IG03-A020

Examination for Moment Magnitude of the Small Tsunami Observable by Oceanographic Radar Installed in Wakayama

Prefecture

Shuji SETO¹⁵⁺, Tomoyuki TAKAHASHI², Hirofumi HINATA³, Ryotaro FUJI⁴, Fumihiko IMAMURA⁵

¹International Research Institute of Disaster Science, Tohoku University, ²Kansai University, ³Ehime University, ⁴Kokusai Kogyo Co., Ltd., ⁵Tohoku University

IG03-D3-AM1-323A-008 | IG03-A028

A Numerical Modeling of Long-Term Flooding After the

Tsunami Caused by the Nankai Earthquake, Japan

Toshitaka BABA^{1‡+}, Kentaro IMAI², Kenta NAKANISHI³, Manabu MIYOSHI³, Keisuke AKI³

¹Tokushima University, ²Japan Agency for Marine-Earth Science and Technology, ³Nita Consultant Co., Ltd.

Time 13:30 - 15:30

Chair(s) Yuichiro TANIOKA, Hokkaido University

IG03-D3-PM1-323A-009 | IG03-A011 (Invited)

Properties of Trans-Pacific Tsunamis

Kenji SATAKE1#+

¹The University of Tokyo

IG03-D3-PM1-323A-010 | IG03-A032

A Self-Consistent Fault-Slip Model for the 2011 Tohoku

Earthquake and Tsunami

Kwok Fai CHEUNG^{1*+}, Yoshiki YAMAZAKI², Thorne LAY³
¹University of Hawaii at Manoa, ²University of Hawaii, ³University of California Santa Cruz

IG03-D3-PM1-323A-011 | IG03-A010

Source Estimate for the 1960 Chile Earthquake from Joint

Inversion of Geodetic and Transoceanic Tsunami Data

Tungcheng $HO^{1\sharp *},$ Kenji SATAKE¹, Shingo WATADA¹, Yushiro $FUJII^2$

¹The University of Tokyo, ²Building Research Institute

IG03-D3-PM1-323A-012 | IG03-A001

Nearshore Behavior of the 1906 Colombia-Ecuador Earthquake

Tsunami in Hilo Bay

Yusuke YAMANAKA^{1‡+}, Yuichiro TANIOKA²
¹The University of Tokyo, ²Hokkaido University

IG03-D3-PM1-323A-013 | IG03-A017

A Large Slip Near the Trough of the 1854 Ansei-Tokai

Earthquake Estimated from an Observed Tsunami Waveform at San Francisco

Karen UNO^{1‡+}, Yuichiro TANIOKA¹, Yusuke YAMANAKA²
¹Hokkaido University, ²The University of Tokyo

IG03-D3-PM1-323A-014 | IG03-A019

Source Processes of the 2016 Mie-Oki Earthquake (Mw5.9)

Using Tsunami Waveforms Observed by Dense Seafloor

Pressure Sensor Network System

Tatsuya NAKAGAKI 1* , Yuichiro TANIOKA 1 , Kentaro IMAI 2 , Takeshi IINUMA 2 , Narumi TAKAHASHI 2

¹Hokkaido University, ²Japan Agency for Marine-Earth Science and Technology

IG03-D3-PM1-323A-015 | IG03-A013

Tsunami Source Modeling for the 2015 Volcanic Tsunami

Earthquake Near Torishima, South of Japan

Osamu SANDANBATA $^{1,2^{a}+}$, Shingo WATADA 1 , Kenji SATAKE 1 , Yoshio FUKAO 3 , Hiroko SUGIOKA 4 , Aki ITO 3 , Hajime SHIOBARA 1

¹The University of Tokyo, ²Japan Society for the Promotion of Science, ³Japan Agency for Marine-Earth Science and Technology, ⁴Kobe University

Time 16:00 - 18:00

Chair(s) Yusuke YAMANAKA, The University of Tokyo

Toshitaka BABA, Tokushima University

IG03-D3-PM2-323A-016 | IG03-A004

Determination of a Fault Size from a Dispersive Character of a

Tsunami: A Case Study for the 2016 El Salvador-Nicaragua

Outer-Ride Earthquake

Yuichiro TANIOKA^{1#+}, Amilcar Geovanny CABRERA RAMIREZ², Yusuke YAMANAKA³

¹Hokkaido University, ²Nicaraguan Institute of Territorial Studies, ³The University of Tokyo

IG03-D3-PM2-323A-017 | IG03-A005

Feasibility Study on Tsunami Source Estimation from

Observed Water Level Change by Machine Learning

Tomoyuki TAKAHASHI1#+

¹Kansai University

IG03-D3-PM2-323A-018 | IG03-A025

Consideration of Tsunami Design Load for Building by

Comparison Between Japan and the U.S.

Takashi MORI¹⁺, Yoshihiro OKUMURA²⁺, Junji KIYONO³
¹IHI Corporation, ²Kansai University, ³Kyoto University

IG03-D3-PM2-323A-019 | IG03-A021

Numerical Experiment on Validation of Tsunami Sediment Transport Model for Various Sand Grains Using Hydraulic Experiment Data

Ako YAMAMOTO¹⁵⁺, Tomoyuki TAKAHASHI¹, Kenji HARADA², Masaaki SAKURABA³, Kazuya NOJIMA³
¹Kansai University, ²Shizuoka University, ³Nippon Koei Co., Ltd.

IG03-D3-PM2-323A-020 | IG03-A036

Hydraulic Experiment on Spatial Distribution of Tsunami

Deposits and Hydraulic Characteristics of Tsunami

Kenji HARADA¹⁵⁺, Tomoyuki TAKAHASHI², Ako YAMAMOTO², Masaaki SAKURABA³, Kazuya NOJIMA³, Junpei MINETA¹

¹Shizuoka University, ²Kansai University, ³Nippon Koei Co., Ltd.

IG03-D3-PM2-323A-021 | IG03-A008

Sedimentary Features and Preservation Potential of the 2011 Tohoku-Oki Tsunami Deposits in the Shallow Sea of the Sendai Bay

Akira SATO¹, Kazuhisa GOTO¹²+, Daisuke SUGAWARA², Keiko UDO¹

¹Tohoku University, ²Museum of Natural and Environmental History

IG03-D3-PM2-323A-022 | IG03-A029

Characteristics of Evacuation Start During the 2017 Tsunami

Evacuation Drill in Minami-Awaji, Japan

Yuji DOHI1#+, Yoshihiro OKUMURA2

¹National Research Institute for Earth Science and Disaster Resilience (NIED), ²Kansai University

IG08 / Data-driven Modeling in Geoscience

Wed - 06 Jun | MR322B

Time 13:30 - 15:30

Chair(s) Takane HORI, Japan Agency for Marine-Earth Science

and Technology

Tatsu KUWATANI, Japan Agency for Marine-Earth

Science and Technology

IG08-D3-PM1-322B-001 | IG08-A016 (Invited)

Sparse Modeling and Data Driven Science

Masato OKADA1#+

¹The University of Tokyo

IG08-D3-PM1-322B-002 | IG08-A015

A Nonlinear Parametric Model Based on Power Law for Tsunami Height Prediction at Owase in the Kii Peninsula,

Japan

Yasuhiko IGARASHI^{1,2+}, Masashi YOSHIKAWA², Shin MURATA², Toshitaka BABA³, Takane HORI⁴, Masato OKADA^{2‡} ¹Japan Science and Technology Agency, ²The University of Tokyo, ³Tokushima University, ⁴Japan Agency for Marine-Earth Science and Technology

IG08-D3-PM1-322B-003 | IG08-A018

Information Entropy of the 2004 Parkfield Earthquake

Alexis GIGUERE1#+, John B. RUNDLE2

¹University of California Davis, ²University of California, Davis

IG08-D3-PM1-322B-004 | IG08-A010

${\bf Geodetic\ Data\ Inversion\ for\ Spatial\ Distribution\ of\ Long-Term}$

Slow Slip Events Beneath the Bungo Channel, Southwest

Japan, Using Sparse Modelling

Ryoko NAKATA^{1#+}, Hideitsu HINO², Tatsu KUWATANI¹, Shoichi YOSHIOKA³, Masato OKADA⁴, Takane HORI¹ ¹Japan Agency for Marine-Earth Science and Technology, ²University of Tsukuba, ³Kobe University, ⁴The University of Tokyo

IG08-D3-PM1-322B-005 | IG08-A019

Seismic Wavefield Imaging of Long-Period Ground Motion in

the Tokyo Metropolitan Area, Japan

Hiromichi NAGAO¹⁸⁺, Masayuki KANO², Kenji NAGATA³, Shin-Ichi ITO¹, Shin'ichi SAKAI¹, Shigeki NAKAGAWA¹, Muneo HORI¹, Naoshi HIRATA¹

¹The University of Tokyo, ²Tohoku University, ³National Institute of Advanced Industrial Science and Technology

IG08-D3-PM1-322B-006 | IG08-A012

Pressure-Temperature-Time Path Inversion from Zoned

Minerals Using Data Assimilation

Tatsu KUWATANI^{1‡}, Hiromichi NAGAO², Atsushi OKAMOTO³, Kenta YOSHIDA¹, Shin-Ichi ITO², Takamoto OKUDAIRA⁴

¹Japan Agency for Marine-Earth Science and Technology, ²The University of Tokyo, ³Tohoku University, ⁴Osaka City University

IG08-D3-PM1-322B-007 | IG08-A007

Applications of Persistent Homology to Fracture

Characterization

Anna SUZUKI^{1‡+}, Miyuki MIYAZAWA¹, Atsushi OKAMOTO¹, Hiroyuki SHIMIZU², Yasuaki HIRAOKA¹, Ippei OBAYASHI¹, Takatoshi ITO¹

¹Tohoku University, ²Kajima Corporation

Time 16:00 - 18:00

Chair(s) Dmitri KONDRASHOV, University of California, Los

Angeles

Hiromichi NAGAO, The University of Tokyo

IG08-D3-PM2-322B-008 | IG08-A017 (Invited)

Identification of Dynamical Processes in Space Plasma

Turbulence

Michael BALIKHIN^{1#+}
¹University of Sheffield

IG08-D3-PM2-322B-009 | IG08-A023

Calibrating Nino 3.4 SST Forecast Ensembles Using Bayesian Model Averaging

Hanpei ZHANG^{1#+}, Pao-Shin CHU², Luke HE³, David UNGER³
¹University of Hawaii at Manoa, ²University of Hawaii, ³National
Oceanic and Atmospheric Administration

IG08-D3-PM2-322B-010 | IG08-A009

Response of Irrigation Water Requirement to the Elevated CO2 over an Agricultural Region in Northwest China

Jun NIU^{1#+}, Shaozhong KANG¹
¹China Agricultural University

IG08-D3-PM2-322B-011 | IG08-A008

The Detection of Cloud Pattern in the Antarctic Using Convolution Neural Network for Estimation of the Snowfall Amount

Kazue SUZUKI $^{1\sharp *}$, Terumasa TOKUNAGA 2 , Takashi YAMANOUCHI 3

¹National Center of Neurology and Psychiatry, ²Kyushu Institute of Technology, ³National Institute of Polar Research

IG08-D3-PM2-322B-012 | IG08-A006

Geochemical Discrimination Using Machine Learning:

${\bf Magmatic\ Tectonic\ Settings\ and\ Geochemical\ Signatures}$

Kenta UEKI^{1‡+}, Hideitsu HINO², Tatsu KUWATANI¹
¹Japan Agency for Marine-Earth Science and Technology, ²University of Tsukuba

IG08-D3-PM2-322B-013 | IG08-A005

Grain Growth Prediction Based on Data Assimilation by

Implementing 4DVar on Phase-Field Models

Shin-Ichi ITO $^{1\sharp +}$, Hiromichi NAGAO 1 , Tadashi KASUYA 1 , Junya INOUE 1

¹The University of Tokyo

IG08-D3-PM2-322B-014 | IG08-A022

WaveNet - An Open Geoscience Database Initiative for

Automatic Event Picking and Beyond

Ning TU^{1#+}
¹Tongji University

IG08-D3-PM2-322B-015 | IG08-A021

NASA GES DISC Earth Science Data Support

Jennifer WEI $^{{\scriptscriptstyle 1\#}}$, Dana OSTRENGA², Bruce VOLLMER¹, David MEYER³

¹NASA Goddard Earth Sciences Data and Information Services Center, ²NASA Goddard Earth Sciences Data and Information Services Center/ Adnet Systems, ³NASA Goddard Space Flight Center

IG09 / Big data, point cloud, and geospatial analytics in geosciences

Wed - 06 Jun | MR322B

Time 08:30 - 10:30

Chair(s) Uma DAS, Indian Institute of Information Technology

Kalyani

Yuichi S. HAYAKAWA, The University of Tokyo

C.S.DUBEY, Centre for Advanced Studies, Department of

Geology University of Delhi

IG09-D3-AM1-322B-001 | IG09-A001

A State-of-the-Art Evaluation Framework for Earth System

Modeling and its Big Data Approaches

Thomas SCHARTNER^{1‡+}, Sebastian ILLING¹, Christopher KADOW¹, Ingo KIRCHNER¹, Ulrich CUBASCH¹
¹Free University of Berlin

IG09-D3-AM1-322B-002 | IG09-A006

The Terra Data Fusion Project: An Update

Larry DI GIROLAMO^{1#+}
¹University of Illinois

IG09-D3-AM1-322B-003 | IG09-A007

Frequency Characteristic of Grace Data and the Related

Technique to Recover the Gravity Field

Iinhai YU1#+

¹University of Chinese Academy of Sciences

IG09-D3-AM1-322B-004 | IG09-A004

Time Series Prediction of Solar Flares Using Three

Machine-Learning Algorithms

Naoto NISHIZUKA¹**, Komei SUGIURA¹, Yuki KUBO¹, Mitsue DEN¹, Mamoru ISHII¹

¹National Institute of Information and Communications Technology

IG09-D3-AM1-322B-005 | IG09-A005

Integration Method of Big Data on Spatiotemporal

Distribution of People in Urban Area

Toshihiro OSARAGI1#+

¹Tokyo Institute of Technology

IG09-D3-AM1-322B-006 | IG09-A009

Development of Public Safety Map Service and Influence on Society

Young Woo CHUN $^{\mbox{\tiny 15+}},$ Kyung Soo PYO $^{\mbox{\tiny 1}},$ So Hee LEE $^{\mbox{\tiny 1}},$ Mi Song KIM $^{\mbox{\tiny 1}}$

¹National Disaster Management Research Institute

IG09-D3-AM1-322B-007 | IG09-A012

Analysis of Gravel Sediment Movement and Flow Path Change Through High-Frequency, High-Definition Topographic

Measurements in the Tedori River, Northcentral Japan

Takuro OGURA^{1#+}, Yuichi S. HAYAKAWA¹, Tatsuto AOKI²
¹The University of Tokyo, ²Kanazawa University

IG09-D3-AM1-322B-008 | IG09-A013

Estimating Volume and Source Location of Tsunami Boulders
Using Point Cloud Data

Yuichi S. HAYAKAWA^{1‡+}, Hisashi AOKI²

¹The University of Tokyo, ²Tokyo Gakugei University

IG13 / Where History and Geology Intercept: Multidisciplinary Approaches to Extending Our Chronology of Catastrophic Geologic Events

Wed - 06 Jun | MR302B

Time 13:30 - 15:30

Chair(s) Christopher HARPEL, US Geological Survey

Florian SCHWANDNER, NASA-JPL

Aron MELTZNER, Nanyang Technological University

IG13-D3-PM1-302B-001 | IG13-A003 (Invited)

Hawaiian Chants and Stories: Important Guides to Volcanic

Events at Kīlauea Volcano in the 15th-17th Centuries

Donald SWANSON1#+

¹United States Geological Survey

IG13-D3-PM1-302B-002 | IG13-A002

Sedimentological Comparison of Recent Storm and Tsunami

Deposits from the South-Eastern Coastline of India

Christos GOURAMANIS¹⁵⁺, Adam SWITZER², Srinivasalu SESHACHALAM³, Anandasabari KARTHIKEYAN⁴, Dat PHAM⁵, Jessica PILARCZYK⁶, Hussain SHAIK⁷, Brian JONES⁸, Wenshu YAP²

¹National University of Singapore, ²Nanyang Technological University, ³Anna University, ⁴Jawaharlal Nehru Centre for Advance Scientific Research, ⁵Viet Nam Institute of Meteorology, Hydrology and Climate Change, ⁶University of Southern Mississippi, ⁷University of Madras, ⁸University of Wollongong

IG13-D3-PM1-302B-003 | IG13-A008

Historical Earthquakes in the Eastern Sunda Arc, Indonesia

Athanasius CIPTA $^{1\sharp +}$, Jonathan GRIFFIN 2 , Ngoc NGUYEN 3 , Phil CUMMINS 3

¹Geological Agency, ²Geoscience Australia, ³Australian National University

IG13-D3-PM1-302B-004 | IG13-A001

Earthquake Resilience and Society: The Intersection of Archaeology, Myth, and Geology at Late Bronze Age Akrotiri Amanda GAGGIOLI^{1‡+}

¹Stanford University

IG13-D3-PM1-302B-005 | IG13-A009

Using Historical Events and Timelines to Communicate

Natural Hazards to Mainstream Audiences

Isaac KERLOW1#+

¹Nanyang Technological University

IG22 / Pre-earthquake Anomalies, Earthquake Predictability, 10 Years Commemoration 2008 M8.0 Wehchuan Earthquake, Kickoff Chinese Seismo-electromagnetic Satellite

Wed - 06 Jun | MR322B

Time 11:00 - 12:30

Chair(s) Tiger JY LIU, National Central University

Katsumi HATTORI, Chiba University

IG22-D3-AM2-322B-004 | IG22-A015 (Invited)

The Added Value of a Multi-Parametric Global Earthquake

Observation System (EQuOS) in the New CSES Perspective

Valerio TRAMUTOLI^{1#}, Nicola GENZANO¹, Carolina FILIZZOLA², Mariano LISI¹, Nicola PERGOLA²
¹University of Basilicata, ²National Research Council

IG22-D3-AM2-322B-005 | IG22-A013

Seismo-Ionospheric Anomalies of the Ground-Based Total Electron Content Prior to the 12 May 2008 M8.2 Wenchuan

Earthquake and M≥6.0 Earthquakes in China

Jann-Yenq (Tiger) LIU^{1*}, Yuh-Ing CHEN¹, Chengyan LIU²
¹National Central University, ²Beijing University of Technology

IG22-D3-AM2-322B-006 | IG22-A002

On the Quantification and Optimization of Forecasting

Efficiency of Non-Seismic Observations

Peng HAN^{1#+}, Katsumi HATTORI², Jiancang ZHUANG³
¹Southern University of Science and Technology, ²Chiba University,
³Institute of Statistical Mathematics

IG22-D3-AM2-322B-007 | IG22-A006

Precursor Information and Forecasts Before the M7.3

Kumamoto Earthquake in Japan

Weisheng CHEN^{1‡+}, Huirong ZHANG¹
¹Beijing University of Technology

OS03 / Enso and Iod Theory, Impact and Prediction

Wed - 06 Jun | MR322A

Time 08:30 - 10:30

Chair(s) Tao LIAN, Second Institute of Oceanography

OS03-D3-AM1-322A-001 | OS03-A002

Oceanic Feedbacks in Affecting ENSO Asymmetry

Cong GUAN $^{1\sharp *}$, Michael MCPHADEN 2 , Shijian HU 3 , Fan WANG 3

¹Institute of Oceanology Chinese Academy of Sciences, ²National Oceanic and Atmospheric Administration, ³Chinese Academy of Sciences

OS03-D3-AM1-322A-002 | OS03-A003

Interannual Variability and Dynamics of Intraseasonal Wind

Rectification in the Equatorial Pacific Ocean

Xia ZHAO^{1‡+}, Dongliang YUAN¹
¹Chinese Academy of Sciences

OS03-D3-AM1-322A-003 | OS03-A007

Why Was the Indian Ocean Dipole Weak in the Context of the

Extreme El Nino in 2015?

Lin LIU^{1#+}, Guang YANG¹
¹State Oceanic Administration

OS03-D3-AM1-322A-004 | OS03-A010

Impact of South Pacific Subtropical Dipole Mode on ENSO

Jian ZHENG^{1,2±+}, Faming WANG¹, Michael ALEXANDER³
¹Chinese Academy of Sciences, ²Qingdao National Laboratory for Marine Science and Technology, ³National Oceanic and Atmospheric Administration

OS03-D3-AM1-322A-005 | OS03-A011

Similarity of Optimally Growing Initial Errors and Optimal

Precursors for Two Types of El Nino Events and its

Application for Recognizing Sensitive Area

Hui XU1#+, Wansuo DUAN1, Lei CHEN2

¹Chinese Academy of Sciences, ²Shanghai Meteorological Service

OS03-D3-AM1-322A-006 | OS03-A012

High Resolution Modeling of ENSO-Induced Precipitation in

the Tropical Andes

Jil KIEFER^{1#+}, Christina KARAMPERIDOU¹

¹University of Hawaii at Manoa

Time 11:00 - 12:30

Chair(s) Tao LIAN, Second Institute of Oceanography

OS03-D3-AM2-322A-007 | OS03-A013

Precipitation Associated with ENSO Near Hawaiian Islands

Xinyi YANG^{1#+}, Fei-Fei JIN^{1,2}

¹University of Hawaii, ²Chinese Meteorological Agency

OS03-D3-AM2-322A-008 | OS03-A014

Predictability of Different Types of ENSO

Xiangming ZHANG1+, Youmin TANG2#

 $^1State\ Oceanic\ Administration,\ ^2University\ of\ Northern\ British$

Columbia

OS03-D3-AM2-322A-009 | OS03-A015

Climate Modulation on Sea Surface Height in China Coastal

Water and Adjacent Seas

Xiaoshuang ZHANG1#+

¹National Marine Data and Information Service

OS03-D3-AM2-322A-010 | OS03-A018

Lake Level Variation of Ngangzi Co in the Tibetan Plateau

from Altimetry and its Potential Link to ENSO and IOD

Haihong WANG¹*, Zhengkai HUANG¹, Xiancai ZOU¹ ¹Wuhan University

OS13 / High-resolution Ocean and Ocean-atmosphere Coupled Models: Advances and Challenges

Wed - 06 Jun | MR324

Time 13:30 - 15:30

Chair(s) Zhenya SONG, First Institute of Oceanography

Chan Joo JANG, Korea Institute of Ocean Science and

Technology

OS13-D3-PM1-324-001 | OS13-A031 (Invited)

Results from High Resolution Climate Simulations Using the Energy Exascale Earth System Model (E3SM)

Mathew MALTRUD1#+

¹Los Alamos National Laboratory

OS13-D3-PM1-324-002 | OS13-A023

A Virtual Ocean-Atmosphere Simulation for Studying Air-Sea

Interactions and Evaluating Observation Systems

Ehud STROBACH^{1;+}, Andrea MOLOD², Atanas TRAYANOV², William PUTMAN³, Gael FORGET⁴, Jean-Michel CAMPIN⁴, Chris HILL⁴, Dimitris MENEMENLIS⁵, Patrick HEIMBACH⁶

¹University of Maryland, ²NASA Goddard Space Flight Center,

³NASA Global Modeling and Assimilation Office, ⁴Massachusetts
Institute of Technology, ⁵Jet Propulsion Laboratory, California Institute of Technology, ⁶The University of Texas at Austin

OS13-D3-PM1-324-003 | OS13-A032

Real-Case Simulation Using a High Resolution

Ocean-Atmosphere Coupled Model

Jung-Eun KIM^{1*+}, Young-Su LEE¹, Junghan KIM¹
¹Korea Institute of Atmospheric Prediction Systems (KIAPS)

OS13-D3-PM1-324-004 | OS13-A028

Improved Climate Simulations Through a Stochastic

Parameterization of Ocean Eddies

Paul WILLIAMS¹;*, Nicola HOWE², Jonathan GREGORY^{1,3}, Robin SMITH¹, Manoj JOSHI⁴

¹University of Reading, ²Risk Management Solutions, ³Met Office Hadley Centre, ⁴University of East Anglia

OS13-D3-PM1-324-005 | OS13-A026

Impacts of Heat Flux Adjustments on the Climate Simulation in a Regional Atmosphere-Ocean Coupled Model RSM-ROMS

over the Northwest Pacific Ocean

Xiaojun GUO¹#+, Kei YOSHIMURA¹ ¹The University of Tokyo OS13-D3-PM1-324-006 | OS13-A006

Impact of Ocean Eddy Resolution on the Projection of

Precipitation Change

Jie HE1#+

¹Princeton University

OS13-D3-PM1-324-007 | OS13-A003

High-Resolution Visualization of Ocean Current Using Line

Integral Convolution

Haixing LIU1#+, Zhendong LIU1, Tianyun SU1, Wen WANG1

¹State Oceanic Administration

Time 16:00 - 18:00

Chair(s) Chan Joo JANG, Korea Institute of Ocean Science and

Technology

Weihong ZHANG, First Institute of Oceanography

OS13-D3-PM2-324-008 | OS13-A025 (Invited)

The Development and Application of LASG/IAP Climate

System Ocean Model (LICOM)

Hailong LIU $^{1\sharp +}$, Pengfei LIN 1 , Zipeng YU 1 , Yongqiang YU 1

¹Chinese Academy of Sciences

OS13-D3-PM2-324-009 | OS13-A011

The Study of Arctic Sea Ice Data Assimilation in FIOCOM

Qi SHU¹#+

¹State Oceanic Administration

OS13-D3-PM2-324-010 | OS13-A029

A Realization of Bias Correction Method in the GMAO

Coupled System

Yehui CHANG1#+

¹NASA Goddard Space Flight Center

OS13-D3-PM2-324-011 | OS13-A002 (Invited)

Development of a Multi-Model Ensemble Atmosphere-Ocean

Coupling Framework

Wei XUE1#+

¹Tsinghua University

OS13-D3-PM2-324-012 | OS13-A007

Simulation of Air-Sea Exchange of Carbon Dioxide in the Gulf

Coast by Using Coupled COAWST-WRF/Chem Model

Pengfei WANG¹, Zuo XUE¹, Hongliang ZHANG^{1#+}

¹Louisiana State University

OS13-D3-PM2-324-013 | OS13-A010

Parameterization of Self-Attraction and Loading Tides for a Regional Tidal Model and its Application in the Northwest

Pacific Ocean

Yonggang WANG $^{1s+}$, Zexun WEI 1 , Guohong FANG 1 , Xiumin GAO 1

¹State Oceanic Administration

OS13-D3-PM2-324-014 | OS13-A017

Air-Sea Interactions in the Northern South China Sea During Winter-Summer Between ENSO Decaying Years Using a Regional Coupled Model

Yi-Chun KUO^{1#+}, Yu-Heng TSENG¹

¹National Taiwan University

OS14 / Progress in Ocean Heat Uptake and Sea Level Studies

Wed - 06 Jun | MR317B

Time 08:30 - 10:30

Chair(s) Xuebin ZHANG, Commonwealth Scientific and Industrial

Research Organization

Shuhei MASUDA, Japan Agency for Marine-Earth

Science and Technology

Xianyao CHEN, Ocean University of China

OS14-D3-AM1-317B-001 | OS14-A007 (Invited)

Sea Level and Ocean Heat Content Variations Analyzed with

the Latest ECCO State Estimate

Ichiro FUKUMORI¹*, Rui M. PONTE², Christopher PIECUCH³, Patrick HEIMBACH⁴

¹Jet Propulsion Laboratory, ²Atmospheric and Environmental Research, Inc., ³Woods Hole Oceanographic Institution, ⁴The University of Texas at Austin

OS14-D3-AM1-317B-002 | OS14-A011 (Invited)

Role of Pacific Trade Wind Variations in Decadal Climate

Variability and Ocean Heat Uptake

Matthew ENGLAND1#+

¹University of New South Wales

OS14-D3-AM1-317B-003 | OS14-A001 (Invited)

Implications of Earth's Energy Imbalance and Ocean Heat

Content for Ocean Heat Transports

Kevin TRENBERTH1#+, Lijing CHENG2

¹National Center for Atmospheric Research, ²Chinese Academy of Sciences

OS14-D3-AM1-317B-004 | OS14-A002

Impact of Heat Flux Perturbations in the North Atlantic on the

AMOC: Insight from FAFMIP

Oleg SAENKO¹²⁺, Jonathan GREGORY^{2,3}, Johann JUNGCLAUS⁴, Armin KOEHL⁵, Ojha SAYANTANI⁵, Detlef STAMMER⁵, Tatsuo SUZUKI⁶, Michael WINTON⁷

¹Canadian Centre for Climate Modelling and Analysis, ²University of Reading, ³Met Office Hadley Centre, ⁴Max Planck Institute for Meteorology, ⁵University of Hamburg, ⁶Japan Agency for Marine-Earth Science and Technology, ⁷NOAA Geophysical Fluid Dynamics Laboratory

OS14-D3-AM1-317B-005 | OS14-A009

Sea Level Response to Poleward Shifting vs. Strengthening of Westerly Winds in the Southern Ocean

Xuebin ZHANG^{1‡+}, John CHURCH², Kewei LYU¹
¹CSIRO Oceans and Atmosphere, ²University of New South Wales

OS14-D3-AM1-317B-006 | OS14-A010

Mechanisms of Steric Sea Level Trends During 1992-2015

Quran WU¹⁺, Xuebin ZHANG^{2‡}, John CHURCH³, Jianyu HU¹
¹Xiamen University, ²CSIRO Oceans and Atmosphere, ³University of
New South Wales

OS14-D3-AM1-317B-007 | OS14-A017

Long-Term Sea Level Changes in an Ocean State Estimation of FSTOC

Shuhei MASUDA^{1*+}, Satoshi OSAFUNE¹, Tadashi HEMMI¹ ¹Japan Agency for Marine-Earth Science and Technology

OS14-D3-AM1-317B-008 | OS14-A013

Regional Sea Level Changes over North Pacific Driven by Air-Sea Interaction and Inter-Basin Teleconnections

Xichen LI1#+

¹Chinese Academy of Sciences

OS17 / The Oceanic Energy Cascade: from Mesoscale, Submesoscale to Small-scale Turbulence

Wed - 06 Jun | MR322A

Time 13:30 - 15:30

Chair(s) Yisen ZHONG, Shanghai Jiao Tong University

Toshiyuki HIBIYA, The University of Tokyo

Bo QIU, University of Hawaii

OS17-D3-PM1-322A-001 | OS17-A002

Seasonality in Transition Scale from Balanced to Unbalanced Motions in the World Ocean

Bo QIU^{1‡+}, Shuiming CHEN¹, Patrice KLEIN², Jinbo WANG³, Lee-Lueng FU³, Dimitris MENEMENLIS³, Hector TORRES³ ¹University of Hawaii, ²The French Research Institute for the Exploitation of the Sea (IFREMER), ³NASA Jet Propulsion Laboratory

OS17-D3-PM1-322A-002 | OS17-A005

Seasonality of the Kuroshio Intensity East of Taiwan

Modulated by Mesoscale Eddies

Yuqi YIN^{1*+}, Xiaopei LIN², Yijun HOU¹
¹Chinese Academy of Sciences, ²Ocean University of China

OS17-D3-PM1-322A-003 | OS17-A006

The Reynolds Stress Caused by Accumulation of Circular Mesoscale Eddies

Kunihiro AOKI^{1#+}, Yukio MASUMOTO²

¹Japan Agency for Marine-Earth Science and Technology, ²The University of Tokyo

OS17-D3-PM1-322A-004 | OS17-A009

Multi-Scale Dynamical Processes and Their Interactions

Observed in the South China Sea Mesoscale Eddy Experiment

Zhiwei ZHANG^{1‡+}, Jiwei TIAN¹, Bo QIU², Xiaodong HUANG¹, Wei ZHAO¹

¹Ocean University of China, ²University of Hawaii

OS17-D3-PM1-322A-005 | OS17-A012

Enhanced Eddy-Induced Ocean-to-Atmosphere Turbulent Heat

Transfers in the Global Western Boundary Current Regions

Yanan ZHU1#+, Xiaopei LIN1, Bo QIU2

¹Ocean University of China, ²University of Hawaii

OS17-D3-PM1-322A-006 | OS17-A013

Observational and Numerical Studies of the Vertical Structure

of Tidal Mixing over Abyssal Rough Bottom Bathymetry

Toshiyuki HIBIYA^{1‡+}, Emiri KOBORI¹, Robin ROBERTSON² ¹The University of Tokyo, ²Xiamen University

OS17-D3-PM1-322A-007 | OS17-A003

The Performance of Vertical Mixing Parameterizations in

Replicating the Mixed Layer Depth and Surface Wind Mixing

Robin ROBERTSON1#+, Paul HARTLIPP2

¹Xiamen University, ²University of New South Wales

OS17-D3-PM1-322A-008 | OS17-A019

Effects of the Indonesian Throughflow on the Generation and

Propagation of Internal Tides in Lombok Strait

Taira NAGAI¹#+, Toshiyuki HIBIYA¹

¹The University of Tokyo

OS17-D3-PM1-322A-009 | OS17-A018

Long-Range Radiation and Dissipation of M2 Internal Tides in

the Philippine Sea

Yang WANG1+, Zhenhua XU1#, Baoshu YIN1

¹Chinese Academy of Sciences

OS19 / Marine Debris – from Modelling to Management to Microplastics

Wed - 06 Jun | MR317B

Time 11:00 - 12:30

Chair(s) Mark MANUEL, National Oceanic and Atmospheric

Administration

Serena LEE, Griffith University

Charles LEMCKERT, University of Canberra

OS19-D3-AM2-317B-001 | OS19-A002 (Invited)

Pathways and Fate of Marine Debris from the 2011 Tsunami in

Japan Studed with a Synthesis of Numerical Models and

Observational Reports

Nikolai MAXIMENKO $^{{\scriptscriptstyle \parallel}**}$, Jan HAFNER $^{\scriptscriptstyle 1}$, Masafumi KAMACHI $^{\scriptscriptstyle 2}$, Amy MACFADYEN $^{\scriptscriptstyle 3}$

¹University of Hawaii, ²Japan Agency for Marine-Earth Science and Technology, ³National Oceanic and Atmospheric Administration

OS19-D3-AM2-317B-002 | OS19-A001

Spatial and Seasonal Variation of Microplastic Debris

Abundance in the Lakshadweep Archipelago, Indian Ocean

Venkatachalapathy RAMADOSS1 $^{18+}$, Veerasingam S 2 , Mugilarasan M 1

¹Annamalai University, ²National Institute of Oceanography

OS19-D3-AM2-317B-003 | OS19-A003

Modeling the Marine Debris Transport Across the North

Pacific, the Case of 2011 Japanese Tsunami Marine Debris in

Hawaii

Jan HAFNER¹⁵⁺, Nikolai MAXIMENKO¹, Gisela SPEIDEL¹, Kin Lik WANG¹, Chris WOOLAWAY², Carl BERG³, Megan LAMSON⁴

¹University of Hawaii, ²Keep The Hawaii Islands Beautiful, ³Surfrider Foundation Kauai Chapter, ⁴Hawaii Wildlife Fund

OS19-D3-AM2-317B-004 | OS19-A006

When Particle Inertial Effects Need to be Included in the

Transport of Microplastics in the Ocean

Ross CALVERT $^{1\sharp +}$, Alistair BORTHWICK 2 , Ton VAN DEN BREMER 1

¹University of Oxford, ²The University of Edinburgh

OS19-D3-AM2-317B-005 | OS19-A004

Monitoring Marine Debris Using Drone Technology

Serena LEE^{1#+}, Daniel WARE¹
¹Griffith University

OS19-D3-AM2-317B-006 | OS19-A007

Bridging Citizen Science and Academia

Sarah-Jeanne ROYER^{1#+}, Jan HAFNER¹, Nikolai MAXIMENKO¹ ¹University of Hawaii

OS19-D3-AM2-317B-007 | OS19-A010

The NOAA Marine Debris Monitoring and Assessment

Project: Four Years of Effort in the U.S. Pacific States

Sherry LIPPIATT^{1#+}, Carlie HERRING¹, Mark MANUEL²
¹NOAA Marine Debris Program, ²National Oceanic and Atmospheric Administration

OS21 / Submesoscale Processes and Their Parameterizations

Wed - 06 Jun | MR324

Time 08:30 - 10:30

Chair(s) Changming DONG, Nanjing University of Information

Science and Technology

OS21-D3-AM1-324-001 | OS21-A015 (Invited)

Three Compartment Structure of Subsurface-Intensified

Mesoscale Eddies in the Ocean

Zhengguang ZHANG^{1#+}

¹Ocean University of China

OS21-D3-AM1-324-002 | OS21-A011

Parameterizations of Eddies: Fluxes and Lognormal

Dissipation

Baylor FOX-KEMPER¹;, Brodie PEARSON¹
¹Brown University

OS21-D3-AM1-324-003 | OS21-A007

Elevated Mixing in the Periphery of Mesoscale Eddies in the

South China Sea

Qingxuan YANG¹²+, Chun ZHOU¹, Xiaodong HUANG¹, Hui SUN¹

¹Ocean University of China

OS21-D3-AM1-324-004 | OS21-A009

Numerical Study of Flow Through the Caiwei Seamounts, a

Deep Seamount in the Northwest Pacific Ocean

Xingliang JIANG $^{1s+}$, Changming DONG 1,2 , Dongfeng XU 3 , Chunsheng WANG 3

¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles, ³State Oceanic Administration

OS21-D3-AM1-324-005 | OS21-A010

Submesoscale Process Around Ocean Eddies Based on

Along-Track Altimeter and Numerical Modelling Data

Guangjun XU^{1±+}, Changming DONG^{1,2}, Xingliang JIANG¹
¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles

OS21-D3-AM1-324-006 | OS21-A012

Parameterization of Wave-Induced Mixing Using Large Eddy Simulation

Haili WANG^{1,*}, Changming DONG^{1,2}, Xiaoqian GAO^{1,3}
¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles, ³State Oceanic Administration

OS21-D3-AM1-324-007 | OS21-A013

Convective Instability-Induced Bottom Mixing Using Large

Eddy Simulation

Xiaoqian GAO^{1,2#}, Changming DONG^{1,3}, Liang JUNHONG⁴, Li GUOJING⁵, Jingsong YANG², Dongxiao WANG⁶, James C. MCWILLIAMS³

¹Nanjing University of Information Science & Technology, ²State Oceanic Administration, ³University of California, Los Angeles, ⁴Louisiana State University, ⁵Chinese Academy of Sciences, ⁶South China Sea Institute of Oceanology, Chinese Academy of Sciences

OS21-D3-AM1-324-008 | OS21-A004

Chlorophyll Rings Around Ocean Eddies in the North Pacific

Changming DONG^{1,2#+}, Guangjun XU¹, Peter GAUBE³, Yu LIU¹, Xingliang JIANG¹, Jingsong YANG⁴, Wenjin SUN¹

¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles, ³University of Washington, ⁴State Oceanic

Administration

OS24 / Coastal Hazards: Impacts of Tropical Storms and Tsunamis

Wed - 06 Jun | MR317B

Time 13:30 - 15:30

Chair(s) Xiping YU, Tsinghua University

Harry YEH, Oregon State University

OS24-D3-PM1-317B-001 | OS24-A039 (Invited)

Estimating Extreme Water Levels by Quadrature Joint

Probability Optimal Sampling Method in Xiamen Bay, China

Sudong $XU^{1\#+}$, Kai YIN 1 , Xinghua ZHU 1

¹Southeast University

OS24-D3-PM1-317B-002 | OS24-A017

Deterministic and Ensemble Storm Surge Forecasting Combing with Regional Operational Atmospheric Model

Yu-Lin TSAI $^{1\sharp\star}$, Tso-Ren WU 1 , Chuen-Teyr TERNG 2 , Chi-Hao CHU 2

¹National Central University, ²Central Weather Bureau

OS24-D3-PM1-317B-003 | OS24-A020

Hindcast Study of Inundation in Macau Caused by Typhoon Hato and Hagupit

Jie YANG¹,²²+, Linlin LI³, Chuan-Yao LIN⁴, Philip LIU¹, Kai Meng MOK⁵

¹National University of Singapore, ²Hohai University, ³Nanyang Technological University, ⁴Academia Sinica, ⁵University of Macau

OS24-D3-PM1-317B-004 | OS24-A015

Infragravity Waves and Storm Surge of the Hurricane Maria

Gael ARNAUD $^{1\sharp\star}$, Yann KRIEN 2 , Bernard DUDON 1 , Narcisse ZAHIBO 1

¹Université des Antilles, ²University of the French West Indies and Guiana

OS24-D3-PM1-317B-005 | OS24-A036

Coastal Waves, Circulation and Sediment Transport During

Severe Storms in the Northeastern USA in a Changing Climate

Dongmei XIE^{1#+}, Qingping ZOU², Jean MACRAE¹
¹University of Maine, ²Heriot-Watt University

OS24-D3-PM1-317B-006 | OS24-A047

Cyclone Induced Berm Breaching in the Bay of Bengal Under Climate Change Conditions - A Case Study off Konark Coast

During Cyclone Phailin

Jaya Kumar SEELAM¹⁵⁺, Amaranatha Reddy N², Jyoti KERKAR¹
¹National Institute of Oceanography, ²National Institute of Technology
Karnataka

OS24-D3-PM1-317B-007 | OS24-A041 (Invited)

Probabilistic Mapping of Storm-Induced Coastal Inundation

for Climate Change Adaptation

Kwok Fai CHEUNG 15+, Ning LI1, Yoshiki YAMAZAKI2, Volker ROEBER2

¹University of Hawaii at Manoa, ²University of Hawaii

Time 16:00 - 18:00

Chair(s) Zhenhua HUANG, University of Hawaii at Manoa

Xiping YU, Tsinghua University

OS24-D3-PM2-317B-008 | OS24-A040

A River-Bay Coupled Model for Simulating Flood Inundation

Due to Cyclone Along the Head Bay of Bengal Region

Sridharan BALAKRISHNAN^{1*}, Soumendra Nath KUIRY¹
¹Indian Institute of Technology Madras

OS24-D3-PM2-317B-009 | OS24-A042

Improvement in Estimation of Radius of Maximum Wind of

the Cyclones in the Bay of Bengal Region

Soumendra Nath KUIRY^{1‡+}, B. SRIDHARAN¹, Nithila DEVI N.¹ Indian Institute of Technology Madras

OS24-D3-PM2-317B-010 | OS24-A011

A Preliminary Study on the Impact of Typhoon Storm Surge on

the Tidal Bore in the Qiantang River

Cunhong PAN $^{1\#+}$, Qiushun WANG 1 , Dongzi PAN 1 Zhejiang Institute of Hydraulics & Estuary

OS24-D3-PM2-317B-011 | OS24-A012

Tidal Disasters at the Qiantang River Estuary in the History of China: 250-2010

Dongzi PAN^{1#+}, Ying LI², Cunhong PAN¹

¹Zhejiang Institute of Hydraulics & Estuary, ²Zhejiang University of Water Resources and Electric Power

OS24-D3-PM2-317B-012 | OS24-A038

Physical Modelling of Tsunami Bore Propagation, Run-Up and

Surf/Swash Hydrodynamics

Ignacio BARRANCO^{1±+}, Yun-Ta WU¹, Philip L.-F. LIU¹
¹National University of Singapore

OS24-D3-PM2-317B-013 | OS24-A026

Physical and Numerical Modelling of Tsunami Inundation in

Coastal Urban Area

Tomohiro YASUDA^{1#+}, Adi PRASETYO², Victoria JOHNSON³, Nobuhito MORI⁴

¹Kansai University, ²Ministry of Public Works and Housing, ³United States Naval Academy, ⁴Kyoto University

OS24-D3-PM2-317B-014 | OS24-A027 (Invited)

Storm and Tsunami Deposits in the Geological Record: Where Are We Now and Where Do We Go from Here?

Adam SWITZER1#+

¹Nanyang Technological University

PS02 / Volcanism and Tectonism Across the Solar System

Wed - 06 Jun | MR302A

Time 16:00 - 18:00

Chair(s) Anezina SOLOMONIDOU, European Space Agency

(ESA) ESAC

Florian M. SCHWANDNER, Jet Propulsion Laboratory,

California Institute of Technology

Rosaly LOPES-GAUTIER, Jet Propulsion Laboratory/

California Institute of Technology (Caltech)

PS02-D3-PM2-302A-001 | PS02-A003 (Invited)

The Contrasting Volcanic Histories of Inner Solar System Worlds

Paul BYRNE1#+

¹North Carolina State University

PS02-D3-PM2-302A-002 | PS02-A004 (Invited)

The Robex Lunar Analogue Mission on Mt. Etna, Sicily

Frank SOHL^{1#}, Martin KNAPMEYER², Alexandra HEFFELS¹, Sabrina SCHWINGER¹, Vikram UNNITHAN³, Laurenz THOMSEN³, Martina WILDE⁴

¹German Aerospace Center, ²DLR Institute of Planetary Research, ³Jacobs University Bremen, ⁴Alfred Wegener Institute

PS02-D3-PM2-302A-003 | PS02-A007

First Tectonic Stress Map Across Enceladus' South Polar

Terrain and Possible Dynamic Causes

Ashley SCHOENFELD^{1#+}, An YIN²

¹UCLA, ²University of California, Los Angeles

PS02-D3-PM2-302A-004 | PS02-A008

Explosive Volcanism on Mars: Implications for Sedimentary

Processes and Alteration Geochemistry

Joseph MICHALSKI1#+

¹University of Hong Kong

PS02-D3-PM2-302A-005 | PS02-A002

Big Bang Theory: A New Style of Volcanic Eruption Activity

Identified in <i>Galileo</i> NIMS Data at Marduk Fluctus, Io

Ashley DAVIES^{1,*}, Rebecca DAVIES², Glenn VEEDER³, Katherine DE KLEER⁴, Imke DE PATER⁵, Dennis MATSON³, Torrence JOHNSON⁶, Lionel WILSON⁷

¹Jet Propulsion Laboratory - California Institute of Technology, ²Oxted School, ³Bear Fight Institute, ⁴California Institute of Technology, ⁵University of California - Berkeley, ⁶NASA Jet Propulsion Laboratory, ⁷Lancaster University

PS06 / Magnetospheres, Atmospheres, Exopheres of Outer Planets and Their Satellites

Wed - 06 Jun | MR302A

Time 08:30 - 10:30

Chair(s) Norbert KRUPP, Max Planck Institute for Solar System

Research

PS06-D3-AM1-302A-001 | PS06-A021

3D Jovian Magnetosphere - Ionosphere - Thermosphere (MIT) Coupling

Japheth YATES^{1‡+}, Licia RAY², Nicholas ACHILLEOS³
¹European Space Agency, ²Lancaster University, ³University College London

PS06-D3-AM1-302A-002 | PS06-A023 (Invited)

Europa's Tenuous Atmosphere and its Interaction with

Europa's Icy Surface and the Jovian Magnetosphere: Current

Knowledge and Perspectives for Future Missions

Alessandro MURA¹⁵⁺, Christina PLAINAKI², Timothy CASSIDY³, Valery SHEMATOVICH⁴, Anna MILILLO⁵, Peter WURZ⁶, Audrey VORBURGER⁶, Lorenz ROTH⁷, Andre GALLI⁶, Rubin MARTIN⁶, Aljona BLÖCKER⁸, Pontus BRANDT⁹, Frank CRARY³, Iannis DANDOURAS¹⁰, Xianzhe JIA¹¹, Davide GRASSI⁵, Paul HARTOGH¹², Alice LUCCHETTI¹³, Melissa MCGRATH¹⁴, Valeria MANGANO⁵, Stefano ORSINI⁵, Chris PARANICAS⁹, Aikaterini RADIOTI¹⁵, Kurt RETHERFORD¹⁶, Joachim SAUR⁸, Ben TEOLIS¹⁶

¹National Institute for Astrophysics VAT: O6895721006, ²Italian Space Agency, ³University of Colorado Boulder, ⁴Institute of Astronomy of the Russian Academy of Sciences, ⁵National Institute for Astrophysics, ⁶University of Bern, ⁷KTH Royal Institute of Technology, ⁸University of Cologne, ⁹The Johns Hopkins University Applied Physics Laboratory, ¹⁰University of Toulouse, ¹¹University of Michigan, ¹²Max Planck Institute for Solar System Research, ¹³INAF -Astronomical observatory of Padova, ¹⁴SETI Institute, ¹⁵University of Liege, ¹⁶Southwest Research Institute

PS06-D3-AM1-302A-003 | PS06-A013 (Invited)

Evidence of a Plume on Europa from Galileo Magnetic and

Plasma Wave Signatures

Xianzhe JIA^{1‡+}, Margaret KIVELSON², Krishan KHURANA², William KURTH³

¹University of Michigan, ²University of California, Los Angeles, ³The University of Iowa

PS06-D3-AM1-302A-004 | PS06-A007

Ice State on the Inner Satellites of Jupiter and Saturn

Chris PARANICAS^{1*+}, Charles HIBBITTS¹, Nicolas LIGIER², Amanda HENDRIX³, Peter KOLLMANN¹, George CLARK¹, Timothy CASSIDY⁴, Tom NORDHEIM⁵, Elias ROUSSOS⁶, Norbert KRUPP⁶, Diana BLANEY⁵

¹The Johns Hopkins University Applied Physics Laboratory, ²Open University, ³Planetary Science Institute, ⁴University of Colorado Boulder, ⁵Jet Propulsion Laboratory, California Institute of Technology, ⁶Max Planck Institute for Solar System Research

PS06-D3-AM1-302A-005 | PS06-A011 (Invited)

Ganymede's Exosphere and Their Interaction with the Surface and Magnetosphere: Current Knowledge and Perspectives for

Future Missions

Peter WURZ^{1#+}, Audrey VORBURGER¹
¹University of Bern

PS06-D3-AM1-302A-006 | PS06-A003

Energetic Particle Dynamics Near Callisto

Lucas LIUZZO¹#+, Sven SIMON¹ Georgia Institute of Technology

PS06-D3-AM1-302A-007 | PS06-A014

Modeling and Cassini INMS Data of the Plumes of Enceladus

Dana HURLEY^{1#+}, Mark PERRY¹, Carey M. LISSE¹
¹The Johns Hopkins University Applied Physics Laboratory

Time 13:30 - 15:30

Chair(s) Sushil ATREYA, University of Michigan

PS06-D3-PM1-302A-008 | PS06-A008

Heavy Elements, Cloud Structure, and the Formation of Uranus and Neptune

Sushil ATREYA^{1‡+}, Joong HYUN-IN¹, Mark HOFSTADTER²
¹University of Michigan, ²Jet Propulsion Laboratory, California
Institute of Technology

PS06-D3-PM1-302A-009 | PS06-A016

JUICE: A European Mission to Jupiter and Its Icy Moons

Olivier WITASSE1#+, Stas BARABASH2, Pontus BRANDT3, Lorenzo BRUZZONE4, Emma BUNCE5, Baptiste CECCONI6, Thibault CAVALIÉ⁶, Giuseppe CIMO⁷, Athena COUSTENIS⁶, Gabriele CREMONESE8, Michele DOUGHERTY9, Leigh FLETCHER⁵, Randy GLADSTONE¹⁰, Olivier GRASSET¹¹, Leonid GURVITS7, Paul HARTOGH12, Harald HOFFMANN13, Hauke HUSSMANN¹³, Luciano IESS¹⁴, Ralf JAUMANN¹³, Yasumasa KASABA¹⁵, Yohai KASPI¹⁶, Norbert KRUPP¹², Yves LANGEVIN17, Ingo MUELLER-WODARG9, Pasquale PALUMBO¹⁸, Giuseppe PICCIONI⁸, Jeffrey J. PLAUT¹⁹, François POULET¹⁷, Kurt RETHERFORD¹⁰, Thomas ROATSCH¹³, Hanna ROTHKAEHL²⁰, Ondrej SANTOLIK^{21,22}, David STEVENSON²³, Federico TOSI8, Tim VAN HOOLST24, Jan-Erik WAHLUND2, Peter WURZ25, Andrea ACCOMAZZO1, Nicolas ALTOBELLI1, Arnaud BOUTONNET¹, Christian ERD¹, Rosario LORENTE¹, Ignacio TANCO1, Claire VALLAT1

¹European Space Agency, ²Swedish Institute of Space Physics, ³The Johns Hopkins University Applied Physics Laboratory, ⁴Trento University, ⁵University of Leicester, ⁶Paris Observatory, ⁷Joint Institute for VLBI ERIC, ⁸National Institute for Astrophysics, ⁹Imperial College London, ¹⁰Southwest Research Institute, ¹¹University of Nantes, ¹²Max Planck Institute for Solar System Research, ¹³German Aerospace Center, ¹⁴Sapienza University of Rome, ¹⁵Tohoku University, ¹⁶Weizmann Institute of Science, ¹⁷Paris-Sud University, ¹⁸Napoli Observatory, ¹⁹NASA Jet Propulsion Laboratory, ²⁰Space Research Centre of Polish Academy of Sciences, ²¹Czech Academy of Sciences, ²²Charles University, ²³California Institute of Technology, ²⁴Royal Observatory, ²⁵University of Bern

PS06-D3-PM1-302A-010 | PS06-A015

3D General Circulation and Chemistry Model of the Middle

Atmosphere of Jupiter

Nicholas ZUBE^{1‡+}, Xi ZHANG¹, Cheng LI², Tianhao LE²
¹University of California Santa Cruz, ²California Institute of Technology

PS06-D3-PM1-302A-011 | PS06-A017 (Invited)

Cassini at Jupiter and Saturn: New Results on Storms and

Clouds as Obtained from the ISS Filter Imager and VIMS

Mapping Spectrometer

Kevin BAINES^{1‡+}, John BLALOCK², Patrick FRY¹, Andrew INGERSOLL³, Liming LI⁴, Thomas MOMARY⁵, Kunio SAYANAGI², Larry SROMOVSKY¹, Aaron STUDWELL⁶

¹University of Wisconsin-Madison, ²Hampton University, ³California Institute of Technology, ⁴University of Texas, ⁵NASA Jet Propulsion Laboratory, ⁶University of Houston

PS06-D3-PM1-302A-012 | PS06-A024

CRAND at Saturn: GCR Supply Rate and Injection

Coefficients

Anna KOTOVA^{1#+}, Elias ROUSSOS², Norbert KRUPP², Iannis DANDOURAS¹, Leonardo REGOLI³, Peter KOLLMANN⁴
¹University of Toulouse, ²Max Planck Institute for Solar System Research, ³University of Michigan, ⁴The Johns Hopkins University Applied Physics Laboratory

PS06-D3-PM1-302A-013 | PS06-A028

Hydrocarbon and Nitrile Species in Titan's Upper

Atmosphere from Multiple Occultations

Siteng FAN $^{1\sharp *}$, Linfeng WAN 1 , Donald SHEMANSKY 2,3 , Mao-Chang LIANG 4 , Yuk YUNG 1

¹California Institute of Technology, ²Space Environment Technologies, ³University of Southern California, ⁴Academia Sinica

PS06-D3-PM1-302A-014 | PS06-A006

Evolution of Titan's Atmosphere Near the Poles During the

Cassini Solstice Mission

Athena COUSTENIS^{1‡+}, Donald JENNINGS², Richard ACHTERBERG³, Georgios BAMPASIDIS⁴, Conor NIXON², Panayiotis LAVVAS⁵, Valeria COTTINI², F. Michael FLASAR² ¹Paris Observatory, ²NASA Goddard Space Flight Center, ³University of Maryland, ⁴National and Kapodistrian University of Athens, ⁵Universite Reims Champargne-Ardennes

PS12 / From Dust to Planets: the First Hundred Million Years of the Solar System

Wed - 06 Jun | MR323B

Time 08:30 - 10:30

Chair(s) Ramon BRASSER, Earth Life Science Institute

Liping QIN, University of Science and Technology of

China

PS12-D3-AM1-323B-001 | PS12-A006

The Al-26 Distribution in the Initial Condensation Stage

Ming-Chang LIU^{1‡+}, Jangmi HAN², Adrian BREARLEY³
¹University of California, Los Angeles, ²Johnson Space Center,
³University of New Mexico

PS12-D3-AM1-323B-002 | PS12-A008 (Invited)

Oxygen Isotope Distribution of the Early Solar System at CAI Formation Age

Hisayoshi YURIMOTO^{1#+}, Noriyuki KAWASAKI²

¹Hokkaido University, ²Japan Aerospace Exploration Agency

PS12-D3-AM1-323B-003 | PS12-A012

Early Evolution of the Solar System: The First Few Million

Years

Jitendra N. GOSWAMI^{1#+}
¹Physical Research Laboratory

PS12-D3-AM1-323B-004 | PS12-A009 (Invited)

Nb-Zr Systematics of Rutiles and U-Pb Ages of Zircons from

Mesosiderites: Chronological Implications for the Early

Thermal Evolution of the Parent Body

Makiko K. HABA^{1‡+}, Jörn-Frederik WOTZLAW², Yi-Chen LAI^{2,3}, Maria SCHÖNBÄCHLER², Akira YAMAGUCHI⁴

¹Tokyo Institute of Technology, ²ETH Zurich, ³Macquarie University, ⁴National Institute of Polar Research

PS12-D3-AM1-323B-005 | PS12-A002 (Invited)

Iron Isotope Fractionation in the Early Solar System

Anat SHAHAR $^{1\sharp *}$, Nancy CHABOT 2 , Corliss SIO 3 , Neil BENNETT 1

¹Carnegie Institution of Washington, ²Johns Hopkins University, ³Lawrence Livermore National Laboratory

PS12-D3-AM1-323B-006 | PS12-A014 (Invited)

The Standard Scenario of Solar System Formation and its

Problems

Eiichiro KOKUBO1#+

¹National Astronomical Observatory of Japan

PS12-D3-AM1-323B-007 | PS12-A005

The Curious Case of Mars' Formation

Man Yin Jason WOO^{1‡+}, Ramon BRASSER², Soko MATSUMURA³, Stephen J. MOJZSIS⁴, Shigeru IDA²
¹ELSI, Tokyo Institute of Technology, ²Tokyo Institute of Technology, ³University of Dundee, ⁴University of Colorado

PS17 / Aeronomy and Plasma Physics of Planetary Environments

Wed - 06 Jun | MR304A

Time 08:30 - 10:30

Chair(s) Shotaro SAKAI, University of Tokyo

PS17-D3-AM1-304A-001 | PS17-A041

Thermal O+ Precipitation into Titan's Upper Atmosphere Darci SNOWDEN1^{#+}

¹Central Washington University

PS17-D3-AM1-304A-002 | PS17-A008

Observations of Photoelectron Energy Peaks in Titan's

Ionosphere

Yutian CAO^{1±+}, Anne WELLBROCK², Andrew COATES², Geraint JONES², Cesar BERTUCCI³, Jun CUI^{4,5}, Michele DOUGHERTY⁶
¹National Astronomical Observatories of China, Chinese Academy of Science, ²University College London, ³University of Buenos Aires, ⁴Sun Yat-sen University, ⁵Chinese Academy of Sciences, ⁶Imperial College London

PS17-D3-AM1-304A-003 | PS17-A004

Europa's Water Vapor Plumes: Fact or Fiction

Darrell STROBEL¹⁸⁺, Lorenz ROTH²
¹Johns Hopkins University, ²KTH Royal Institute of Technology

PS17-D3-AM1-304A-004 | PS17-A011

Explaining Pluto's Cold Atmosphere by Haze Heating and Cooling

Xi ZHANG^{1‡+}, Darrell STROBEL², Hiroshi IMANAKA³
¹University of California Santa Cruz, ²Johns Hopkins University,
³NASA Ames Research Center

PS17-D3-AM1-304A-005 | PS17-A039 (Invited)

Recent Advances in Understanding the Lunar Plasma

Environment

Andrew POPPE^{1#+}
¹University of California, Berkeley

PS17-D3-AM1-304A-006 | PS17-A015 (Invited)

Next Exploration of Mercury's Environment: Bepicolombo Overview

Go MURAKAMI^{1‡+}, Hajime HAYAKAWA¹, Masaki FUJIMOTO¹
¹Japan Aerospace Exploration Agency

PS17-D3-AM1-304A-007 | PS17-A009 (Invited)

Mercury's Plasma Environment

James SLAVIN^{1#+}
¹University of Michigan

Time 11:00 - 12:30

Chair(s) Robert LILLIS, UC Berkeley Space Sciences Lab

PS17-D3-AM2-304A-008 | PS17-A034 (Invited)

Overview of the 10 September 2017 Solar Events Observed at

Mars

Christina LEE^{1**}, Bruce JAKOSKY², Janet LUHMANN¹, M. Leila MAYS³, Davin LARSON¹, Ali RAHMATI¹, Patrick DUNN¹, Jasper HALEKAS⁴, Jacob GRUESBECK⁵, Jared ESPLEY⁵, Ed THIEMANN², Frank EPARVIER², Phil CHAMBERLIN², Nick SCHNEIDER², Sonal JAIN², Justin DEIGHAN², Meredith ELROD⁵, Mehdi BENNA⁵, Laila ANDERSSON², Christopher FOWLER², Majd MAYYASI⁶, James MCFADDEN¹, David MITCHELL¹, Shaosui XU¹, Yingjuan MA⁷, Xiaohua FANG², Donald M. HASSLER⁸, Robert WIMMER-SCHWEINGRUBER⁹, Bent EHRESMANN⁸, Jingnan GUO⁹, Cary ZEITLIN¹⁰, Mats HOLMSTRÖM¹¹, Olivier WITASSE¹²

¹University of California, Berkeley, ²University of Colorado Boulder, ³Catholic University of America, ⁴The University of Iowa, ⁵NASA Goddard Space Flight Center, ⁶Boston University, ⁷University of California, Los Angeles, ⁸Southwest Research Institute, ⁹University of Kiel, ¹⁰National Aeronautics and Space Administration, ¹¹Swedish Institute of Space Physics, ¹²European Space Agency

PS17-D3-AM2-304A-009 | PS17-A042

Impact of the September 2017 Solar Storms Observed on the

Surface of Mars by MSL RAD

Donald M. HASSLER^{1#+}, Robert WIMMER-SCHWEINGRUBER², Bent EHRESMANN¹, Jingnan GUO², Cary ZEITLIN³
¹Southwest Research Institute, ²University of Kiel, ³National
Aeronautics and Space Administration

PS17-D3-AM2-304A-010 | PS17-A035

Atmospheric Erosion at Mars: The Role of Mars' Magnetic

Topology During Quiet and Extreme Conditions

Shannon CURRY¹⁸⁺, Janet LUHMANN¹, Chaunfei DONG², Gina DI BRACCIO³, Shaosui XU¹, David MITCHELL¹, Meredith ELROD³, Y.J. MA⁴, Jacob GRUESBECK³, Jared ESPLEY³, J. E. P. CONNERNEY³, David A. BRAIN⁵, James MCFADDEN¹

¹University of California, Berkeley, ²Princeton Plasma Physics

Laboratory, ³NASA Goddard Space Flight Center, ⁴University of California, Los Angeles, ⁵University of Colorado Boulder

PS17-D3-AM2-304A-011 | PS17-A019

Martian Ion Escape Variability from MAVEN and MEX Observations

Yaxue DONG¹**, Xiaohua FANG¹, David A. BRAIN¹, James MCFADDEN², Hans NILSSON³, Robin RAMSTAD¹, Jasper HALEKAS⁴, J. E. P. CONNERNEY⁵, Frank EPARVIER¹, Bruce JAKOSKY¹, Mats HOLMSTRÖM³

¹University of Colorado Boulder, ²University of California, Berkeley, ³Swedish Institute of Space Physics, ⁴The University of Iowa, ⁵NASA Goddard Space Flight Center

PS17-D3-AM2-304A-012 | PS17-A037

How Many mbars? Extrapolating Mars Express Measurements

of the Martian Ion Escape Rate Through Time

Robin RAMSTAD¹**, Stas BARABASH², Yoshifumi FUTAANA², Hans NILSSON², Mats HOLMSTRÖM², David A. BRAIN¹

¹University of Colorado Boulder, ²Swedish Institute of Space Physics

PS17-D3-AM2-304A-013 | PS17-A026

Cold Ion Outflow in Mars' Magnetotail

David MITCHELL^{1‡+}, Shaosui XU¹, James MCFADDEN¹, Takuya HARA¹, Janet LUHMANN¹, Christian MAZELLE², Laila ANDERSSON³, Gina DI BRACCIO⁴, J. E. P. CONNERNEY⁴

¹University of California, Berkeley, ²IRAP / CNRS - University of Toulouse - UPS - CNES, ³University of Colorado Boulder, ⁴NASA Goddard Space Flight Center

Time 13:30 - 15:30

Chair(s) Janet LUHMANN, UC Berkeley Space Sciences

Laboratory

PS17-D3-PM1-304A-014 | PS17-A045

Fast-Fermi Acceleration of Electrons at the Martian Bow Shock

Christian MAZELLE^{1‡+}, Karim MEZIANE², Norberto ROMANELLI³, David MITCHELL⁴, Jared ESPLEY⁵, Abelhaq HAMZA², Jasper HALEKAS⁶, Bruce JAKOSKY⁷

¹IRAP / CNRS - University of Toulouse - UPS - CNES, ²University of New Brunswick, ³Pierre-and-Marie-Curie University, ⁴University of California, Berkeley, ⁵NASA Goddard Space Flight Center, ⁶The University of Iowa, ⁷University of Colorado Boulder

PS17-D3-PM1-304A-015 | PS17-A021

Modelling of Energetic Ions Observations by MAVEN in the Crustal Field Regions

Anna KOTOVA^{1‡+}, Christian MAZELLE², Yingjuan MA³, Yasir SOOBIAH⁴, David MITCHELL⁵, Jasper HALEKAS⁶, Jared ESPLEY⁴

¹University of Toulouse, ²IRAP / CNRS - University of Toulouse - UPS - CNES, ³University of California, Los Angeles, ⁴NASA Goddard Space Flight Center, ⁵University of California, Berkeley, ⁶The University of Iowa

PS17-D3-PM1-304A-016 | PS17-A014

Revisiting Mars Magnetotail Seen on Phobos-2 in Light of MAVEN Observations

Janet LUHMANN^{1#+}, Y.J. MA², Chaunfei DONG³, Gina DI BRACCIO⁴, Shaosui XU¹, Shannon CURRY¹, David MITCHELL¹, Eduard DUBININ⁵, Christopher RUSSELL²

¹University of California, Berkeley, ²University of California, Los Angeles, ³Princeton Plasma Physics Laboratory, ⁴NASA Goddard Space Flight Center, ⁵Max-Planck-Insitute for Solar System Research

PS17-D3-PM1-304A-017 | PS17-A006

Investigation of Martian Magnetic Topology Response to ICMEs

Shaosui XU^{1*}, David MITCHELL¹, Shannon CURRY¹, Janet LUHMANN¹, Xiaohua FANG², Yingjuan MA³, Robert LILLIS⁴, Chaunfei DONG⁵, Gina DI BRACCIO⁶, Tristan WEBER², David A. BRAIN², Christian MAZELLE⁷, J. E. P. CONNERNEY⁶, Jasper HALEKAS⁸

¹University of California, Berkeley, ²University of Colorado Boulder, ³University of California, Los Angeles, ⁴University of California Berkeley, ⁵Princeton Plasma Physics Laboratory, ⁶NASA Goddard Space Flight Center, ⁷National Center for Scientific Research, ⁸The University of Iowa

PS17-D3-PM1-304A-018 | PS17-A013 (Invited)

Dynamics of the Martian Ionosphere and Magnetosphere as Explored by Multi-Point Measurements from MAVEN and

Mars Express

Yuki HARADA^{1‡+}, Donald GURNETT², Andrew KOPF², Jasper HALEKAS², Suranga RUHUNUSIRI², Christina LEE³, Takuya HARA³, Jared ESPLEY⁴, Gina DI BRACCIO⁴, David MITCHELL³, Christian MAZELLE⁵, Davin LARSON³, Bruce JAKOSKY⁶

¹Kyoto University, ²The University of Iowa, ³University of California, Berkeley, ⁴NASA Goddard Space Flight Center, ⁵National Center for Scientific Research, ⁶University of Colorado Boulder

PS17-D3-PM1-304A-019 | PS17-A001

Upper Ionosphere of Mars: Structure and Main Drivers

Eduard DUBININ¹⁸⁺, Markus FRAENZ¹, Martin PÄTZOLD², James MCFADDEN³, Jasper HALEKAS⁴, J. E. P. CONNERNEY⁵, David ANDREWS⁶, F. EPARVIER⁷, Paul MAHAFFY⁵

¹Max-Planck-Insitute for Solar System Research, ²Rhenish Institute for Environmental Research, ³University of California, Berkeley, ⁴The University of Iowa, ⁵NASA Goddard Space Flight Center, ⁶Swedish Institute of Space Physics, ⁷University of Colorado Boulder

PS17-D3-PM1-304A-020 | PS17-A029

The Distribution of Electron Temperature in the Dayside

Ionosphere of Mars Observed by MAVEN

Shotaro SAKAI^{1‡+}, Thomas E. CRAVENS², Laila ANDERSSON³, Christopher FOWLER³, David MITCHELL⁴, Christian MAZELLE⁵, J. E. P. CONNERNEY⁶, David A. BRAIN³, Ed THIEMANN³, Frank EPARVIER³, Kanako SEKI¹

¹The University of Tokyo, ²University of Kansas, ³University of Colorado Boulder, ⁴University of California, Berkeley, ⁵National Center for Scientific Research, ⁶NASA Goddard Space Flight Center

PS17-D3-PM1-304A-021 | PS17-A018

Maven Observations of Ionospheric Irregularities at Mars

Christopher FOWLER^{1#+}, Laila ANDERSSON¹, Skylar SHAVER¹, Jeffrey THAYER¹, Joe HUBA², Robert LILLIS³, Maria USANOVA¹, Jared ESPLEY⁴, James MCFADDEN⁵, Paul MAHAFFY⁴, J. E. P. CONNERNEY⁴, Mehdi BENNA⁴, Meredith ELROD⁴, David MITCHELL⁵, Christian MAZELLE⁶, Bruce JAKOSKY¹

¹University of Colorado Boulder, ²Naval Research Laboratory, ³University of California Berkeley, ⁴NASA Goddard Space Flight Center, ⁵University of California, Berkeley, ⁶National Center for Scientific Research

Time 16:00 - 18:00

Chair(s) Anna KOTOVA, IRAP

PS17-D3-PM2-304A-022 | PS17-A033

Martian Upper Atmosphere Response to the September 10, 2017 Flare as Seen by Imaging Ultraviolet Spectrograph (IUVS) Onboard MAVEN

Sonal JAIN¹²⁺, Justin DEIGHAN¹, Nick SCHNEIDER¹, Ian STEWART¹, Michael CHAFFIN¹, Matteo CRISMANI¹, Michael STEVENS², Joseph EVANS³, Ed THIEMANN¹, Daniel LO⁴, Arnaud STIEPEN⁵, William MCCLINTOCK¹, Gregory HOLSCLAW¹, Franck LEFÈVRE⁶, John CLARKE⁷, Franck MONTMESSIN⁸, Frank EPARVIER¹, Phil CHAMBERLIN¹, Bruce JAKOSKY¹

¹University of Colorado Boulder, ²Naval Research Laboratory, ³Computational Physics, Inc., ⁴University of Arizona, ⁵Université de Liège, ⁶University Pierre et Marie Curie, ⁷Boston University, ⁸National Center for Scientific Research (CNRS)/ Institut Pierre Simon Laplace (IPSL)/ Université de Versailles Saint-Quentin-en-Yvelines (UVSQ) / University Pierre et Marie Curie (UPMC)

PS17-D3-PM2-304A-023 | PS17-A017

September 10-11, 2017 Solar Flare Event: Rapid Enhancement of the Martian Neutral Exosphere from the X-Class Flare as Observed by MAVEN

Meredith ELROD1*+, Shannon CURRY², Ed THIEMANN³, Sonal JAIN³

¹NASA Goddard Space Flight Center, ²University of California, Berkeley, ³University of Colorado Boulder

PS17-D3-PM2-304A-024 | PS17-A032

Martian Metallic Ions Deposited by Comet Siding Spring Defy Expectations

Matteo CRISMANI^{1#}, Nick SCHNEIDER¹, John PLANE², Joseph EVANS³, Sonal JAIN¹, Justin DEIGHAN¹, Roger YELLE⁴
¹University of Colorado Boulder, ²University of Leeds, ³Computational Physics, Inc., ⁴University of Arizona

PS17-D3-PM2-304A-025 | PS17-A016

Remote Sensing the Atmosphere of Mars with MAVEN IUVS Echelle

Majd MAYYASI^{1‡+}, John CLARKE¹, Dolon BHATTACHARYYA¹, Nick SCHNEIDER², Bruce JAKOSKY²
¹Boston University, ²University of Colorado Boulder

PS17-D3-PM2-304A-026 | PS17-A027

MAVEN Pickup Ion Insights into Mars Neutral Escape

Ali RAHMATI¹⁵⁺, Davin LARSON¹, Thomas E. CRAVENS², Robert LILLIS³, Jasper HALEKAS⁴, James MCFADDEN¹, David MITCHELL¹, Ed THIEMANN⁵, J. E. P. CONNERNEY⁶, Patrick DUNN¹, Christina LEE¹, Frank EPARVIER⁵, Gina DI BRACCIO⁶, Jared ESPLEY⁶, Janet LUHMANN¹, Bruce JAKOSKY⁵

¹University of California, Berkeley, ²University of Kansas, ³University of California Berkeley, ⁴The University of Iowa, ⁵University of Colorado Boulder, ⁶NASA Goddard Space Flight Center

PS17-D3-PM2-304A-027 | PS17-A038 (Invited)

Solar Wind Interaction and Impact on the Venusian

Atmosphere: What we have Learnt from Venus Express

Yoshifumi FUTAANA¹⁸⁺, Gabriella STENBERG WIESER¹, Stas BARABASH¹, Mats HOLMSTRÖM¹, Janet LUHMANN², Tielong ZHANG^{3,4}, Christopher RUSSELL⁵

¹Swedish Institute of Space Physics, ²University of California, Berkeley, ³Austrian Academy of Sciences, ⁴University of Science and Technology of China, ⁵University of California, Los Angeles

PS17-D3-PM2-304A-028 | PS17-A007

Shaking the Skies of Mars and Venus: Ionospheric Compression, Energization, and Escape Resulting from the Impact of Ultra-Low Frequency Magnetosonic Waves in the Solar Wind

Glyn COLLINSON^{1;*}, Lynn WILSON², N. OMIDI³, David SIBECK¹, Jared ESPLEY¹, Christopher FOWLER⁴, David MITCHELL⁵, Joseph GREBOWSKY², Christian MAZELLE⁶, Suranga RUHUNUSIRI⁷, Jasper HALEKAS⁷, Rudy FRAHM⁸, Tielong ZHANG^{9,10}, Yoshifumi FUTAANA¹¹, Bruce JAKOSKY⁴ ¹NASA Goddard Space Flight Center, ²National Aeronautics and Space Administration, ³Solana Scientific Inc., ⁴University of Colorado Boulder, ⁵University of California, Berkeley, ⁶L'Institut de Recherche en Astrophysique et Planetologie, ⁷The University of Iowa, ⁸Southwest Research Institute, ⁹Austrian Academy of Sciences, ¹⁰University of Science and Technology of China, ¹¹Swedish Institute of Space Physics

PS20 / Missions and Surveys: Drivers of Future Solar System Science

Wed - 06 Jun | MR323B

Time 13:30 - 15:30

Chair(s) Makoto YOSHIKAWA, Japan Aerospace Exploration

Agencu

Amanda HENDRIX, Planetary Science Institute

PS20-D3-PM1-323B-001 | PS20-A001 (Invited)

Status of Research on the Small-Body Exploration in China

Academy of Space Technology

Jiangchuan HUANG¹⁺, JIANGCHUAN HUANG²⁺, Leyang ZOU², Fan GUO², Tong WANG², Xiaoyu JIA², Dai TIAN²
¹China Academy of Space Technology, ²Beijing Institute of Spacecraft System Engineering

PS20-D3-PM1-323B-002 | PS20-A010 (Invited)

The Solar System Science in HSC-SSP: The Early Results

Based on the First Public Data Release

Ying-Tung CHEN^{1,‡+}, Tsuyoshi TERAI², Hsing-Wen LIN³, Fumi YOSHIDA⁴, Shiang-Yu WANG¹

¹Academia Sinica, ²National Astronomical Observatory of Japan, ³University of Michigan, ⁴Chiba Institute of Technology and Kobe University PS20-D3-PM1-323B-003 | PS20-A020 (Invited)

An Overview of the Destiny+ Geminids Parent (3200) Phaethon

Flyby Mission

Tomoko ARAI^{1‡+}, Masanori KOBAYASHI¹, Ko ISHIBASHI¹, Fumi YOSHIDA¹, Hiroshi KIMURA¹, Junichi WATANABE², Takashi ITO², Hiroki SENSHU¹, Koji WADA¹, Masateru ISHIGURO³, Tomoki NAKAMURA⁴, Hikaru YABUTA⁵, Shogo TACHIBANA⁶, Tatsuaki OKADA⁷, Takahiro IWATA⁷, Takafumi OOTSUBO⁷, Yasuhiro KAWAKATU⁷, Hiroyuki TOYOTA⁷, Kazutaka NISHIYAMA⁷, Takeshi TAKASHIMA⁷

¹Chiba Institute of Technology, ²National Astronomical Observatory of Japan, ³Seoul National University, ⁴Tohoku University, ⁵Hiroshima University, ⁶The University of Tokyo, ⁷Japan Aerospace Exploration Agency

PS20-D3-PM1-323B-004 | PS20-A016

Flyby of Asteroid Phaethon by Destiny+

Ko ISHIBASHI^{1‡+}, Shingo KAMEDA², Masato KAGITANI³, Manabu YAMADA¹, Takaya OKAMOTO⁴, Tomoko ARAI¹, Fumi YOSHIDA¹, Takeshi TAKASHIMA⁴, Takahiro IWATA⁴, Tatsuaki OKADA⁴

¹Chiba Institute of Technology, ²Rikkyo University, ³Tohoku University, ⁴Japan Aerospace Exploration Agency

PS20-D3-PM1-323B-005 | PS20-A006

Small Body Science with the Zwicky Transient Facility

Dennis BODEWITS^{1#}, Quan-Zhi YE², Rex CHANG³, Gerbs BAUER¹, Yu-Chi CHENG³, Ben DEMARIO², Tony FARNHAM¹, Wing-Huen IP³, Michael KELLEY¹, Matthew KNIGHT¹, Zhong Yi LIN³, Frank MASCI², Chow-Choong NGEOW³, Tom PRINCE², Silvia PROTOPAPA¹

¹University of Maryland, ²California Institute of Technology, ³National Central University

PS20-D3-PM1-323B-006 | PS20-A008

Cometary Science with the Zwicky Transient Facility

Michael KELLEY $^{1;+}$, Dennis BODEWITS 1 , James BAUER 1 , Tony FARNHAM 1 , Matthew KNIGHT 1

¹University of Maryland

PS20-D3-PM1-323B-007 | PS20-A017

Mission Status of Hayabus2 - Final Approach to Asteroid

Ryugu

Makoto YOSHIKAWA^{1‡+}, Sei-Ichiro WATANABE², Satoshi TANAKA¹, Seiji SUGITA³, Noriyuki NAMIKI⁴, Kohei KITAZATO⁵, Takahiro IWATA¹, Tatsuaki OKADA¹, Masahiko ARAKAWA⁶, Shogo TACHIBANA³, Masateru ISHIGURO⁷, Hitoshi IKEDA¹, Masanao ABE¹, Yukio YAMAMOTO¹, Yoshiaki ISHIHARA¹, Yuichi TSUDA¹

¹Japan Aerospace Exploration Agency, ²Nagoya University, ³The University of Tokyo, ⁴National Astronomical Observatory of Japan, ⁵University of Aizu, ⁶Kobe University, ⁷Seoul National University

PS20-D3-PM1-323B-008 | PS20-A009

Solar System Science with the Origins Space Telescope

James BAUER^{1#+}, Stefanie MILAM²

¹University of Maryland, ²NASA Goddard Space Flight Center

Time 16:00 - 18:00

Chair(s) Tomoko ARAI, Chiba Institute of Technology

Dennis BODEWITS, University of Maryland

PS20-D3-PM2-323B-009 | PS20-A023 (Invited)

The Search for an Undiscovered Giant Planet in Our Solar System

Chad TRUJILLO^{1±+}, Scott SHEPPARD², David THOLEN³
¹Northern Arizona University, ²Carnegie Institution for Science,
³University of Hawaii

PS20-D3-PM2-323B-010 | PS20-A025 (Invited)

Planetary Exploration, Horizon 2061: Focus on Giant Planets Michel BLANC^{1#}, Norbert KRUPP²⁺

¹Research Institute in Astrophysics and Planetology, ²Max Planck Institute for Solar System Research

PS20-D3-PM2-323B-011 | PS20-A007 (Invited)

The ATLAS All-Sky Near Earth Asteroid Survey

Larry DENNEAU1#+

¹University of Hawaii

PS20-D3-PM2-323B-012 | PS20-A005

The Number Density of Near Earth Asteroids in

Position/Velocity Phase Space

Aren HEINZE^{1‡+}, Larry DENNEAU¹, John TONRY¹
¹University of Hawaii

PS20-D3-PM2-323B-013 | PS20-A014

The Carbon Continuum in the Solar System

Amanda HENDRIX1#+, Faith VILAS1

¹Planetary Science Institute

PS20-D3-PM2-323B-014 | PS20-A003

Short Crater-Degradation Timescale on Asteroid Itokawa

Toshi HIRABAYASHI $^{1\pm}$, Eri TATSUMI 2 , Seiji SUGITA 2 , Hideaki MIYAMOTO 2 , Naru HIRATA 3

¹Auburn University, ²The University of Tokyo, ³The University of Aizu

PS20-D3-PM2-323B-015 | PS20-A013

Creating Habitable Worlds: Proteus a Mission to Investigate

the Origin of Inner Solar System Water

Karen MEECH1#+, Michael MOTTL2

¹University of Hawaii at Manoa, ²University of Hawaii

PS20-D3-PM2-323B-016 | PS20-A015

Searching Asteroids for Activity Revealing Indicators (SAFARI)

Colin Orion CHANDLER^{1#+}, Anthony CURTIS², Michael MOMMERT¹, Scott SHEPPARD³, Chad TRUJILLO¹

¹Northern Arizona University, ²University of South Florida, ³Carnegie Institution for Science

PS21 / Physical and Dynamical Evolution of the Post-formation Solar System

Wed - 06 Jun | MR323B

Time 11:00 - 12:30

Chair(s) Ramon BRASSER, Earth-Life Science Institute

Yoko KEBUKAWA, Yokohama National University

PS21-D3-AM2-323B-001 | PS21-A003 (Invited)

Meteor Showers from Active Asteroids and Dormant Comets in the Near-Earth Space

Quan-Zhi YE1#+

¹California Institute of Technology

PS21-D3-AM2-323B-002 | PS21-A007 (Invited)

Organic Matter in Carbonaceous Chondrite-Like Xenolithic

Clasts: Preserving Unique Records in the Solar System

Yoko KEBUKAWA^{1‡+}, Motoo ITO², Michael ZOLENSKY³, Richard GREENWOOD⁴, Zia RAHMAN³, Hiroki SUGA⁵, Aiko NAKATO⁶, Queenie CHAN⁴, Marc FRIES³, Yasuo TAKEICHI⁷, Yoshio TAKAHASHI⁸, Kazuhiko MASE⁷, Kensei KOBAYASHI¹ Yokohama National University, ²Japan Agency for Marine-Earth Science and Technology, ³NASA Johnson Space Center, ⁴The Open University, ⁵Hiroshima University, ⁶Kyoto University, ⁷High-Energy Accelerator Research Organization, ⁸The University of Tokyo

PS21-D3-AM2-323B-003 | PS21-A004

Tidal Effect on the Early Earth and Moon System Due to the Higher-Degree-Mode Resonance in the Early Earth's Ocean Mai MOTOYAMA^{1‡+}, Hideo TSUNAKAWA¹, Futoshi TAKAHASHI²

¹Tokyo Institute of Technology, ²Kyushu University

PS21-D3-AM2-323B-004 | PS21-A001

Rotationally Induced Structural Failure of Irregularly Shaped Rubble Pile Asteroids

Toshi HIRABAYASHI^{1‡+}, Daniel SCHEERES²
¹Auburn University, ²University of Colorado Boulder

PS21-D3-AM2-323B-005 | PS21-A008

Thermophysical Characteristics of the Large Main-Belt

Asteroid (349) Dembowska

Jianghui JI¹, Liang Liang YU^{2±+}, Bin YANG¹, Wing-Huen IP³
¹Chinese Academy of Sciences, ²Macau University of Science and Technology, ³National Central University

SE01 / Paleomagnetism and Rock Magnetism Applied to Solving Geological, Geophysical, and Environmental Problems

Wed - 06 Jun | MR321A

Time 11:00 - 12:30

Chair(s) Emilio HERRERO-BERVERA, University of Hawaii at

Manoa

Xixi ZHAO, Tongji University

SE01-D3-AM2-321A-001 | SE01-A029 (Invited)

Incapability of Partial Thermoremanent Magnetization Check to Detect Overall Thermal Alteration in Thellier-Series Paleointensity Experiments as Evidenced by Rock Magnetic Property Changes

Huapei WANG^{1#+}, Dennis KENT²
¹China University of Geosciences, ²Rutgers University and Lamont-Doherty Earth Observatory

SE01-D3-AM2-321A-002 | SE01-A003

Magnetic Interaction Effects on Paleointensity Determination:

Results from Experimental Simulations

Xixi ZHAO^{1,2‡+}, Zhong ZHENG³
¹University of California Santa Cruz, ²Tongji University,
³Sogokaihatsu Co. Ltd

SE01-D3-AM2-321A-003 | SE01-A016

Tsunakawa-Shaw Paleointensity Method Applied to the Holocene Surface Lavas in Hawaii Yuhii YAMAMOTO¹⁵⁺

Yuhji YAMAMOTO

¹Kochi University

SE01-D3-AM2-321A-004 | SE01-A020

Holocene Paleomagnetic Secular Variation Stack of East Asia and its Application on Stratigraphic Correlation

Yan ZHENG1#+

¹IVPP, Chinese Academy of Sciences

SE01-D3-AM2-321A-005 | SE01-A004

Analyzing the Geomagnetic Declination in Early 19th Century in Japan from Tadataka Inoh's Santou-Houi-Ki 6th Report Motohiro TSUJIMOTO^{1‡+}, Akitoshi OMOTANI²

¹Japan Cartographers Association, ²San-in System Consultant Co. Ltd.

SE01-D3-AM2-321A-006 | SE01-A022

Measurement of the Magnetoactive Layer of the Earth's Lithosphere and the Curie Isotherm Using the

Different-Altitude Magnetic Data

Oleg BREKHOV1#+, Yuri TSVETKOV2

¹National Research University, ²Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation

Time 13:30 - 15:30

Chair(s) Xixi ZHAO, Tongji University

Yuhji YAMAMOTO, Kochi University

SE01-D3-PM1-321A-007 | SE01-A031 (Invited)

An Overview of First-Order Reversal Curve (FORC)

Measurements, Interpretation, and Recent Developments

Andrew ROBERTS $^{1\sharp +}$, Xiang ZHAO 1 , David HESLOP 1 , Pengxiang HU 1

¹Australian National University

SE01-D3-PM1-321A-008 | SE01-A012

Ongoing Chemical Remanent Magnetization Overprints was Found in Loess L1 at Yancun Loess Section on the Chinese Loess Plateau, Which May Finally Blur the Laschamp Excursion

Ronghua WANG^{1#+}
¹Lanzhou University

SE01-D3-PM1-321A-009 | SE01-A001

Early Diagenetic Greigite as an Indicator of Paleosalinity Changes in the Middle Miocene Paratethys Sea of Central Europe

Suzhen LIU $^{1,2*+}$, Wout KRIJGSMAN 1 , Mark DEKKERS 1 , Dan PALCU 1

¹Utrecht University, ²Chinese Academy of Sciences

SE01-D3-PM1-321A-010 | SE01-A002

Magnetostratigraphic and Paleoenvironmental Records from a Late Cenozoic Sedimentary Succession in the Huaibei Plain, East China

Lei ZHANG^{1*}, Jiaqi LIU², Xiaoguang QIN²

¹Institute of Geology and Geophysics, Chinese Academy of Sciences,

²Chinese Academy of Sciences

SE01-D3-PM1-321A-011 | SE01-A034

Magnetic Fabric Development in Soft-Sedimentary Bed During Multiple Ice Sheet Overriding

Wlodzimierz NARLOCH^{1#+}

¹Nicolaus Copernicus University

SE01-D3-PM1-321A-012 | SE01-A008

Out-of-Phase Susceptibility and Viscous Magnetization: Alternative Tools for Magnetic Granulometry of Sediments and Soils

Martin CHADIMA^{1,2‡+}, Frantisek HROUDA¹
¹Advanced Geoscience Instruments Company, ²Czech Academy of Sciences

Time 16:00 - 18:00

Chair(s) Emilio HERRERO-BERVERA, University of Hawaii at

Manoa

Yuhji YAMAMOTO, Kochi University

SE01-D3-PM2-321A-013 | SE01-A005 (Invited)

Scanning SQUID Microscopy and its Application to Geological Samples

Hirokuni ODA^{1#+}, Jun KAWAI², Akira USUI³, Yuhji YAMAMOTO³, Norihiro NAKAMURA⁴, John TARDUNO⁵ ¹National Institude of Advanced Industrial Science and Technology, ²Kanazawa Institute of Technology, ³Kochi University, ⁴Tohoku University, ⁵University of Rochester

SE01-D3-PM2-321A-014 | SE01-A021

A New Neoproterozoic Paleomagnetic Result of the Tarim Block: Implications for the Paleogeographic Position of Tarim in Rodinia

Hongjun WANG¹⁺, Baochun HUANG^{1‡}, Qian ZHAO¹
¹Peking University

SE01-D3-PM2-321A-015 | SE01-A017

Paleomagnetism of Early Cretaceous Volcanic Rocks from Tethyan Himalaya: Evidence for the Existence of a Pre-Collisional Rigid/Quasi-Rigid Greater Indian Plate Ye ZHANG¹⁺, Baochun HUANG¹⁺, Qian ZHAO¹, Umar JADOON FAROOQ¹

1Peking University

SE01-D3-PM2-321A-016 | SE01-A028

A Sandwich-Like Collision Model Between the North and South China Blocks: First Paleomagnetic Constraints from Lower Triassic Sedimentary Rocks from the South Qinling Belt Jie ZHAO¹⁵⁺, Yunpeng DONG^{1,2}, Baochun HUANG³

¹Northwest University, ²Western University, ³Peking University

SE01-D3-PM2-321A-017 | SE01-A035

A Record of the Collisional Phases of the Panama-Choco Block Related to the Deformational Features and Flow Patters of

Volcanic Rocks of the Combia Formation (Colombia)

Maria Isabel MARIN^{1#+}, Victor Andrés PIEDRAHITA¹, Jackeline REMIREZ¹, Matthias BERNET², Juliana MESA³
¹EAFIT University, ²Université Grenoble Alpes, ³Michigan University

SE02 / Seismic Modelling and Imaging: from Global to Local Scales

Wed - 06 Jun | MR321A

Time 08:30 - 10:30

Chair(s) Shengji WEI, Nanyang Technological University

Daoyuan SUN, University of Science and Technology of

China

SE02-D3-AM1-321A-012 | SE02-A042 (Invited)

Mantle Transition Zone Structure Beneath the Northern

Continental Margin of the South China Sea

Daoyuan SUN^{1#+}, Meng ZHANG¹, Yi WANG¹, Zhongqing WU¹ ¹University of Science and Technology of China

SE02-D3-AM1-321A-013 | SE02-A036

Frozen Gaussian Approximation for Three-Dimensional Seismic Tomography

Xu YANG^{1‡+}, Ping TONG², Lihui CHAI¹
¹University of California, Santa Barbara, ²Nanyang Technological University

SE02-D3-AM1-321A-014 | SE02-A040

Deep Slab Structure Revealed by Deconvolution of Teleseismic P-Waves of the 2013 Mw8.3 Sea of Okhotsk Earthquake

Weiwen CHEN¹⁵⁺, Shengji WEI¹, Weitao WANG²
¹Nanyang Technological University, ²China Earthquake
Administration

SE02-D3-AM1-321A-015 | SE02-A043

Seismic Structure and Seismicity of the Xishancun Landslide,

Sichuan, China

Risheng CHU^{1#+}, Sidao NI¹
¹Chinese Academy of Sciences

SE02-D3-AM1-321A-016 | SE02-A051

Seismic Attenuation Structure Beneath Nazca Plate Subduction

Zone in Southern Peru

Hyoihn JANG^{1#+}, Young-Hee KIM¹, Robert CLAYTON²
¹Seoul National University, ²California Institute of Technology

SE06-30-39 / Faults and Earthquakes: Networks, Precursors and Monitoring Systems

Wed - 06 Jun | MR319B

Time 13:30 - 15:30

Chair(s) Fuqiong HUANG, China Earthquake Networks Center

Han YUE

Alik ISMAIL-ZADEH, Karlsruhe Institute of Technology

SE06-30-39-D3-PM1-319B-001 | SE06-30-39-A005 (Invited)

Geodynamic Modelling, Hazard Assessment and Forecasting of Great Earthquakes

Alik ISMAIL-ZADEH1,2#+

¹Karlsruhe Institute of Technology, ²Russian Academy of Sciences

SE06-30-39-D3-PM1-319B-002 | SE06-30-39-A006

Oscillating Precursory Aseismic Sliding on a Seismogenic Plate Interface in a Numerical Simulation of Earthquake Cycles with Rate-and-State Friction

Naoyuki KATO^{1#+}

¹The University of Tokyo

SE06-30-39-D3-PM1-319B-003 | SE06-30-39-A010

Mantle-Derived Helium Releasing in Southwestern Yunnan, China: Implications for M6 Cluster Seismicity in Simao Puer Seismic Zone

Ciping ZHAO¹⁵⁺, Yun WANG¹, Hua RAN¹, Zhi ZHOU¹, Youli CHEN¹

¹Earthquake Agency of Yunnan Province

SE06-30-39-D3-PM1-319B-004 | SE06-30-39-A013

The Temporal and Spatial Distribution of the Gravity Change Before and After the Kangding Ms6.3 by EOF Method Wei PIERCE212@163.COM¹⁺, Hongtao HAO¹⁺, Jiang YING¹ ¹China Earthquake Administration

SE06-30-39-D3-PM1-319B-005 | SE06-30-39-A012

A B-Value Map and Implication of the First Eastern Rupture of the Nankai Trough Earthquakes

Kazuyoshi NANJO^{1‡+}, Akio YOSHIDA²
¹University of Shizuoka, ²Shizuoka University

SE06-30-39-D3-PM1-319B-006 | SE06-30-39-A027

Dynamic Triggering & Micro-Seismicity Detections Based on the Dense Seismic Network in Xiaojiang of Yunan, China

Shiyong ZHOU^{1‡+}, Hongfeng YANG², Lisheng XU³, Xiaodong ZHANG⁴, Chuan YAN¹, Yuexin LI¹, Naidan YUN¹

¹Peking University, ²Chinese University of Hong Kong, ³China Earthquake Administration, ⁴Institute of Earthquake Forecasting, China Earthquake Administration

SE06-30-39-D3-PM1-319B-007 | SE06-30-39-A028

2017 Jiuzhaigou Earthquake Aftershock Monitoring

Experimental Network

Han YUE1#+

¹Beijing University

SE06-30-39-D3-PM1-319B-008 | SE06-30-39-A030

Seismological Investigation of the Anninghe Fault Zone with a Dense Seismic Array

Jianping WU^{1*+}, Lihua FANG², Weilai WANG¹, Ting YANG¹
¹China Earthquake Administration, ²Institute of Geophysics, China Earthquake Administration

Time 16:00 - 18:00 *Chair(s)* Weijun GAN

Jianping WU, Institute of Geophysics, CEA Takahiro TAGAMI, Kyoto University

SE06-30-39-D3-PM2-319B-009 | SE06-30-39-A026 (Invited)

Investigation of Fault Creep at Shallow Depths in Tianzhu Seismic Gap of Hanyuan Fault System, Gansu Province, China, Based on GPS Observations

Weijun GAN^{1‡+}, Shiming LIANG¹, Keliang ZHANG¹
¹China Earthquake Administration

SE06-30-39-D3-PM2-319B-010 | SE06-30-39-A016

Fault-Zone Thermochronology: An Overview and Examples Takahiro $TAGAMI^{1\sharp +}$

¹Kyoto University

SE06-30-39-D3-PM2-319B-011 | SE06-30-39-A022

Multiple-Stage Deformations and Their 40Ar/39Ar Dating Constraints on Langshan Tectonic Belt, Western Margin of the North China Craton

Liyun ZHOU^{1‡+}, Yu WANG¹, Xiaojie JIANG¹, Honglei GAO²
¹China University of Geosciences, ²China National Nuclear
Corporation

SE06-30-39-D3-PM2-319B-012 | SE06-30-39-A025

Mid-Late Mesozoic NE-Trending Structures and Their 40Ar/39Ar Chronological Constraints, North China Craton,

Eastern Asia

Yueting XIE^{1#+}, Yu WANG¹
¹China University of Geosciences

SE08 / Earthquake Hydrology, Geochemistry and Hydroseismology

Wed - 06 Jun | MR319B

Time 08:30 - 10:30

Chair(s) Fuqiong HUANG, China Earthquake Network Center

SE08-D3-AM1-319B-001 | SE08-A007

The Effects of the Impoundment of the Zipingpu Reservoir on Micro-Seismicities and the Wenchuan Earthquake Based on

3-D Fully Coupled Poroelastic Model

Huihong CHENG^{1‡+}, Huai ZHANG¹, Yaolin SHI¹
¹University of Chinese Academy of Sciences

SE08-D3-AM1-319B-002 | SE08-A022

Constraint of Fault Geometry for Japanese Historical Earthquakes Based on Groundwater Anomaly

Yasuyuki KANO^{1#+}
¹Kyoto University

SE08-D3-AM1-319B-003 | SE08-A001

Effect of Shales on Tidal Response of Water Level to Large Earthquakes

Yan ZHANG^{1‡+}, Chi-Yuen WANG², Li-Yuen FU¹
¹Chinese Academy of Sciences, ²University of California, Berkeley

SE08-D3-AM1-319B-004 | SE08-A008

Comparison of Aquifer Parameters Inferred from Different Methods

Zheming SHI^{1#+}, Guangcai WANG¹ ¹China University of Geosciences

SE08-D3-AM1-319B-005 | SE08-A004

Temporal Changes in Groundwater by the Recent Moderate-Size Earthquakes in Korean Peninsula Hyun A LEE¹⁸⁺, Nam C. WOO¹ ¹Yonsei University

SE08-D3-AM1-319B-006 | SE08-A016

The Groundwater Level Changes of Northeast China Induced by the September 3 2017 Underground Nuclear Explosion of North Korea

Fuqiong HUANG^{1#+}
¹China Earthquake Network Center

Time 11:00 - 12:30

Chair(s) Yan ZHANG, Chinese Academy of Sciences

Yasuyuki KANO, Kyoto University

SE08-D3-AM2-319B-007 | SE08-A015

Changes in Groundwater Chemistry at the Taiwan Chelungpu Fault Borehole Before the 2013 M6.2 Nantou Earthquake in Central Taiwan

Ching-Chou FU^{1‡+}, Chun-Wei LAI², Tsanyao Frank YANG², Vivek WALIA³, Cheng-Hong CHEN², Kuo-Fong MA⁴, L. C. LEE¹ ¹Academia Sinica, ²National Taiwan University, ³National Center for Research on Earthquake Engineering, ⁴National Central University

SE08-D3-AM2-319B-008 | SE08-A018

Soil Gas Radon Observance Around Shanchiao Fault and

Tatun Volcanic Areas of Northern Taiwan for Seismic and

Volcanic Study

Arvind KUMAR $^{1\sharp*}$, Vivek WALIA 1 , Yi-Chun SUNG 1 , Shih-Jung LIN 1 , Kuo-Liang WEN 1

¹National Applied Research Laboratories

SE09 / Paleo- & Historical Earthquake Research and Quantitative Analysis of Seismicity

Wed - 06 Jun | MR302B

Time 16:00 - 18:00

Chair(s) Kenji SATAKE, University of Tokyo

Javed MALIK, Indian Institute of Technology Kanpur

SE09-D3-PM2-302B-001 | SE09-A006

Quantitative Analysis of Seismicity in Kunming, China

Jian WANG1#+

 $^{\scriptscriptstyle 1}$ China Earthquake Administration

SE09-D3-PM2-302B-002 | SE09-A010

Putting August Sieberg's "Erdbebengeographie" (1932) into a

Fresh Perspective

Paola ALBINI1#+

¹National Institute of Geophysics and Volcanology

SE09-D3-PM2-302B-003 | SE09-A011

Minna De Honkoku: Online Transcription Project of Historical

Earthquake Documents

Yasuyuki KANO^{1#+}, Yuta HASHIMOTO², Ichiro NAKANISHI¹ ¹Kyoto University, ²National Museum of Japanese History

SE09-D3-PM2-302B-004 | SE09-A005

Tsunami on Sanriku Coast in 1586: Orphan or Ghost?

Kenji SATAKE1#+

¹The University of Tokyo

SE09-D3-PM2-302B-005 | SE09-A007

Absolute Dating of Fault Gouge Using Luminescence Dating

Techniques - The Borehole Survey of the Nojima Fault,

Southwest Japan

Evangelos TSAKALOS^{1;+}, Aiming LIN², Yannis BASSIAKOS³, Maria KAZANTZAKI³, Eleni FILIPPAKI³, Nishiwaki TAKAFUMI²

¹NCSR, ²Kyoto University, ³National Centre of Scientific Research "Demokritos"

SE15 / Landslide Identification, Prediction, and Monitoring Using Multi-disciplinary Technologies

Wed - 06 Jun | MR321B

Time 08:30 - 10:30

Chair(s) Chih-Chung CHUNG, National Central University

SE15-D3-AM1-321B-001 | SE15-A008 (Invited)

Multi Polarimetric Coherence Mapping, a New Visualization Technique of Polarimetric SAR Data for Fall-Type Landslides Identification from Satellite Data

Ryoichi FURUTA1#+

¹Remote Sensing Technology Center of Japan

SE15-D3-AM1-321B-002 | SE15-A009 (Invited)

A Fully Three-Dimensional Model for Stress Field Analysis in

a Soil Layer on a Soil-Mantled Hillslope

Ying-Hsin WU $^{1\#+}$, Eiichi NAKAKITA 1

¹Kyoto University

SE15-D3-AM1-321B-003 | SE15-A002

Initiation and Kinematics of Earthquake-Triggered

 $Daguangbao\ Rock\ Wedge\ Slide$

Jia-Jyun DONG $^{1\sharp +}$, Thi-Phuong NGUYEN 2 , Che-Ming YANG 1 , Chyi-Tyi LEE 1

¹National Central University, ²Graduate Institute of Applied Geology

SE15-D3-AM1-321B-004 | SE15-A003

The Landslide Monitoring Using the Microtremor Techniques

Chun-Te CHEN^{1#+}, Hsin-Hua HUANG¹

¹Academia Sinica

SE15-D3-AM1-321B-005 | SE15-A006

Implication Study of Iron Speciation on Landslide

Development

Guodong ZHENG^{1#}, Xiangxian MA¹, Shouyun LIANG², Yuhua LANG³, Qi LI¹, Wang XU¹

¹Chinese Academy of Sciences, ²Lanzhou University, ³Sabxia University

SE15-D3-AM1-321B-006 | SE15-A007

Analyzing the Texture Properties in Multitemporal Synthetic

Aperture Radar Images for Event Landslides Detection

Shou-Hao CHIANG1#+

¹National Central University

SE15-D3-AM1-321B-007 | SE15-A004

Development of Sacrificed Sensors for Rainfall-Triggered

Shallow Landslide Monitoring

Chih-Chung CHUNG^{1‡+}, Shih-Kai WEI¹, Yi-Chun LIAO¹
¹National Central University

Time 11:00 - 12:30

Chair(s) Chih-Chung CHUNG, National Central University

SE15-D3-AM2-321B-008 | SE15-A010 (Invited)

Constraining the Spatial Extent of Deep-Seated, Slow-Moving

Landslides Using Passive Image Interferometry

Hsin-Hua HUANG¹;, Chun-Te CHEN¹, Ya-Ju HSU¹, Chih-Yu KUO¹, Chien-Chih CHEN², Rou-Fei CHEN³, Meei-Ling LIN², Kuo-Lung WANG⁴, Ching-Weei LIN⁵, Ching-Ren LIN¹, Pei-Ying LIN⁶

¹Academia Sinica, ²National Central University, ³Chinese Culture University, ⁴National Chi Nan University, ⁵National Cheng Kung University, ⁶Taiwan Ocean Research Institute

SE15-D3-AM2-321B-009 | SE15-A015 (Invited)

Rainfall Thresholds for Landslides in the Philippines

Decibel FAUSTINO-ESLAVA^{1*}, Jayson ARIZAPA¹, Wilbur MANIBO¹, Joey Philip TORRES¹, Carla DIMALANTA², Jenielyn PADRONES³, Nathaniel BANTAYAN¹, Cristino Jr. TIBURAN¹, Loucel CUI⁴, Noelynna RAMOS¹, Beth Zaida UGAT¹ ¹University of the Philippines, ²University of the Philippines Diliman, ³Akita University, ⁴University of the Philippines Los Baños

SE15-D3-AM2-321B-010 | SE15-A011

Geological Impact on Human Migrations: A Study Case of

Paridraiyan Village, Southern Central Range, Taiwan

Slawomir GILETYCZ^{1‡+}, Olimpia KOT-GILETYCZ²
¹Natinal Central University, ²National Tsing Hua University

SE15-D3-AM2-321B-011 | SE15-A012

New Development in Statistical Landslide Hazard Analysis

Chyi-Tyi LEE1#+

¹National Central University

SE15-D3-AM2-321B-012 | SE15-A013

Using Multi-Sensor to Model Landslide Area: A Case Study in

Tou-Bian-Keng Stream, Central Taiwan

Wan-Ting LIAO^{1‡+}, Yu-Ching LIN², Kuo-Hsin TSENG¹
¹National Central University, ²National Defense University

SE23 / Electromagnetic Methods Applied to Studies of Crustal and Mantle Dynamics

Wed - 06 Jun | MR321B

Time 13:30 - 15:30

Chair(s) Qinghua HUANG, Peking University

Makoto UYESHIMA, The University of Tokyo

SE23-D3-PM1-321B-001 | SE23-A015

On Pre- P Wave and Co- Seismic Wave EM Disturbances

Detected in the 2017 Kumamoto Earthquake Sequences by the

Iwo-Yama MT Campaign

Makoto UYESHIMA¹[‡], Koki AIZAWA², Kaori TSUKAMOTO², Wataru KANDA³, Kaori SEKI³, Takahiro KISHITA³, Takao OHMINATO¹, Atsushi WATANABE¹, Hengxin REN⁴, Qinghua HUANG⁵

¹The University of Tokyo, ²Kyushu University, ³Tokyo Institute of Technology, ⁴Southern University of Science and Technology, ⁵Peking University

SE23-D3-PM1-321B-002 | SE23-A001

Numerical Simulations to Explain the Coseismic

Electromagnetic Signals Observed During 2016 Kumamoto

Earthquakes

Hengxin REN^{1‡+}, Yaochong SUN¹, Makoto UYESHIMA², Qinghua HUANG³, Koki AIZAWA⁴, Kaori TSUKAMOTO⁴, Wataru KANDA⁵, Kaori SEKI⁵, Takahiro KISHITA⁵, Takao OHMINATO², Atsushi WATANABE², Xiaofei CHEN¹ ¹Southern University of Science and Technology, ²The University of Tokyo, ³Peking University, ⁴Kyushu University, ⁵Tokyo Institute of Technology

SE23-D3-PM1-321B-003 | SE23-A008

Electromagnetic Variations Arising from the Seismic Motional

Induction in a Conductive Half-Space Medium

Ken'Ichi YAMAZAKI^{1#+}
¹Kyoto University

SE23-D3-PM1-321B-004 | SE23-A007

Electrical Conductivity of Hydrous Minerals: Implications for the High-Conductivity Anomaly in Subduction Zones

Duojun WANG^{1*+}, Tao LIU¹, Kewei SHEN¹, Baosheng LI², Li YI³
¹University of Chinese Academy of Sciences, ²State University of New York at Stony Brook, ³Institute of Earthquake Forecasting, China Earthquake Administration

SE23-D3-PM1-321B-005 | SE23-A005

Thin Stratum Constraint Inversion Using Magnetotelluric

Equivalence Principle and its Application

Xuben WANG¹⁺, Rongjiang TANG^{1‡}, Lu GAN¹
¹Chengdu University of Technology

SE23-D3-PM1-321B-006 | SE23-A016

Lithospheric Electrical Structure of the Northern Qaidam Basin and its Implication for the Deformation Mechanism of

Northern Tibetan Plateau

Letian ZHANG1**, Sheng JIN1, Wenbo WEI1, Gaofeng YE1, Chengliang XIE1

¹China University of Geosciences

SE23-D3-PM1-321B-007 | SE23-A020

Crustal Partial Melting Beneath Collision-Related Deposit

Zone in the Southern Tibetan Plateau

Chengliang XIE^{1‡+}, Wenbo WEI¹, Sheng JIN¹, Gaofeng YE¹, Jian'En JING¹, Letian ZHANG¹, Hao DONG¹, Yaotian YIN¹
¹China University of Geosciences

SE23-D3-PM1-321B-008 | SE23-A004

Three-Dimensional Electrical Structure of the Magma

Chambers at Tengchong Volcanoes

Qinghua $HUANG^{1\sharp +}$, Tao YE^1 , Xiaobin CHEN 2 , Huiqian ZHANG 1 , John CHEN 1

¹Peking University, ²China Earthquake Administration

SE25-40 / New Advance on Tectonics of SE Asia

Wed - 06 Jun | MR314

Time 13:30 - 15:30

Chair(s) Xixi ZHAO, Tongji University

Mian LIU, University of Missouri

SE25-40-D3-PM1-314-001 | SE25-40-A038 (Invited)

Tearing of Indian Mantle Lithosphere from High-Resolution Seismic Images: Implications for Lithosphere Coupling in Southern Tibet

Jiangtao LI¹, Xiaodong SONG^{2,3‡+}
¹University of Illinois Urbana-Champaign, ²U of Illinois Urbana-Champaign / Wuhan U, ³Wuhan University

SE25-40-D3-PM1-314-002 | SE25-40-A017

Boninites from Both Sides Now - Doubly-Vergent Subduction Initiation Along Philippine Sea Plate Margins

Americus PEREZ
1 $^{1\pm}$, Susumu UMINO¹, Graciano YUMUL, JR.
2.3, Osamu ISHIZUKA⁴

¹Kanazawa University, ²Monte Oro Resources & Energy, Inc., ³Apex Mining Co. Inc., ⁴Geological Survey of Japan

SE25-40-D3-PM1-314-003 | SE25-40-A032

Cathaysian Fragments in West Central Philippines: Constraints from Sedimentary Geochemistry and Detrital Zircon U-Pb Geochronology

Carla DIMALANTA^{1±+}, Decibel FAUSTINO-ESLAVA², Jenielyn PADRONES³, Karlo QUEAÑO⁴, Rose Ann CONCEPCION⁵, Shigeyuki SUZUKI⁶, Graciano YUMUL, JR.^{7,8}
¹University of the Philippines Diliman, ²University of the Philippines, Los Baños, ³Akita University, ⁴Mines and Geosciences Bureau, ⁵University of the Philippines, ⁶Okayama University, ⁷Monte Oro Resources & Energy, Inc., ⁸Apex Mining Co. Inc.

SE25-40-D3-PM1-314-004 | SE25-40-A033

Petrology and Geochemistry of Cretaceous-Neogene Clastic Rocks from Cebu Island: Insights to the Geologic History of the Island

Sarena TARONGOY^{1;*}, Betchaida PAYOT¹, Jillian Aira GABO-RATIO¹, Carla DIMALANTA¹, Noelynna RAMOS¹, Decibel FAUSTINO-ESLAVA², Leo ARMADA¹, Graciano YUMUL, JR.³,⁴, Yuan Hsi LEE⁵

¹University of the Philippines Diliman, ²University of the Philippines, ³Monte Oro Resources & Energy, Inc., ⁴Apex Mining Co. Inc., ⁵National Chengchi University

SE25-40-D3-PM1-314-005 | SE25-40-A026

Lithologic Correlation of the Volcanic Section of Bangui Formation and Pugo Formation Using Petrography and Geochemistry

Paul Albert Frederick CASTILLO^{1#+}, Aletheia AMANDY², Earl Matthew SABILE², Cris Reven GIBAGA³, Carlo ARCILLA¹
¹University of the Philippines Diliman, ²University of the Philippines,
³Philippine Nuclear Research Institute

SE25-40-D3-PM1-314-006 | SE25-40-A020

Break-Up Unconformity System of Zhujiangkou Rifted Margin and Relationship with Seafloor Spreading of South China Sea

Xinong XIE^{1#+}, Jianye REN², Chao LEI¹
¹China University of Geosciences, ²China University of Geosciences (Wuhan)

SE25-40-D3-PM1-314-007 | SE25-40-A045

Active Tectonic Movement in the South-Central Portion of

Coastal Zone of Vietnam and its Significance for Geohazards

Hai Thanh TRAN $^{1\sharp *}$, Nam NGUYEN XUAN 2 , Do Tu Ngo HOANG 3 , Thao Thanh NGUYEN 1

¹Hanoi University of Mining and Geology, ²Vietnam Institute of Geosciences and Mineral Resources, ³Hue University of Sciences Time 16:00 - 18:00

Chair(s) Xixi ZHAO, Tongji University

SE25-40-D3-PM2-314-008 | SE25-40-A007 (Invited)

New Paleomagnetic Constraints on Middle Miocene

Strike-Slip Faulting Along the Middle Altyn Tagh Fault

Maodu YAN^{1#+}, Bingshuai LI¹
¹Chinese Academy of Sciences

SE25-40-D3-PM2-314-009 | SE25-40-A019

A Paleomagnetic Study of the Permian Volcanic Section in

Qinghai-Tibet Plateau, China

Xin CHENG^{1#+}
¹Northwest University

SE25-40-D3-PM2-314-010 | SE25-40-A036

Active Crustal Deformation in Southeastern Tibetan Plateau:

The Kinematics and Dynamics

Yujiang LI¹, Mian LIU^{2,3‡+}, Yuhang LI¹, Lianwang CHEN¹
¹China Earthquake Administration, ²University of Missouri, ³Chinese Academy of Sciences

SE25-40-D3-PM2-314-011 | SE25-40-A014

Large Late Cenozoic Rotation of the Baoshan Terrane on the Southeastern Edge of Tibetan Plateau: New Paleomagnetic

Constraint

Zhenyu YANG^{1‡+}, Yabo TONG², Zongwen PU²
¹Capital Normal University, ²Chinese Academy of Geological Sciences

SE25-40-D3-PM2-314-012 | SE25-40-A004

The Simao Block May Not Be Part of Indochina Untill the Late

Cretaceous

Yonggang YAN^{1#+}, Baochun HUANG², Donghai ZHANG²
¹Sun Yat-sen University, ²Peking University

SE26 / Cenozoic Deformation of Orogenic Belts in Asia: a Multiscale Spatial and Temporal Investigation

Wed - 06 Jun | MR314

Time 08:30 - 10:30

Chair(s) Huiping ZHANG, China Earthquake Administration

Wenjun ZHENG, Sun Yat-sen University Renjie ZHOU, University of Queensland

SE26-D3-AM1-314-001 | SE26-A003

Pulsed Upward and Upward Growth of the Tibetan Plateau to

its Northern Margin During the Early Oligocene

Weitao WANG¹**, Peizhen ZHANG², Caicai LIU³, Huiping ZHANG³, Zhuqi ZHANG³, Dewen ZHENG³, Wenjun ZHENG²

¹Institute of Geology, China Earthquake Administration, ²Sun Yat-sen University, ³China Earthquake Administration

SE26-D3-AM1-314-002 | SE26-A015

The Cenozoic Deformation and Uplift in the Northeastern

Margin of the Tibetan Plateau: Implication of the

Magnetostratigraphic Results

Hao LIANG^{1#+}, Ke ZHANG¹, Jianli FU²
¹Sun Yet-sen University, ²Chinese Academy of Sciences

SE26-D3-AM1-314-003 | SE26-A016

Structural Features and Tectonic Evolution of the Mesozoic and

Cenozoic in the Western Margin of Ordos Basin, China

Yue Qiao ZHANG1#+

¹PetroChina Research Institute of Petroleum Exploration and Development

SE26-D3-AM1-314-004 | SE26-A008 (Invited)

Oligo-Miocene Doming vs Strike-Slip Faulting Along the

Ailao Shan-Red River Belt, Southeastern Tibet Plateau

Junlai LIU $^{1\sharp *}$, Xiaoyu CHEN 1 , Wei CHEN 1 , Wenkui FAN 1 , Hua CHEN 2

¹China University of Geosciences, ²Jilin University

Time 11:00 - 12:30

Chair(s) Shaopeng DONG, Institute of Geology, China Earthquake

Administration

SE26-D3-AM2-314-005 | SE26-A020

Applications of Optical Dating of Sediments Associated with

Earthquakes and Neo-Tectonic Activities in Northern

Tianshan, China

Sheng-Hua LI^{1‡+}, Jie CHEN², Jintang QIN², Yuehua LI², Guiming HU¹

¹The University of Hong Kong, ²China Earthquake Administration

SE26-D3-AM2-314-006 | SE26-A013 (Invited)

Kinematics and Geodynamics of Active Faults on the Shan

Plateau, Southeast of the Eastern Himalayan Syntaxis

Xuhua SHI¹, Yu WANG^{1,2}, Kerry SIEH¹, Ray WELDON³, Lujia FENG¹, Chung-Han CHAN¹, Jing LIU⁴

¹Nanyang Technological University, ²National Taiwan University, ³University of Oregon, ⁴China Earthquake Administration

SE26-D3-AM2-314-007 | SE26-A017

Oblique Thrusting and Strain Partitioning in the Longmen

Shan Fold-and-Thrust Belt, Eastern Tibetan Plateau

Zhigang LI^{1#}, Zhang PEI-ZHEN², Wenjun ZHENG¹, Judith HUBBARD³, Rafael ALMEIDA³, Dong JIA⁴, Chuang SUN⁴, Xuhua SHI³, Tao LI¹

¹Sun Yat-sen University, ²China Earthquake Administration, ³Nanyang Technological University, ⁴Nanjing University

SE26-D3-AM2-314-008 | SE26-A001

How Does the Yabrai Fault System Influence Landform of the

Badain Jaran Desert, NE Tibet?

Jiaxin DU¹⁺, Bihong FU^{1‡}
¹Chinese Academy of Sciences

SE26-D3-AM2-314-009 | SE26-A014

Drainage Responses to the Activity of the Langshan

Range-Front Fault and Tectonic Implications

Shaopeng DONG $^{1s+}$, Huiping ZHANG 1 , Yizhou WANG 1 , Zhang PEI-ZHEN 1 , Wenjun ZHENG 2

¹China Earthquake Administration, ²Sun Yat-sen University

SS08 / Interdisciplinary suduction zone research initiatives

Wed - 06 Jun | MR319A

Time 13:30 - 15:30

Chair(s) Gerald BAWDEN, National Aeronautics and Space

Administration

SS08-D3-PM1-319A-001 | SS08-A006 (Invited)

Geophysical Observational Systems for Science and Hazard Reduction

Richard ALLEN1#+

¹University of California, Berkeley

SS08-D3-PM1-319A-002 | SS08-A001 (Invited)

Monitoring, Imaging and Modeling Subduction Zones to

Mitigate Subduction Zone Geohazards

Shuichi KODAIRA1#+

¹Japan Agency for Marine-Earth Science and Technology

SS08-D3-PM1-319A-003 | SS08-A004 (Invited)

Subduction Zone Observatory Initiatives and Opportunities in

New Zealand

Nicola LITCHFIELD^{1#+}, Laura WALLACE¹ GNS Science

SS08-D3-PM1-319A-004 | SS08-A007 (Invited)

Very Long Term Variability in Interseismic Deformation: A

Case Study from the Sumatran Subduction Zone

Emma HILL^{1#+}, Aron MELTZNER², Qiu QIANG², James Daniel Paul MOORE², Lujia FENG², Rino SALMAN², Belle PHILIBOSIAN³, Eric LINDSEY², Louisa TSANG², Iwan HERMAWAN², Paramesh BANERJEE², Danny NATAWIDJAJA⁴, Kerry SIEH²

¹Earth Observatory of Singapore / NTU, ²Nanyang Technological University, ³California Institute of Technology, ⁴Indonesian Institute of Sciences

SS08-D3-PM1-319A-005 | SS08-A002 (Invited)

The SZ4D Initiative: Developing a Comprehensive Approach

to Subduction Hazard Geoscience

Harold TOBIN1#+

¹University of Wisconsin-Madison

SS08-D3-PM1-319A-006 | SS08-A005 (Invited)

GNSS Applications to Monitor, Measure and Study

Subduction Zone Earthquakes and Their Resulting Tsunamis

Jeff FREYMUELLER1#+

¹University of Alaska Fairbanks

SS08-D3-PM1-319A-007 | SS08-A009 (Invited)

Tsunami Early Warning - Interdisciplinary Collaboration to Save Lives

Laura KONG1#+

¹International Tsunami Information Center

SS12 / Workshop on Earth Girl Volcano

Wed - 06 Jun | MR325A

Time 11:00 - 12:30

Chair(s) Isaac KERLOW, Nanyang Technological University

Helena ALBERT, Nanyang Technological University

ST08 / Magnetic Reconnection at Electron Scale: Observations and Simulations

Wed - 06 Jun | MR323C

Time 11:00 - 12:30

Chair(s) Huishan FU, Beihang University

Tai PHAN, University of California at Berkeley

ST08-D3-AM2-323C-001 | ST08-A003 (Invited)

The Nose of the Magnetopause: The Physics of First Contact

Christopher RUSSELL^{1‡+}, Cong ZHAO¹, Hairong LAI¹, Robert STRANGEWAY¹, William PATERSON², Barbara GILES³, James BURCH⁴

¹University of California, Los Angeles, ²National Aeronautics and Space Administration, ³NASA Goddard Space Flight Center, ⁴Southwest Research Institute

ST08-D3-AM2-323C-002 | ST08-A008

Generation of Energetic Electrons with a Power Law Spectrum

During Multiple X Line Reconnection with a Guide Field

Quanming LU^{1‡+}, Huanyu WANG¹, Rongsheng WANG¹
¹University of Science and Technology of China

ST08-D3-AM2-323C-003 | ST08-A021

Magnetospheric Multiscale Observations of an Electron

Diffusion Region in a Magnetotail Reconnection Event

Meng ZHOU^{1,2#}, Ye PANG³, Xiaohua DENG⁴, Zhihong ZHONG³, Mostafa EL-ALAOUI², Raymond WALKER², Melvyn GOLDSTEIN⁵, Giovanni LAPENTA⁶, Christopher RUSSELL², Robert STRANGEWAY², Per-Arne LINDQVIST⁷, Robert ERGUN⁸, William PATERSON⁹, Barbara GILES¹⁰, James BURCH¹¹, Roy B. TORBERT¹²

¹UCLA, ²University of California, Los Angeles, ³Nanchang University, ⁴Wuhan University, ⁵Space Science Institute, ⁶Katholieke Universiteit Leuven, ⁷KTH Royal Institute of Technology, ⁸University of Colorado Boulder, ⁹National Aeronautics and Space Administration, ¹⁰NASA Goddard Space Flight Center, ¹¹Southwest Research Institute, ¹²University of New Hampshire

ST08-D3-AM2-323C-004 | ST08-A020

On the Role of Secondary Flux Ropes in Magnetic

Reconnection

Zhihong ZHONG¹⁺, Meng ZHOU^{2,3#}, Rongxin TANG^{1,4}, Xiaohua DENG⁵, Ye PANG¹, Hengyan MAN¹, Jean BERCHEM³, Melvyn GOLDSTEIN⁶, Christopher RUSSELL³, Cong ZHAO³, Barbara GILES⁷, William PATERSON⁸, Robert ERGUN⁹, Per-Arne LINDQVIST¹⁰, James BURCH¹¹

¹Nanchang University, ²UCLA, ³University of California, Los Angeles, ⁴Memorial University of Newfoundland, ⁵Wuhan University, ⁶Space Science Institute, ⁷NASA Goddard Space Flight Center, ⁸National Aeronautics and Space Administration, ⁹University of Colorado Boulder, ¹⁰KTH Royal Institute of Technology, ¹¹Southwest Research Institute

ST08-D3-AM2-323C-005 | ST08-A017 (Invited)

Electron Distribution Around the Magnetic Reconnection

X-Line

Zhe WANG^{1#+}
¹Beihang University

Time 13:30 - 15:30

Chair(s) Meng ZHOU, Nanchang University

Yuri KHOTYAINTSEV, Swedish Institute of Space

Physics

ST08-D3-PM1-323C-006 | ST08-A027 (Invited)

MMS Observations of Magnetic Reconnection in Turbulent

Magnetosheath Current Sheets

Tai PHAN¹s+, Jonathan EASTWOOD², Michael SHAY³, James DRAKE⁴, Bengt SONNERUP⁵, Masaki FUJIMOTO⁶, Paul CASSAK⁷, Marit OIEROSET¹, Roy B. TORBERT®, Amy RAGER®, John DORELLI®, Daniel GERSHMANԹ, Craig POLLOCK¹⁰, Prayash PYAKUREL³, Colby HAGGERTY³, Yuri KHOTYAINTSEV¹¹, Benoit LAVRAUD¹², Mitsuo OKA¹, Robert ERGUN¹³, Alessandro RETINO¹⁴, Olivier LE CONTEL¹⁴, Matthew ARGALL®, Barbara GILES⁹, Thomas MOOREϿ, Frederick WILDER¹³, Robert STRANGEWAY¹⁵, Christopher RUSSELL¹⁵, Per-Arne LINDQVIST¹⁶

¹University of California, Berkeley, ²Imperial College London, ³University of Delaware, ⁴University of Maryland, ⁵Dartmouth College, ⁶Japan Aerospace Exploration Agency, ⁷University of West Virginia, ⁸University of New Hampshire, ⁹NASA Goddard Space Flight Center, ¹⁰Denali Scientific, ¹¹Swedish Institute of Space Physics, ¹²National Centre for Scientific Research, ¹³University of Colorado Boulder, ¹⁴National Centre for Scientific Research/ Ecole Polytechnique, ¹⁵University of California, Los Angeles, ¹⁶KTH Royal Institute of Technology

ST08-D3-PM1-323C-007 | ST08-A032 (Invited)

MMS Encounters with Reconnection Diffusion Regions at the

Dayside Magnetopause and the Magnetotail

Roy B. TORBERT^{1#+}, Michael HESSE², Tai PHAN³
¹University of New Hampshire, ²University of Bergen, ³University of California, Berkeley

ST08-D3-PM1-323C-008 | ST08-A030

Energetic Electron Acceleration During Magnetopause

Reconnection

Huishan FU^{1#+}, Fangzheng PENG¹
¹Beihang University

ST08-D3-PM1-323C-009 | ST08-A033

Two Steps of Energy Conversion Involving Both Plasma Heating and Alfvénic Turbulence Enhancement in Solar Wind Magnetic Reconnection Exhaust Region

Jiansen HE^{1#+}

¹Peking University

ST08-D3-PM1-323C-010 | ST08-A037

Statistics on the Properties of the Magnetosheath

Hui ZHANG¹**, Suiyan FU², Jianyong LV³, Changbo ZHU¹, Wenlong LIU⁴, Weixing WAN¹, Libo LIU¹, Yiding CHEN¹, Huijun LE¹

¹Chinese Academy of Sciences, ²Peking University, ³Nanjing University of Information Science & Technology, ⁴Beihang University

ST08-D3-PM1-323C-011 | ST08-A002 (Invited)

Observations of the Electron Jet Generated by Secondary

Reconnection in the Magnetotail

Shiyong HUANG¹ 1 , Kui JIANG¹, Zhigang YUAN¹, Fouad SAHRAOUI², Linghui HE¹, Xiaohua DENG¹, Jiansen HE³, Xiongdong YU¹, Dedong WANG¹, Craig POLLOCK⁴, Roy B. TORBERT⁵

¹Wuhan University, ²Plasma Physics Laboratory, ³Peking University, ⁴Denali Scientific, ⁵University of New Hampshire

ST08-D3-PM1-323C-012 | ST08-A009 (Invited)

Magnetic Reconnection in Earth's Magnetotail: Energy

Conversion and its Earthward-Tailward Asymmetry

San LU1*+, Philip PRITCHETT¹, Vassilis ANGELOPOULOS¹, Anton ARTEMYEV¹

¹University of California, Los Angeles

Time 16:00 - 18:00

Chair(s) Quanming LU, University of Science and Technology of

China

Roy TORBERT, University of New Hampshire

ST08-D3-PM2-323C-013 | ST08-A024 (Invited)

Electrostatic Turbulence and Anomalous Effects in

Reconnection Diffusion Region

Yuri KHOTYAINTSEV^{1‡+}, Daniel GRAHAM¹, Andris VAIVADS¹, Konrad STEINVALL¹, Mats ANDRE¹, Andrey DIVIN², Cecilia NORGREN³, Wenya LI⁴, Stefano MARKIDIS⁵, Per-Arne LINDQVIST⁵, Robert ERGUN⁶, Matthew ARGALL⁷, Olivier LE CONTEL⁸, Werner MAGNES⁹, Christopher RUSSELL¹⁰, Roy B. TORBERT⁷, Barbara GILES¹¹

¹Swedish Institute of Space Physics, ²St. Petersburg State University, ³University of Bergen, ⁴State Key Laboratory of Space Weather, ⁵KTH Royal Institute of Technology, ⁶University of Colorado Boulder, ⁷University of New Hampshire, ⁸National Centre for Scientific Research/ Ecole Polytechnique, ⁹Austrian Academy of Sciences, ¹⁰University of California, Los Angeles, ¹¹NASA Goddard Space Flight Center

ST08-D3-PM2-323C-014 | ST08-A001 (Invited)

Coalescence of Magnetic Flux Ropes via Magnetic

Reconnection at the Magnetopause

Rongsheng WANG1#+

¹University of Science and Technology of China

ST08-D3-PM2-323C-015 | ST08-A035 (Invited)

Magnetic Reconnection Driven by Electron Dynamics in Laser

Produced Plasmas

Yasuhiro KURAMITSU1#+

¹Osaka University

ST08-D3-PM2-323C-016 | ST08-A010

Prelimary Results of Magnetic Reconnection Experiments on

Keda Linear Magnetized Plasma Device

Feibin FAN^{1‡+}, Jinlin XIE¹, Quanming LU¹, Weixing DING¹, Longlong SANG¹, QIaofeng ZHANG¹
¹University of Science and Technology of China

ST08-D3-PM2-323C-017 | ST08-A041

Chaos-Induced Resistivity in Collisionless Magnetic

Reconnection

Zhen WANG1#+

¹Chinese Academy of Sciences

ST08-D3-PM2-323C-018 | ST08-A028

Whistler Wave Emission and Electron Acceleration Associated

with Plasmoid Collision

Keizo FUJIMOTO1#+

¹Beihang University

ST08-D3-PM2-323C-019 | ST08-A026 (Invited)

Experimental Observation of Kinetic Alfvén Wave Generated

by Magnetic Reconnection

Xuan SUN1#+

¹University of Science and Technology of China

ST14 / Energy Dissipation and Conversion in Space

Wed - 06 Jun | MR317A

Time 16:00 - 18:00

Chair(s) Tony LUI, Johns Hopkins University

Zhonghua YAO, University of Liege

ST14-D3-PM2-317A-001 | ST14-A012

Magnetic Energy Dissipation ($\delta J.\delta E$ or $\delta J.\delta E')$ and Distribution

Among Protons and Electrons for Alfvenic Waves at Kinetic

Scales in Wavenumber Space

Die DUAN^{1#+}, Jiansen HE¹, Linghua WANG¹, Chuanyi TU¹ ¹Peking University

ST14-D3-PM2-317A-002 | ST14-A010 (Invited)

Explosive Energy Release in Space Plasma: Earth's

Magnetospheric Substorm

Jonathan RAE $^{1\pm}$, Nadine KALMONI 1 , Clare WATT 2 , Kyle MURPHY 3 , Andrew WALSH $^{4+}$

¹University College London, ²University of Reading, ³National Aeronautics and Space Administration, ⁴European Space Agency

ST14-D3-PM2-317A-003 | ST14-A009

Dipolarization Front Current Structures Observed by MMS and Swarm Spacecraft

Yasong GE^{1**} , Pengfei QIN 1 , Aimin DU^1 , Cong ZHAO 2 , Jiaming OU^1 , Christopher RUSSELL 2 , Rumi NAKAMURA 3

¹Chinese Academy of Sciences, ²University of California, Los Angeles, ³Austrian Academy of Sciences

ST14-D3-PM2-317A-004 | ST14-A008

A New Flapping Mechanism of Earth's Magnetotail Current

Sheet Inferred from Cluster Observations

J.W. GAO¹, Zhaojin RONG^{1#}, Y.H. CAI¹, Anatoli PETRUKOVICH², Anthony LUI³, Chao SHEN⁴, Yong WEI¹, Weixing WAN¹

¹Chinese Academy of Sciences, ²Russian Academy of Sciences, ³Johns Hopkins University, ⁴Harbin Institute of Technology

ST14-D3-PM2-317A-005 | ST14-A002

Energy Exchanges Caused by Reconnection: What are the Main

Energy Carriers in the Inflow, Outflow and Diffusion Regions?

Giovanni LAPENTA¹²⁺, Francesco PUCCI¹, Martin GOLDMAN², David NEWMAN²

¹KU Leuven, ²University of Colorado Boulder

ST14-D3-PM2-317A-006 | ST14-A004 (Invited)

Solar Wind - Magnetosphere Energy Coupling Function:

Global MHD Simulation Result

Chi WANG1#+, Jinpeng HAN2, Hui LI1

¹Chinese Academy of Sciences, ²Academy of Launch Vehicle Technology

ST14-D3-PM2-317A-007 | ST14-A006

Magnetic Energy Dissipation at the Secondary Reconnection

Sites in the Magnetotail

Meng ZHOU1,2#+, Xiaohua DENG3

¹UCLA, ²University of California, Los Angeles, ³Wuhan University

ST15 / Evolution and Effects of Large Solar Transients Throughout Geospace and the Heliosphere

Wed - 06 Jun | MR323C

Time 08:30 - 10:30

Chair(s) John RICHARDSON, Massachusetts Institute of

Technology

ST15-D3-AM1-323C-001 | ST15-A003 (Invited)

Sun-to-Earth Propagation of CMEs and Chinese Efforts on an L5/L4 Mission

Ying LIU1#+

¹Chinese Academy of Sciences

ST15-D3-AM1-323C-002 | ST15-A002

Evolution of Alfvenic Fluctuations Inside an Interplanetary

Coronal Mass Ejection and Their Contribution to Local Plasma

Heatin

Hui LI^{1#+}, Chi WANG¹, John RICHARDSON², Cui TU¹

¹Chinese Academy of Sciences, ²Massachusetts Institute of Technology

ST15-D3-AM1-323C-003 | ST15-A009 (Invited)

Evolution and Impact of CME Flux Ropes in the Inner

Heliosphere

Nat GOPALSWAMY1#+

¹NASA Goddard Space Flight Center

ST15-D3-AM1-323C-004 | ST15-A005

Fast Acceleration of Energetic Particle by Interplanetary Shock Stimulated ULF Waves in the Magnetosphere

Qiugang ZONG^{1#+}
¹Peking University

ST15-D3-AM1-323C-005 | ST15-A006 (Invited)

The Study of the Propagation of an Interplanetary Coronal Mass Ejection in the Solar System with Multi Spacecraft Data Olivier WITASSE^{1‡+}, Beatriz SANCHEZ-CANO², M. Leila MAYS³ ¹European Space Agency, ²University of Leicester, ³Catholic University of America

ST15-D3-AM1-323C-006 | ST15-A015

Impact of the September 2017 Solar Particle Events Observed at Mars

Donald M. HASSLER^{1‡}, Robert WIMMER-SCHWEINGRUBER², Bent EHRESMANN¹, Jingnan GUO², Cary ZEITLIN³, Christina LEE⁴, Janet LUHMAN⁴, Bruce JAKOSKY⁵, Davin LARSON⁴, Robert LILLIS⁶, Sonal JAIN⁵, Nick SCHNEIDER⁵, M. Leila MAYS⁷, Olivier WITASSE⁸

¹Southwest Research Institute, ²University of Kiel, ³National Aeronautics and Space Administration, ⁴University of California, Berkeley, ⁵University of Colorado Boulder, ⁶University of California Berkeley, ⁷Catholic University of America, ⁸European Space Agency

ST15-D3-AM1-323C-007 | ST15-A007 (Invited)

Evidence of the Effects of Large Solar Transients in the

Interstellar Medium

William KURTH^{1‡+}, Donald GURNETT¹
¹The University of Iowa

ST15-D3-AM1-323C-008 | ST15-A008

Numerical Simulation of the Cosmic Rays Effects on the

Structure of Outer Heliosphere

Xiaocheng GUO^{1‡+}, Chi WANG¹, Vladimir FLORINSKI²
¹Chinese Academy of Sciences, ²University of Alabama in Huntsville

ST16 / Observations and Simulations of Radiation Belt Dynamics

Wed - 06 Jun | MR325B

Time 16:00 - 18:00

Chair(s) Allison N. JAYNES, University of Iowa

Anthony A. CHAN, Rice University

ST16-D3-PM2-325B-001 | ST16-A007 (Invited)

EMIC Wave-Driven Electron Precipitation via Cyclotron and

Bounce Resonance

Lauren BLUM^{1‡+}, Anton ARTEMYEV², Oleksiy AGAPITOV³
¹NASA Goddard Space Flight Center, ²University of California, Los Angeles, ³Space Sciences Laboratory

ST16-D3-PM2-325B-002 | ST16-A003

Intensity of Relativistic Electron Microbursts and Their Impact on the Radiation Belt

Emma DOUMA¹**, Craig RODGER¹, Lauren BLUM², Mark CLILVERD³, Paul O'BRIEN⁴, Berhard BLAKE⁴

¹University of Otago, ²NASA Goddard Space Flight Center, ³The British Antarctic Survey, ⁴The Aerospace Corporation

ST16-D3-PM2-325B-003 | ST16-A001 (Invited)

Interaction of ULF Waves with Energetic Particles: Van Allen

Probes Observations Kazue TAKAHASHI^{1#+}

¹The Johns Hopkins University Applied Physics Laboratory

ST16-D3-PM2-325B-004 | ST16-A013 (Invited)

Flux Enhancement of Relativistic Electrons of the Outer Belt

Through Resonance with the Fast Mode Waves

Yoshizumi MIYOSHI^{1‡+}, Masahiro HAYASHI¹, Shing SAITO¹, Yosuke MATSUMOTO², Satoshi KURITA¹, Hiroki ITO¹, Mariko TERAMOTO¹, Tomoaki HORI¹, Shoya MATSUDA³, Takanobu AMANO⁴, Kanako SEKI⁴, Nana HIGASHIO⁵, Takefumi MITANI⁵, Takeshi TAKASHIMA⁵, Yoshiya KASAHARA⁶, Yasumasa KASABA⁷, Keigo ISHISAKA⁸, Fuminori TSUCHIYA⁷, Atsushi KUMAMOTO⁷, Ayako MATSUOKA⁵, Iku SHINOHARA⁵, Berhard BLAKE⁹, Joseph FENNELL⁹, Seth CLAUDEPIERRE⁹

¹Nagoya University, ²Chiba University, ³ISAS/JAXA, ⁴The University of Tokyo, ⁵Japan Aerospace Exploration Agency, ⁶Kanazawa University, ⁷Tohoku University, ⁸Toyama Prefectural University, ⁹The Aerospace Corporation

ST16-D3-PM2-325B-005 | ST16-A008

Effects of Solar Wind and Magnetospheric Processes on the Ultra-Relativistic Electron Acceleration in the Outer Radiation Belt

Hong ZHAO1**, Dan BAKER¹, Xinlin LI¹, Allison JAYNES², Shri KANEKAL³, Kun ZHANG¹

¹University of Colorado Boulder, ²University of Iowa, ³NASA Goddard Space Flight Center

ST16-D3-PM2-325B-006 | ST16-A017

Simulation of Relativistic Electron Dynamics Observed by the

Van Allen Probes

Robert RANKIN^{1±+}, Chengrui WANG¹, Qiugang ZONG², Yongfu WANG², Alexander DEGELING¹, Xuzhi ZHOU²
¹University of Alberta, ²Peking University

ST16-D3-PM2-325B-007 | ST16-A010

Interacting Solar Wind Large-Scale Drivers and Outer

Radiation Belt Response

E. KILPUA¹²⁺, Drew TURNER², Heli HIETALA³, Allison JAYNES⁴, Minna PALMROTH¹, Jaan PRAKS⁵, Rami VAINIO⁶, Hannu KOSKINEN¹, Tuija PULKKINEN⁵

¹University of Helsinki, ²The Aerospace Corporation, ³University of California Los Angeles, ⁴University of Iowa, ⁵Aalto University, ⁶University of Turku

ST19 / Causes and Consequences of Magnetospheric Particle Losses

Wed - 06 Jun | MR325B

Time 11:00 - 12:30

Chair(s) Hong ZHAO, Laboratory for Atmospheric and Space

Physics

Mei-Ching FOK, NASA Goddard Space Flight Center

ST19-D3-AM2-325B-001 | ST19-A002

Can a Drift Model Simulate Energetic Particle Loss Caused by Radial Diffusion?

Mei-Ching FOK1*+, Suk-Bin KANG¹, Colin KOMAR¹, Alex GLOCER¹

¹NASA Goddard Space Flight Center

ST19-D3-AM2-325B-002 | ST19-A003 (Invited)

Calculation of Last Closed Drift Shells

Jay ALBERT1#+

¹Air Force Research Laboratory

ST19-D3-AM2-325B-003 | ST19-A016

Simulating Energetic Electron Losses Due to Drift Orbit

Bifurcation Using the CIMI Model

Suk-Bin KANG $^{1\# *}$, Mei-Ching FOK 1 , Alex GLOCER 1 , Colin KOMAR 1

¹NASA Goddard Space Flight Center

ST19-D3-AM2-325B-004 | ST19-A012 (Invited)

Understanding the Driver of Energetic Electron Precipitation

Using Coordinated Multi-Satellite Observations

Wen LI^{1,2‡+}, Luisa CAPANNOLO¹, Qianli MA¹.², Xiaojia ZHANG² ¹Boston University, ²University of California, Los Angeles

ST19-D3-AM2-325B-005 | ST19-A008

VLF Waves from Ground-Based Transmitters Observed by the

Van Allen Probes: Statistical Model and Effects on

Plasmaspheric Electrons

Qianli MA1,2#+

¹University of California, Los Angeles, ²Boston University

ST19-D3-AM2-325B-006 | ST19-A011

Hot Plasma Effects on the Cyclotron-Resonant Pitch-Angle Scattering Rates of Radiation Belt Electrons Due to EMIC

Waves

Xing CAO¹⁺, Binbin NI¹, Yuri SHPRITS², Danny SUMMERS³, Xudong GU^{1‡}, Fu SONG¹, Lou YUEQUN¹

¹Wuhan University, ²GFZ German Research Centre for Geosciences, ³Memorial University of Newfoundland

Time 13:30 - 15:30

Chair(s) Mei-Ching FOK, NASA Goddard Space Flight Center

Hong ZHAO, Laboratory for Atmospheric and Space

Physics

ST19-D3-PM1-325B-007 | ST19-A017 (Invited)

Using Multi-Point Measurements to Characterize the Spatial

Scale and Structure of Energetic Electron Precipitation

Robyn MILLAN $^{1\sharp*}$, Sapna SHEKHAR 1 , Brett ANDERSON 1 , Leslie WOODGER 1 , David SMITH 2 , John SAMPLE 3 , Michael MCCARTHY 4

¹Dartmouth College, ²University of California Santa Cruz, ³Montana State University, ⁴University of Washington

ST19-D3-PM1-325B-008 | ST19-A015

Precipitation Loss of Radiation Belt Electrons Observed by

LEO Satellites and Balloons

Kun ZHANG¹^{‡+}, Xinlin LI¹, Hong ZHAO¹, Quintin SCHILLER², Robyn MILLAN³

¹University of Colorado Boulder, ²NASA Goddard Space Flight Center, ³Dartmouth College

ST19-D3-PM1-325B-009 | ST19-A019

Quantifying the Precipitation Loss of Radiation Belt Electrons

During a Rapid Dropout Event

Kevin PHAM^{1‡+}, Weichao TU², Zheng XIANG³
¹NCAR, ²West Virginia University, ³Wuhan University

ST19-D3-PM1-325B-010 | ST19-A018

The Role of Localised Compressional Ultra-Low Frequency

Waves in Energetic Electron Precipitation

Jonathan RAE^{1#}, Kyle MURPHY², A. W. DEGELING³, Clare WATT⁴, Andrew R. INGLIS^{5,6}

¹University College London, ²National Aeronautics and Space Administration, ³Shandong University, ⁴University of Reading, ⁵Catholic University of America, ⁶NASA Goddard Space Flight Center

ST19-D3-PM1-325B-011 | ST19-A004 (Invited)

Quantifying Radiation Belt Electron Precipitation and its Effect on Atmospheric Chemistry

Chia-Lin HUANG¹⁸⁺, Harlan SPENCE¹, Katharine DUDERSTADT¹, Sonya SMITH¹, Alexander BOYD², Berhard BLAKE³, Joseph FENNELL³, Seth CLAUDEPIERRE³, Drew TURNER³, Geoffrey REEVES⁴, David KLUMPAR⁵, John SAMPLE⁵, Arlo JOHNSON⁵, Mykhaylo SHUMKO⁵, Alex CREW⁶ ¹University of New Hampshire, ²New Mexico Consortium, ³The Aerospace Corporation, ⁴Los Alamos National Laboratory, ⁵Montana State University, ⁶John Hopkins University

ST19-D3-PM1-325B-012 | ST19-A005

Relativistic Electron Microburst Events: Modeling the

Atmospheric Impact

Annika SEPPALA^{1*+}, Emma DOUMA¹, Craig RODGER¹, Pekka VERRONEN², Mark CLILVERD³, Jacob BORTNIK⁴
¹University of Otago, ²Finnish Meteorological Institute, ³The British Antarctic Survey, ⁴University of California, Los Angeles

ST19-D3-PM1-325B-013 | ST19-A007

Prompt Irreversible Removal of Radiation Belt Relativistic

Electrons by Substorm Proton Injections

Guyue DAI^{1#+}, Zhenpeng SU¹
¹University of Science and Technology of China

ST19-D3-PM1-325B-014 | ST19-A020

The Role of Nitrogen Ions in the Ring Current Decay

Raluca ILIE^{1‡+}, Mei-Yun LIN¹, Yu HUANG¹
¹University of Illinois at Urbana Champaign

ST22 / General Session in Solar and Terrestrial Sciences

Wed - 06 Jun | MR317A

Time 08:30 - 10:30

Chair(s) Mario M. BISI, Science & Technology Facilities Council

Linghua WANG, Peking University

ST22-D3-AM1-317A-001 | ST22-A029 (Invited)

Solar Magneto-Seismology: MHD Waves in Asymmetric

Waveguides

Robertus ERDELYI $^{{\scriptscriptstyle 1\sharp}*}$, Matthew ALLCOCK $^{\scriptscriptstyle 1}$, Noemi ZSAMBERGER $^{\scriptscriptstyle 1}$

 $^1 University of Sheffield$

ST22-D3-AM1-317A-002 | ST22-A024

The Kelvin-Helmholtz Instability Along the Heliopause and the Consequent Pickup Ion Dynamics

Ken TSUBOUCHI1#+

¹The University of Electro-Communications

ST22-D3-AM1-317A-003 | ST22-A036 (Invited)

Probing Heliospheric and Geospace Plasmas Using

Astrophysical Background Radio Emissions

Colin LONSDALE1#+

¹Massachusetts Institute of Technology

ST22-D3-AM1-317A-004 | ST22-A033

An Investigation of Solar Terminator Waves on Earth

Katelynn GREER1#+

¹University of Colorado Boulder

ST22-D3-AM1-317A-005 | ST22-A037

How Do the TNO (Tachocline Nonlinear Oscillation) Patterns

Change When Extended Solar Cycle Start at High-Latitudes?

Bernadett BELUCZ1#+, Mausumi DIKPATI2

¹Eötvös Loránd University, ²National Center for Atmospheric Research

ST22-D3-AM1-317A-006 | ST22-A039 (Invited)

Eclipse Across America: Through the Eyes of NASA

C. Alex YOUNG^{1#+}, Louis MAYO¹
¹NASA Goddard Space Flight Center

Time 11:00 - 12:30

Chair(s) Quan-Qi SHI, ShanDong University at Weihai

Gang LI, University of Alabama in Huntsville

ST22-D3-AM2-317A-007 | ST22-A019

Local Time Characteristic of Low-Latitude Geomagnetic Field

Response to Intense Solar Flares

Akiko FUJIMOTO^{1‡+}, Akimasa YOSHIKAWA¹, Toshiya NISHIGUCHI¹
¹Kyushu University

ST22-D3-AM2-317A-008 | ST22-A031

On the Occurrence of Afternoon Counter Electrojet over Indian

Longitudes During June Solstice in Solar Minimum

Kuldeep PANDEY 1,2** , R. SEKAR 1 , B G ANANDARAO 1 , S P GUPTA 1 , Dibyendu CHAKRABARTY 1

¹Physical Research Laboratory, ²Indian Institute of Technology Gandhinagar

ST22-D3-AM2-317A-009 | ST22-A030

Ionospheric Scintillation Measurements Using Closely-Spaced

GNSS Receivers at Tromso, Norway

Sayaka SAKAMOTO $^{\! 1},$ Yuichi OTSUKA $^{\! 1\sharp +},$ Yasunobu OGAWA $^{\! 2},$ Keisuke HOSOKAWA $^{\! 3}$

¹Nagoya University, ²National Institute of Polar Research, ³University of Electro-Communications

ST22-D3-AM2-317A-010 | ST22-A021 (Invited)

On Generalization of Birkeland Current System in the

Tree-Dimensional Magnetosphere-Ionosphere Coupling

Akimasa YOSHIKAWA1#+

¹Kyushu University

Time 13:30 - 15:30

Chair(s) Shasha ZOU, University of Michigan

Mario M. BISI, Science & Technology Facilities Council

ST22-D3-PM1-317A-011 | ST22-A018 (Invited)

Variation of O+ and H+ Distribution with Storm-Phase in Ring

Current Region Retrieved from Twins ENA Images During the

June 2015 Magnetic Storm

Shuying MA1*, Xiang-Yao ZENG¹, Liang XU¹*, Philip VALEK², Jerry GOLDSTEIN²

¹Wuhan University, ²Southwest Research Institute

ST22-D3-PM1-317A-012 | ST22-A035 (Invited)

The Contribution of Inductive Electric Fields to Particle

Energization

Raluca ILIE^{1‡+}, Lunjin CHEN², Muhammad Fraz BASHIR¹
¹University of Illinois at Urbana Champaign, ²The University of Texas at Dallas

ST22-D3-PM1-317A-013 | ST22-A014

Effects of Dynamic Pressure on Magnetotail During Intervals

of Southward Bz: Global Modeling and Observations

Doga OZTURK1**, Shasha ZOU1, James SLAVIN1, Aaron RIDLEY1

¹University of Michigan

ST22-D3-PM1-317A-014 | ST22-A027

Automatic Georeferencing of Astronaut Auroral Photography

Andrew WALSH1#+, Matt TAYLOR1

¹European Space Agency

ST22-D3-PM1-317A-015 | ST22-A006 (Invited)

Non-Linear Least Square Fitting Technique for the

Determination of Field Line Resonance Frequency in Ground

Magnetometer Data: Application to the Remote Sensing of

Plasmaspheric Mass Density

Athanasios BOUDOURIDIS^{1,2#}, Mark MOLDWIN³, Eftyhia

¹Space Science Institute, ²University of Colorado Boulder, ³University of Michigan, ⁴NASA Goddard Space Flight Center

ST22-D3-PM1-317A-016 | ST22-A038 (Invited)

The Effects of Mars-Like Conditions in the Stratosphere and

Laboratory on Paenibacillus Xerothermodurans Spores

David SMITH1#+

¹NASA Ames Research Center

AS2 Poster Presentations

Wed - 06 Jun, 13:30 - 15:30 | Ballroom B

AS03-D3-PM1-P-040 | AS03-A005

Short-Term Radiative Effects of Black Carbon Intra-Seasonal

Variation over the Southeastern Tibetan Plateau:

Implications for Atmospheric Circulation

Jing YANG1#+

¹Beijing Normal University

AS03-D3-PM1-P-041 | AS03-A010

The Impact of the ENSO Cycle on the Stratospheric Ozone

Distribution over East Asia

Mingsheng WANG1#+, Guo SHICHANG2

¹Guangdong Climate Center, China, ²Yunnan University

AS03-D3-PM1-P-042 | AS03-A011

The Precursor Signal Analysis and Prediction for the

Landfall Typhoon Intensity over South China

Yamin $HU^{1\sharp +}$, Juanhuai WANG¹, Mingsheng WANG², Xiaolin LUO¹

¹Guangdong Meteorological Bureau, ²Guangdong Climate Center, China

AS03-D3-PM1-P-043 | AS03-A013

Impact of Rossby and Kelvin Wave Components on MJO

Eastward Propagation

Tim LI^{1#+}, Lu WANG¹, Tomoe NASUNO²

¹University of Hawaii, ²Japan Agency for Marine-Earth Science and Technology

AS03-D3-PM1-P-044 | AS03-A020

Multi-Scale Temporospatial Variability of the East Asian

Summer Monsoon Stationary Frontal System in the

Observation and GFDL Hiram

Yana LI1#+

¹Sun Yat-sen University

AS03-D3-PM1-P-045 | AS03-A028

Physical Processes Controlling Earlier and Later Onset of a

Typhoon Season in the Western North Pacific

Heng ZUO1+, Tim LI2#

¹Nanjing University of Information Science & Technology,

²University of Hawaii

AS03-D3-PM1-P-046 | AS03-A037

The Impact of Tropical Cyclones on Extreme Precipitation

over Coastal and Inland Areas of China and its Association

to the ENSO

Xihui GU1#+

¹China University of Geosciences

AS03-D3-PM1-P-047 | AS03-A042

Causes of Strengthening and Weakening of ENSO

Amplitude Under Global Warming

Lin CHEN1#+

¹University of Hawaii

AS03-D3-PM1-P-048 | AS03-A044

Modeling Study on the Thermal Contrast Between Asia

Continent and Adjacent Ocean on Centennial Time Scale

over the Past Two Millennia

Peng HE1+, Jian LIU1#, Zhiyuan WANG1

¹Nanjing Normal University

AS03-D3-PM1-P-049 | AS03-A049

Analysis on Centennial-Scale Abrupt Changes in Simulated

Summer Temperature over China

Yahui QIU1#+, Jian LIU1, Zhiyuan WANG1

¹Nanjing Normal University

AS03-D3-PM1-P-050 | AS03-A054

Millennial-Scale Oscillation in Europe and North American

During Holocene

Lingfeng WAN $^{1+}$, Zhengyu LIU 2 , Jian LIU $^{1\sharp}$, Bryan SHUMAN 3 ,

Jeremiah MARSICEK²

¹Nanjing Normal University, ²University of Wisconsin-Madison,

³University of Wyoming

AS03-D3-PM1-P-051 | AS03-A057

Relationship of EASM and ISM on Inter-Decadal Scales in

Three Typical Periods

Zhou YANG1#+, Jian LIU1, Zhiyuan WANG1

¹Nanjing Normal University

AS03-D3-PM1-P-052 | AS03-A059

East Asian Summer Monsoon Responses in Fast and Slow El

Niño Decaying Years

Xiaoye ZHOU1#+

¹Nanjing University of Information Science

AS03-D3-PM1-P-053 | AS03-A063

Role of the Western Hemisphere Warm Pool in Climate Variability over the Western North Pacific

Jae-Heung PARK^{1‡+}, Tim LI², Jong-Seong KUG³, Soon-II AN⁴
¹International Pacific Research Center (IPRC), ²University of
Hawaii, ³Pohang University of Science and Technology, ⁴Yonsei
University

AS03-D3-PM1-P-054 | AS03-A066

The Characteristics of Centennial-Scale Changes of East

Asian Summer Monsoon over the Last Two Millennium

Hongyue ZHANG $^{1s+}$, Jian LIU 1 , Liang NING 2 , Zhiyuan WANG 1

¹Nanjing Normal University, ²Nanjing Normal University & University of Massachusetts

AS03-D3-PM1-P-055 | AS03-A071

Interannual Variability of Seasonal Evolution on Eastern Tibetan Plateau Precipitation

Liying SUN1#+

¹Nanjing University of Information Science & Technology

AS03-D3-PM1-P-056 | AS03-A075

Trends in the Appearance of Dry Intrusion Around the

Equator and its Detection

Saki YANAGISAWA^{1#+}, Akiyo YATAGAI¹
¹Hirosaki University

AS03-D3-PM1-P-057 | AS03-A084

Long-Lead Prediction of Early Summer Subtropical Front

Rainfall Based on Arctic Sea Ice

Fei HUANG^{1#+}, Wen XING¹, Jinping ZHAO¹ ¹Ocean University of China

AS03-D3-PM1-P-058 | AS03-A086

Long-Term Climatology on the Precipitation Features for the

Large Rainfall Years on Eastern Japan in the Baiu Season

Kengo MATSUMOTO^{1‡+}, Kuranoshin KATO¹, Kazuo OTANI¹ ¹Okayama University

AS03-D3-PM1-P-059 | AS03-A087

Synoptic Climatological Study on Precipitation

Characteristics and Atmospheric Field Around the Japan

Islands in the Midsummer

Tomoyasu TSUCHIDA^{1‡+}, Kuranoshin KATO¹, Kazuo OTANI¹, Kengo MATSUMOTO¹

¹Okayama University

AS03-D3-PM1-P-060 | AS03-A089

 ${\bf Subseason al\ Zonal\ Shift\ of\ the\ Western\ Pacific\ Subtropical}$

High and its Relation to the Summer Rainfall Anomaly in

Eastern China

Weina GUAN¹⁺, Xuejuan REN^{1#}
¹Nanjing University

AS08-D3-PM1-P-017 | AS08-A007

A Moist Static Energy Analysis of Super MJO Events

Ling-Hui HUANG¹⁺, Jia-Yuh YU^{1#}

¹National Central University

AS08-D3-PM1-P-018 | AS08-A010

Tropical Upper-Ocean Introduces a Memory Effect Into the

Madden-Julian Oscillation within Isothermal-Layer Depth

Yung-Yao LAN^{1#+}, Huang-Hsiung HSU¹, Ben-Jei TSUANG², Wan-Ling TSENG¹

¹Academia Sinica, ²National Chung-Hsing University

AS08-D3-PM1-P-019 | AS08-A018

Impact of the Interannual Variation of the Tropical

Low-Frequency Oscillation Intensity on the Winter Climate

over China

Ziniu XIAO1#+

¹Chinese Academy of Sciences

AS08-D3-PM1-P-020 | AS08-A019

The Relationship Between Tropical Low-Frequency

Oscillation and the Rainfall over Lancang-Mekong River

Basin and its Impact on Drought Disaster Damage

Xichun YANG1#+

¹Beijing Rainymet Technology Co., Ltd.

AS08-D3-PM1-P-021 | AS08-A021

Prediction of the Madden Julian Oscillation in the

Sub-Seasonal to Seasonal (S2S) Prediction Dataset

Shuguang WANG^{1#+}, Adam SOBEL¹, Micheal TIPPETT¹,

Frederic VITART²

¹Columbia University, ²European Centre for Medium-Range

Weather Forecasts

AS08-D3-PM1-P-022 | AS08-A024

The MJO Simulation in CMIP5 Climate Models and the

Roles of Background States

Jian LING^{1#+}, Guiwan CHENG¹

¹Chinese Academy of Sciences

AS08-D3-PM1-P-023 | AS08-A026

150-hPa Zonal Geopotential Gradient - An Alternative of OLR as a MJO Convection Signal in Observation and Simulation

Jeremy Cheuk-Hin LEUNG^{1#+}, Weihong QIAN¹
¹Peking University

AS08-D3-PM1-P-024 | AS08-A027

A Quasistationary Extreme Rain Producing Mesoscale

Convective System on the Meiyu Front

Yuchun ZHAO1#+

¹Xiamen Meteorological Bureau

AS08-D3-PM1-P-025 | AS08-A028

Improving MJO Simulation in AGCM by Coupling SIT One Dimensional Ocean Model

Wan-Ling TSENG 1s , Chia-Ying TU 1 , Yung-Yao LAN 1 , Huang-Hsiung HSU 1 , Ben-Jei TSUANG 2

¹Academia Sinica, ²National Chung-Hsing University

AS08-D3-PM1-P-026 | AS08-A029

The Change of MJO Teleconnection Under the Global

Warming

Wan-Ling TSENG $^{1\sharp *}$, Huang-Hsiung HSU 1 , Li-Chiang JIANG 1 , Chiung-Wen June CHANG 2 , Ben-Jei TSUANG 3 , Chia-Ying TU 1 , S. Y. Simon WANG 4

¹Academia Sinica, ²Chinese Cultural University, ³National Chung-Hsing University, ⁴Utah State University

AS08-D3-PM1-P-027 | AS08-A032

Evaluating the MJO Forecast Skill in the NCEP GEFS 35-Day Experiments

Wei $LI^{1#}$, Yuejian ZHU 1 , Xiaqiong ZHOU 1 , Bing FU 1 , Dingchen HOU 1 , Eric SINSKY 1 , Christopher MELHAUSER 1 , Malaquias PEÑA 2 , Hong GUAN 1 , Richard WOBUS 1

¹National Oceanic and Atmospheric Administration, ²University of Connecticut

AS08-D3-PM1-P-028 | AS08-A037

Two Dynamical Regimes of the MJO Mode Due to the Wave

Feedback: A Linear Theoretical Study

Guosen CHEN1#+, Bin WANG1

¹University of Hawaii

AS08-D3-PM1-P-029 | AS08-A038

Estimating Group Velocity of the MJO: Effects of the

Indo-Pacific Warm Pool

Oliver WATT-MEYER¹**, Ángel ADAMES², Daehyun KIM¹ ¹University of Washington, ²University of Michigan

AS08-D3-PM1-P-030 | AS08-A039

Climate Change in Intraseasonal Blocking and Extratropical

Cyclone Activity by Large Ensemble Simulation

Chiharu TAKAHASHI1#+

¹The University of Tokyo, Atmosphere and Ocean Research Institute

AS09-D3-PM1-P-020 | AS09-A011

Estimation of Precipitable Water Vapor from Himawari-8

Geostationary Meteorological Satellite on Behalf of InSAR

Atmospheric Correction

Youhei KINOSHITA $^{1s+}$, Tadahiro NIMURA 1 , Ryoichi FURUTA 1

¹Remote Sensing Technology Center of Japan

AS09-D3-PM1-P-021 | AS09-A013

Development of Fog Detection Algorithm at Daytime Using

Himawari-8/AHI and Ground Data

Ji-Hye HAN¹+, Myoung-Seok SUH¹‡
¹Kongju National University

AS09-D3-PM1-P-022 | AS09-A019

Operation-Oriented Asian Dust Data Assimilation Using

Himawari-8 Aerosol Products

Thomas SEKIYAMA^{1‡+}, Keiya YUMIMOTO², Taichu TANAKA¹, Takashi MAKI¹, Mayumi YOSHIDA³, Maki KIKUCHI³, Takashi M. NAGAO³, Hiroshi MURAKAMI³
¹Japan Meteorological Agency, ²Kyushu University, ³Japan Aerospace Exploration Agency

AS09-D3-PM1-P-023 | AS09-A022

Detection of Overshooting Tops over East Asia Using

Himawari-8

Haemi PARK^{1‡+}, Jungho IM¹, Miae KIM¹, Juhyun LEE¹ ¹Ulsan National Institute of Science and Technology

AS09-D3-PM1-P-024 | AS09-A024

AHI Yonsei Aerosol Retrieval (YAER) : Algorithm and

Validation

Hyunkwang LIM¹*, Myungje CHOI¹, Jhoon KIM¹, Sujung GO¹, Yasuko KASAI², P.W. CHAN³

¹Yonsei University, ²National Institute of Information and Communications Technology, ³Hong Kong Observatory

AS09-D3-PM1-P-025 | AS09-A026

Estimation of Black Carbon Emission from Forest Fires in

India Using Moderate-Resolution Imaging

Spectroradiometer Burnt Area Product

Umed PALIWAL¹, Pavan Kumar NAGAR², Mukesh SHARMA²**

¹University of California, Berkeley, ²Indian Institute of Technology Kanpur AS09-D3-PM1-P-026 | AS09-A039

How do Aerosol Retrievals from Polar Orbiting Instruments Help Inform the Future of Aerosol Remote Sensing from Geostationary Platforms?

Michael GARAY1#+

¹Jet Propulsion Laboratory, California Institute of Technology

AS09-D3-PM1-P-027 | AS09-A042

SatCORPS Cloud Detection Using GOES-16 Satellite:

Results and Validation

Qing TREPTE^{1,*}, William L. SMITH JR.², Rabi PALIKONDA¹, Chris YOST^{1,2}, Patrick MINNIS²

¹Science Systems and Applications, Inc., ²NASA Langley Research Center

AS10-D3-PM1-P-012 | AS10-A004

Influence of BC Warming Effect on East Asian Monsoon and its Feedbacks

Bingliang ZHUANG^{1‡+}, Tijian WANG¹, Pulong CHEN¹, Shu LI¹, Min XIE¹, Jingxian LIU¹, Mengmeng LI¹, Huimin CHEN¹ ¹Nanjing University

AS10-D3-PM1-P-013 | AS10-A005

Recent Change in Relationship Between Western North

Pacific and East Asian Summer Monsoons

Kangjin LEE1#+, Minho KWON2

¹Korea Institute of Ocean Science & Technology, ²Korea Institute of Ocean Science and Technology

AS10-D3-PM1-P-014 | AS10-A008

Similar Features of Inter-Decadal Variability Between

Typical Warm Periods During the Past 1500 Years

Kai DING¹⁺, Jian LIU^{1‡}, Liang NING², Zhiyuan WANG¹
¹Nanjing Normal University, ²Nanjing Normal University &
University of Massachusetts

AS10-D3-PM1-P-015 | AS10-A010

Comparisons of Circulation Anomalies for Different Types

of Heat Waves in South Korea

Baek-Jo KIM¹**, Ke XU², Riyu LU², Jong-Kil PARK³, Jae-Young BYON¹

¹Korea Meteorological Administration, ²Chinese Academy of Sciences, ³Inje University

AS10-D3-PM1-P-016 | AS10-A016

Combined Effects of Blocking and AO on Prolonged

Snowstorm in Jeju Island

Ji-Hye YEO¹⁺, Kyung-Ja HA^{1#}
¹Pusan National University

AS10-D3-PM1-P-017 | AS10-A017

The Characteristics of 2017 Winter Climate over East Asia

Su-Jeong KIM $^{\mbox{\tiny 15+}}$, So-Young YIM $^{\mbox{\tiny 1}}$, Sung-Ho WOO $^{\mbox{\tiny 2}}$, Dong-Jun KIM $^{\mbox{\tiny 1}}$, Jiseon BAK $^{\mbox{\tiny 1}}$

¹Korea Meteorological Administration, ²APEC Climate Center

AS10-D3-PM1-P-018 | AS10-A020

The Regional Characteristic of Onset Mechanism over the

Asian Summer Monsoon

Suyeon MOON¹⁺, Kyung-Ja HA^{1#}
¹Pusan National University

AS10-D3-PM1-P-019 | AS10-A021

Change in the Relationship Between East Asian Summer

Monsoon and Tropical Indian Ocean During Recent Decade

and its Possible Causes

Seogyeong KIM¹⁺, Kyung-Ja HA¹⁺, Ruiqiang DING²

¹Pusan National University, ²Chinese Academy of Sciences

AS11-D3-PM1-P-029 | AS11-A004

Change of Dust Particles in Marine Atmosphere:

Comparison Between China and Japan

Daizhou ZHANG^{1#+}, Yaunobu IWASAKA², Guang-Yu SHI³
¹Prefectural University of Kumamoto, ²University of Shiga
Prefecture, ³Chinese Academy of Sciences

AS11-D3-PM1-P-030 | AS11-A006

Characteristics of the Turbulent Transfer During the Heavy

Haze in Winter 2016/17 in Beijing

Yan REN¹⁺, Shuwen ZHENG¹, Wei WEI², Bingui WU³, Hongsheng ZHANG^{1‡}, Xuhui CAI¹, Yu SONG¹ ¹Peking University, ²Chinese Academy of Meteorological Sciences, ³Tianjin Meteorological Bureau

AS11-D3-PM1-P-031 | AS11-A007

Comparison of Two Different Dust Emission Mechanisms over the Horqin Sandy Land Area: Aerosols Contribution and Size Distributions

Tingting JU^{1‡+}, Hongsheng ZHANG¹, Xiaolan LI², Xuhui CAI¹, Yu SONG¹

¹Peking University, ²China Meteorological Administration

AS11-D3-PM1-P-032 | AS11-A016

Characteristics, Potential Source Region and Implications

During a Haze Episode in Yinchuan in January 2016

Fei CHEN^{1‡+}, Hongxia YU², Hui ZHANG¹, Jixi GAO¹
¹Ministry of Environmental Protection, ²Nanjing Agricultural University

AS11-D3-PM1-P-033 | AS11-A019

Improved Retrieval of Cloud Base Heights from Ceilometer

Using a Non-Standard Instrument Method

Yang WANG¹⁺, Chuanfeng ZHAO^{1#}
¹Beijing Normal University

AS11-D3-PM1-P-034 | AS11-A023

Long-Range Transported Bioaerosols Captured in Snow Cover on Mount Tateyama, Japan: Impacts of Asian-Dust Events on Airborne Bacterial Dynamics Relating to

Ice-Nucleation Activities

Teruya MAKI¹⁵⁺, Kevin LEE², Koichi WATANABE³, Kazuma AOKI⁴, Masataka MURAKAMI⁵, Takuya TAJIRI⁵, Yaunobu IWASAKA⁶

¹Kanazawa University, ²Auckland University of Technology, ³Toyama Prefectural University, ⁴University of Toyama, ⁵Meteorological Research Institute, ⁶University of Shiga Prefecture

AS11-D3-PM1-P-035 | AS11-A024

Comparison of Microbial Isolates Collected from Bioaerosol over KOSA Source Region (Gobi Desert) and Down Region (Noto Peninsula)

Tatsuyuki FUJITA¹+, Teruya MAKI¹, Kenji KAI², Yasunori KUROSAKI³+, Hiroshi HASEGAWA¹, Yaunobu IWASAKA⁴¹Kanazawa University, ²Nagoya University, ³Tottori University, ⁴University of Shiga Prefecture

AS11-D3-PM1-P-036 | AS11-A030

Dust Modeling over East Asia During the Summer of 2010 Using the WRF-Chem Model

Beidou ZHANG¹#+, Jianping HUANG¹, Siyu CHEN¹ ¹Lanzhou University

AS11-D3-PM1-P-037 | AS11-A032

The Temporal and Spatial Distribution and Long-Term Trends of Dust Events over Xinjiang Basin During 1960 to 2015

Jing SU^{1#+}
¹Lanzhou University

AS11-D3-PM1-P-038 | AS11-A035

Observed Characteristics of Precipitation Timing During the

Hazes: Implication to Aerosol-Precipitation Interactions

Wenting ZHANG¹⁺, Seung-Hee EUN¹, Sung Min PARK¹, Hyewon HWANG¹, Byung-Gon KIM¹⁺, daehong KOH²
¹Gangneung-Wonju National University, ²gwnu

AS11-D3-PM1-P-039 | AS11-A042

Spatial and Temporal Evolution of Natural and Anthropogenic Dust Events over Northern China Xin WANG^{1‡+}
¹Lanzhou University AS12-D3-PM1-P-013 | AS12-A002

Evaluating the Impact of Emissions Regulations on the Emissions Reduction During the 2015 China Victory Day

Parade with an Ensemble Square Root Filter

Kekuan CHU¹⁵⁺, Zhen PENG¹, Zhiquan LIU², Lili LEI¹, Xingxia KOU³

¹Nanjing University, ²National Center for Atmospheric Research, ³China Meteorological Administration

AS12-D3-PM1-P-014 | AS12-A003

Assimilation of Lightning-Proxy Radar Reflectivity Using

WRF-3DVAR

Yi YANG^{1#+}
¹Lanzhou University

AS12-D3-PM1-P-015 | AS12-A010

Assimilation of Remotely Sensed Leaf Area Index Into the Community Land Model with Explicit Carbon and Nitrogen Components Using Data Assimilation Research Testbed Xiaolu LING^{1‡+}
¹Nanjing University

AS12-D3-PM1-P-016 | AS12-A013

A New Approach to Analysis of Rain-Drop Size Distribution over Hill-Top Region in the Himalayas

Sanat Kumar DAS^{1#+}, Soumendra SINGH¹, Abhijit CHATTERJEE¹, Ajay K. SINGH¹, Amitabha MITRA¹, Sanjay K. GHOSH¹, Sibaji RAHA¹
¹Bose Institute

AS12-D3-PM1-P-017 | AS12-A015

Development of Observation Processing Package in KIAPS

Jeon-Ho KANG^{1*}, Hyoung-Wook CHUN¹, Sihye LEE¹, Ji-Hyun HA¹, In-Hyuk KWON¹, Hyun-Jun HAN¹, Hanbyeol JEONG¹, Hui-Nae KWON¹

¹Korea Institute of Atmospheric Prediction Systems (KIAPS)

AS12-D3-PM1-P-018 | AS12-A020

Impact of the Surface Data Assimilation on the Afternoon

Thunderstorm Prediction in Taiwan

Jing-Shan HONG^{1‡+}, I-Han CHEN¹, Yan-Ming SHAO¹, Ya-Ting TSAY¹, Chin-Hsiao CHIANG¹, Siou-Ying JIANG^{1,2}
¹Central Weather Bureau, ²National Taiwan University

AS13-D3-PM1-P-013 | AS13-A004

The Impact of Wind and Concentration Data Assimilation on the Plume Dispersion Simulation in the Lower Troposphere Thomas SEKIYAMA^{1‡+}, Mizuo KAJINO¹ ¹Japan Meteorological Agency AS13-D3-PM1-P-014 | AS13-A009

Ensemble-Based Atmospheric Reanalysis Using a Global

Coupled Atmosphere-Ocean GCM

Nobumasa KOMORI^{1#+}, Takeshi ENOMOTO², Takemasa MIYOSHI^{3,4}, Akira YAMAZAKI¹, Akira KUWANO-YOSHIDA², Bunmei TAGUCHI⁵

¹Japan Agency for Marine-Earth Science and Technology, ²Kyoto University, ³RIKEN Advanced Institute for Computational Science, ⁴University of Maryland, ⁵The University of Tokyo

AS13-D3-PM1-P-015 | AS13-A016

Potential Impact of All-Sky Radiance from GEMS on

Regional Scale Air Quality Prediction

Ebony LEE¹⁺, Seon Ki PARK^{1#}, Milija ZUPANSKI²
¹Ewha Womans University, ²Colorado State University

AS16-53-D3-PM1-P-010 | AS16-53-A004

Determination of Mesospheric Green Line Emission Peak

Altitude over Arecibo, Puerto Rico

Eframir FRANCO DIAZ $^{1\pm}$, Shikha RAIZADA 2 , Christiano GARNETT MARQUES BRUM 2

¹Arecibo Observatory, ²SRI International

AS16-53-D3-PM1-P-011 | AS16-53-A025

Atmospheric Coupling in Gigantic Jets Altitude

Kang-Ming PENG $^{{\scriptscriptstyle 1\sharp}*},$ Rue-Ron HSU $^{{\scriptscriptstyle 1}},$ Han-Tzong SU $^{{\scriptscriptstyle 1}},$ Alfred CHEN $^{{\scriptscriptstyle 1}},$ Yen-Jung WU $^{{\scriptscriptstyle 1}}$

¹National Cheng Kung University

AS17-D3-PM1-P-017 | AS17-A010

Characteristics of Mesospheric Gravity Waves over the

Southeastern Tibetan Plateau Region

Qinzeng LI1**, Jiyao XU1, Xiao LIU2, Wei YUAN1, Jingsong CHEN3

¹Chinese Academy of Sciences, ²Henan Normal University, ³China Research Institute of Radio Wave Propagation

AS17-D3-PM1-P-018 | AS17-A012

Terrestrial Evapotranspiration Estimated Based on MODIS Remote Sensing Products and Land Surface Model over Arid and Semi-Arid Regions

Yang YANG¹#+, Lijuan WANG², Yue PING¹, Suying SUN¹, Yue QI¹

¹China Meteorological Administration, ²Institute of Arid Meteorology, China Meteorological Administration, Lanzhou

AS17-D3-PM1-P-019 | AS17-A016

Seasonal and Inter-Annual Variations in Carbon Dioxide Exchange over an Alpine Grassland in the Eastern

Qinghai-Tibetan Plateau

Lunyu SHANG1#+

¹Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences AS17-D3-PM1-P-020 | AS17-A024

Study on Low Frequency Change of OLR and Wind in Qinghai-Tibet Plateau and the Relationship with Plateau Vortex

Tiangui XIAO¹⁺, Chao WANG^{1‡}, Zhen YUAN¹ ¹Chengdu University of Information Technology

AS17-D3-PM1-P-021 | AS17-A025

Effect of Marginal Topography Around the Tibetan Plateau on the Asian Climate

Zhengguo SHI1#+

¹Institute of Earth Environment, Chinese Academy of Sciences

AS17-D3-PM1-P-022 | AS17-A026

A Transient Simulation of Westerly Wind Modulation on Spring Dust Cycle over North China at Precessional Bands During the Last Interglacial Period

Xinzhou LI1#+

¹Chinese Academy of Sciences

AS17-D3-PM1-P-023 | AS17-A027

Improving the Simulation of Terrestrial Water Storage Anomalies over China Using a Bayesian Model Averaging Ensemble Approach

Jianguo LIU^{1#+}, Zhenghui XIE², Binghao JIA², Chunxiang SHI³
¹Huaihua Universty, ²Chinese Academy of Sciences, ³China
Meteorological Administration

AS17-D3-PM1-P-024 | AS17-A031

Effects of Tibetan Plateau Uplift on Autumn Rainfall in Southwest China

Qi WANG^{1#+}, Mi YAN¹, Jian LIU¹
¹Nanjing Normal University

AS17-D3-PM1-P-025 | AS17-A034

A New Plateau Monsoon Index Using the Wind Dynamical Normalized Seasonality and its Application

Shaobo ZHANG1#+

¹Chengdu University of Information Technology

AS17-D3-PM1-P-026 | AS17-A042

Cloud Vertical Structure by Surface-Based W/Ka Band Cloud

Radar and Satellite Observation over Tibet

Jinli LIU1#+, Qiang SUN2, Qiufei JIANG3, Ling WANG3, Daren LYU1.4

¹Institute of Atmospheric Physics, Chinese Academy of Sciences, ²Chinese Academy of Sciences, ³Chengdu University of Information Technology, ⁴University of Chinese Academy of Sciences

AS19-D3-PM1-P-015 | AS19-A002

Impacts of Aerosols on Seasonal Precipitation and Snowpack in California Based on Convection-Permitting WRF-Chem Simulations

Longtao WU¹**, Yu GU², Jonathan JIANG¹, Hui SU¹, Nanpeng YU³, Chun ZHAO⁴, Yun QIAN⁵, Bin ZHAO², Kuo-Nan LIOU², Yong-Sang CHOI⁶

¹Jet Propulsion Laboratory, California Institute of Technology, ²University of California, Los Angeles, ³University of California, Riverside, ⁴University of Science and Technology of China, ⁵Pacific Northwest National Laboratory, ⁶Ewha Womans University

AS19-D3-PM1-P-016 | AS19-A003

Carbonaceous Aerosol and Light Absorption Property in a

Typical Glacierization Region of the Tibetan Plateau

Hewen NIU $^{1\sharp *}$, Shichang KANG 1 , Hailong WANG 2 , Rudong ZHANG 2

¹Chinese Academy of Sciences, ²Pacific Northwest National Laboratory

AS19-D3-PM1-P-017 | AS19-A004

Impact of Snow Darkening by Light-Absorbing Aerosols on the Regional Dependency of Precipitation Recycling Ratio over Eurasia

Maeng-Ki KIM $^{1\pm}$, William LAU 2 , Kyu-Myong KIM 3 , Jeong SANG 1 , Teppei YASUNARI 4

¹Kongju National University, ²University of Maryland, ³NASA Goddard Space Flight Center, ⁴Hokkaido University

AS19-D3-PM1-P-018 | AS19-A009

Radiative Feedbacks of Dust-in-Snow over the Tibetan

Plateau on East Asian Dust Cycle

Xiaoning XIE1#+

¹Institute of Earth Environment, Chinese Academy of Sciences

AS19-D3-PM1-P-019 | AS19-A011

Effects of Samalas Mega Volcanic Eruption on Global

Climate Change Based on CESM Simulation

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AS19-D3-PM1-P-020 | AS19-A015

Anthropogenic Aerosol Effects on East Asian Monsoon

Climate

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Sciences

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Impact of Absorbing Aerosols on Snowmelt over the Tibetan

Plateau and Regional Hydro-Climate: A Case Study of the

South Asian Summer Monsoon of 2008

Kyu-Myong KIM^{1‡+}, William LAU², Si-Chee TSAY¹, Teppei YASUNARI³, Sarith MAHANAMA⁴, Randal KOSTER¹, Arlindo DA SILVA¹

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AS19-D3-PM1-P-022 | AS19-A019

Difference of AOD Between Observation and Model,

MIROC-SPRINTARS, due to Discrepancy of Aerosol

Vertical Information

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Modeling Study of Aerosol Indirect Effects on Precipitation

Using a New Coupled Chemistry-Climate Model

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AS19-D3-PM1-P-024 | AS19-A023

Observational Evidence of Wet-First-And-Dry-Later (WFDL)

Mechanism on Eurasia Hydro-Climate

Jeong SANG¹+, William LAU², Maeng-Ki KIM¹‡, Kyu-Myong KIM³

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AS19-D3-PM1-P-025 | AS19-A025

Effect of Aerosol on Fair Weather Electric Field at a High

Altitude Station in Eastern Himalayas

Sanjay GHOSH^{1#}, Trishna BHATTACHARYYA¹, Sanat Kumar DAS¹, Abhijit CHATTERJEE¹, Soumendra SINGH¹, Arindam ROY¹

AS19-D3-PM1-P-026 | AS19-A029

Glacier Mass Balance During Past 50 Years and Potential Effect Caused by Black Carbon on it on the Laohugou

Glacier No. 12, Western Qilian Mountains

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AS20-D3-PM1-P-020 | AS20-A009

Impacts of Synoptic and Regional Factors on Heat Wave

Events over Southeastern Region of Korea in 2015

Dong Hyuck YOON¹⁺, Gil LEE¹, Ki-Hong MIN^{2,3}, Dong-Hyun CHA^{1‡}

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AS20-D3-PM1-P-021 | AS20-A012

Changes in Tropical Cyclone Activity and Mechanism over the Western North Pacific Under Global Warming Scenario

Ping-Gin CHIU^{1‡+}, Huang-Hsiung HSU¹, Chia-Ying TU²
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AS20-D3-PM1-P-022 | AS20-A021

Gauging Both Linear and Nonlinear Dispersion Properties of

High-Order Numerical Schemes: A 1D Analysis of the

Staggering Choices and Noise Handling

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AS20-D3-PM1-P-023 | AS20-A022

The Effect of Horizontal Resolution and Domain in the

Limited-Area Ensemble System in KMA

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AS20-D3-PM1-P-024 | AS20-A023

Temperature Forecasts by Multi-Model Ensembles over

Guangdong-Hong Kong-Macao Greater Bay Area of China

Guangxin LI^{1;*}, Qinglan LI¹, Hui LI², Kun XIE², Dian HUANG¹, Xiaoxue WANG¹, Liqun SUN¹

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AS20-D3-PM1-P-025 | AS20-A024

Future Projection for Seasonal Precipitation in the Western

North Pacific and East Asia by HiRAM Under Global

Warming

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·Acaaemia Sinica, ·University of Taipei, ·National Oceanic and Atmospheric Administration

AS20-D3-PM1-P-026 | AS20-A031

Climatological Characteristics of Evolution of East Asian

Winter Monsoon with the BCC_CSM1.1 Climate Model

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AS20-D3-PM1-P-027 | AS20-A033

Efficient Data Assimilation for High-Dimensional

Geophysical Systems: A Local Unscented Transform Kalman

Filter

Kwangjae SUNG^{1#}, Hyo-Jong SONG¹, Jeon-Ho KANG¹, Youngsoon JO¹, In-Hyuk KWON¹, Junghan KIM¹, Jung-Eun KIM¹, Tae-Hun KIM¹

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AS20-D3-PM1-P-028 | AS20-A038

Characteristics of Laplacian-Based Hyper-Diffusion

Discretized by Spectral Element Method on Cubed-Sphere

Grid and Applications for High-Resolution Simulation

Suk-Jin CHOI¹⁵⁺, Ja-Rin PARK¹, Hyun-Gyu KANG², Songyou HONG¹

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AS20-D3-PM1-P-029 | AS20-A041

Simulated Climate Extremes and Large-Scale Modes of

Climate Variability: Sensitivity to Model Resolution

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AS22-D3-PM1-P-015 | AS22-A002

Radiative Transfer Effects of Non-Photochemical Quenching

in Ocean

Pengwang ZHAI^{1*}, Emmanuel BOSS², Jeremy WERDELL³, Yongxiang HU⁴, Bryan FRANZ³

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AS22-D3-PM1-P-016 | AS22-A004

Semi-Analytical Optical Model for Open and Coastal Waters Lipi $MUKHERIEE^{1\sharp+}$

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AS22-D3-PM1-P-017 | AS22-A006

Sensitivity Study of VIIRS Aerosol Retrievals to Aerosol

Type, Surface Reflectance and Aerosol Vertical Distribution

Chong LI^{1#+}, Jing LI¹

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AS22-D3-PM1-P-018 | AS22-A008

Polarization Influencing Factors and Their Characteristics in

Ultraviolet and Visible Spectral Region

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Center

AS22-D3-PM1-P-019 | AS22-A010

Aerosol Retrieval Using the Airborne Multiangle

Spectropolarimetric Imager - A Review

Feng XU^{1‡+}, Gerard VAN HARTEN¹, David DINER¹, Anthony DAVIS¹, Olga KALASHNIKOVA¹, Felix SEIDEL¹, Pengwang ZHAI², Oleg DUBOVIK³

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AS22-D3-PM1-P-020 | AS22-A019

Estimating Ground-Level Particulate Matter Concentrations

Using Satellite Observations and Numerical Model Output

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AS22-D3-PM1-P-021 | AS22-A022

Modeling Sub-Pixel Spatial and Spectral Variabilities of

Optically Thin Aerosol Layers with Generalized Radiative

Transfer: Application to Profiling with the Oxygen A-Band

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Comparisons of the Atmospherically-Corrected

DSCOVR/EPIC UV Reflectance of the Ocean with a

Theoretical Model and Aura/OMI Observations

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AS22-D3-PM1-P-023 | AS22-A029

Aerosol Absorption Retrievals from the Pace Broad Spectrum

Ocean Color Instrument (OCI)

Shana MATTOO1*, Lorraine REMER^{2,3+}, Robert LEVY⁴, Pawan GUPTA^{4,5}, Zia Ahmad ZIA AHMAD⁴, J. Vanderlei MARTINS², Omar TORRES⁴, Adriana ROCHA LIMA^{2,6}

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AS22-D3-PM1-P-024 | AS22-A033

Sensitivity of Radiances Observed by OCO-2 in the Oxygen

a Band with Respect to Absorbing Aerosol Properties

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AS27-D3-PM1-P-012 | AS27-A001

Low-Frequency Features of the Typical Extreme Cold Events in China

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AS27-D3-PM1-P-013 | AS27-A012

Impact of Land Surface Data on the Dynamical Downscaling

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AS27-D3-PM1-P-014 | AS27-A014

Understanding of 2C Target Period Diversity in CMIP5

Climate Model Simulations

Hyun-Su JO^{1‡+}, Wenju CAI^{1,2}, Sang-Wook YEH³

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²Ocean University of China and Qingdao National Laboratory for Marine Science and Technology, ³Hanyang University

AS27-D3-PM1-P-015 | AS27-A029

Anomalous Slow Sea Ice Recovery in Fall and Winter 2016 by an Extreme Warming Event in Mid-Latitudes

Lee SANGGYUN^{1‡+}, Jungho IM¹, Hyun-Choel KIM² ¹Ulsan National Institute of Science and Technology, ²Korea Polar

AS28-D3-PM1-P-014 | AS28-A007

About the Interdecadal Change Around the 1998/1999 over

Southeast Asia and Tropical Indo-Pacific Ocean

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AS28-D3-PM1-P-015 | AS28-A008

Seasonal Variation of Precipitation over the Indochina

Peninsula and Associated Changes in Surface Heat Fluxes

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AS28-D3-PM1-P-016 | AS28-A011

Interdecadal Change of the Relationship Between Spring Precipitation over Southern China and Eurasian Snow Cover at the End of 1980s

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AS28-D3-PM1-P-017 | AS28-A012

Interdecadal Changes of the Relationship Between the Eurasian Snow Cover Extent to the Spring SAT over Eastern

Eurasian Continent

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AS28-D3-PM1-P-018 | AS28-A019

Influences of the Solar Activities on the Decadal Variations of the East Asian Summer Monsoon

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AS29-D3-PM1-P-018 | AS29-A005

Difference of Global Warming Impacts on Future Extreme Rainfall Among Weather Patterns

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AS29-D3-PM1-P-019 | AS29-A010

Key Roles of an Explosive Cyclone and the Kuroshio in a Heavy Precipitation Event at Miyake Island, Japan

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AS29-D3-PM1-P-020 | AS29-A013

Decadal Change of Long Persistent Rainfall over Northern

China and the Associated Ocean Conditions

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AS29-D3-PM1-P-021 | AS29-A016

An Analysis on Evolution of Drought-Flood and its Abrupt Alternation in Three-Outlet Region Along Jingjiang Reaches of Yangtze River from 1951 to 2016

Jingbao LI^{1‡}, Guang HAN¹⁺, Rui ZHANG¹
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AS29-D3-PM1-P-022 | AS29-A019

Characteristics of Present and Future Precipitation Simulated by High Resolution MRI-AGCM3.2H Compared with the CMIP5 and AMIP Models

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Prediction of Summer Extreme Precipitation over the Middle

and Lower Reaches of the Yangtze River Basin

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University of Massachusetts

AS29-D3-PM1-P-024 | AS29-A023

Improvement of Extreme Precipitation over South Korea in APHRODITE Data

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AS29-D3-PM1-P-025 | AS29-A025

Modeling of Ming Dynasty Drought Using CESM

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AS29-D3-PM1-P-026 | AS29-A028

Daily Adjustment for the Wind-Induced Precipitation

Undercatch of Daily Gridded Precipitation in Japan

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AS29-D3-PM1-P-027 | AS29-A034

An Impact of Low Vortex Propagated from the West on Heavy Precipitation over the Northern Kyusyu Island, Japan

During the Baiu Season

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AS29-D3-PM1-P-028 | AS29-A035

Restructuring Big Data to Improve Data Access and Performance in Analytic Services Making Research More Efficient for the Study of Extreme Weather Events and

Application User Communities

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AS29-D3-PM1-P-029 | AS29-A036

Dynamical Downscaling Approach on Future Projections of Extreme Precipitation for Asian Countries Under a Changing Climate

Tosiyuki NAKAEGAWA^{1*+}, Hidetaka SASAKI¹, Izuru TAKAYABU², Rui ITO³, Akihiko MURATA¹, Ryo MIZUTA¹, Hirokazu ENDO¹, Hiroaki KAWASE¹, Yukiko IMADA¹, Kohei YOSHIDA¹, Masaya NOSAKA¹, Masayoshi ISHII¹

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AS29-D3-PM1-P-030 | AS29-A040

Correction of End of Day Gap of APHRODITE-2 Rain Gauge

Data Using Geostationary Meteorological Satellites

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AS29-D3-PM1-P-031 | AS29-A043

Spatial and Temporal Characteristics of Extreme

Precipitation in China and the Associated Changes in

Atmospheric Circulations During 1961-2010

Xuqing HAN^{1‡+}, Huiwen XUE², Daren LYU^{3,4}, Yongguang ZHENG¹, Xiaoling ZHANG¹

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AS29-D3-PM1-P-032 | AS29-A046

Effect of Atmospheric Rivers on Heavy Precipitation in Japan Naho SUETO^{1‡+}, Akiyo YATAGAI¹, Yukari TAKAYABU² ¹Hirosaki University, ²The University of Tokyo

AS29-D3-PM1-P-033 | AS29-A053

Climate Change Projection over Thailand by the 5-km Meteorological Research Institute Non-Hydrostatic Regional Climate Model

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AS31-D3-PM1-P-046 | AS31-A001

Direct Measurements of Momentum Flux and Dissipative Heating in the Surface Layer of Tropical Cyclones During Landfalls

Jie MING^{1#+}, Jun ZHANG²
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AS31-D3-PM1-P-047 | AS31-A002

Effect of Uncertainties in Sea Surface Temperature Dataset on the Simulation of Typhoon Nangka (2015)

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AS31-D3-PM1-P-048 | AS31-A009

Observed Rainfall Asymmetry of Tropical Cyclone in the Process of Making Landfall in Guangdong, South China Guanhuan $WEN^{1\pm}$

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AS31-D3-PM1-P-049 | AS31-A011

Sample Optimization of Ensemble Forecast to Simulate Typhoon Hato Based on the Observed Track and Intensity Jihang $LI^{1\sharp +}$

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AS31-D3-PM1-P-050 | AS31-A012

Projection of Near-Future Tropical Cyclone Activity over the Western North Pacific: Reduction in the Total Number of Storms But Increases in Typhoons

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AS31-D3-PM1-P-051 | AS31-A013

The Influence of Topography on Track Simulation of Typhoon Megi (2016) Past Taiwan as Identified by HWRF Dian-Yi LI¹⁺, Ching-Yuang HUANG¹⁺

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AS31-D3-PM1-P-052 | AS31-A018

Potential Impact of Aeroclippers Observation Assimilation for Tropical Cyclone Forecast

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AS31-D3-PM1-P-053 | AS31-A020

Rapid Intensification of Tropical Cyclones in the Context of Solar Wind - Magnetosphere - Ionosphere - Atmosphere Coupling

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The Estimation of Tropical Cyclone Wind Radii in the

Western North Pacific from Global Model Analyses

Hyeji KIM¹+, Il-Ju MOON¹*, Nam-Young KANG², Eun-Jeong CHA², Seong-Hee WON²

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AS31-D3-PM1-P-055 | AS31-A034

Geostationary Satellite-Based Tropical Cyclone Formation

Forecast Models Using Machine Learning Approaches

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AS31-D3-PM1-P-056 | AS31-A039

The Dominant Effect of Environmental Low-Frequency

Vorticity on the Formation of Some Tropical Cyclones in the

Western North Pacific

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AS31-D3-PM1-P-057 | AS31-A040

DeepTC: ConvLSTM Network for Trajectory Prediction of

Tropical Cyclone Using Numerical Model Data

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AS31-D3-PM1-P-058 | AS31-A044

Probabilistic Prediction of Tropical Cyclone Rapid

Intensification by Using the Characteristics of the

Large-Scale Environment and Satellite Images

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AS31-D3-PM1-P-059 | AS31-A047

Differences in Tropical Cyclogenesis in North Pacific

Between the Strong El Nino Years 1997 and 2015 Investigated

by Perpetual July Experiments with NICAM

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AS31-D3-PM1-P-060 | AS31-A050

Ocean Response to Typhoon Hato (2017) over the South

China Sea: Observations and Results from a Coupled Model

Simulation

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Squall-Line-Like Rainband Structures in the Outer

Environment of Tropical Cyclones

Jhang-Shuo LUO $^{1\#}$, Cheng-Ku YU 1 , Che-Yu LIN 1 , Lin-Wen CHENG 1 , Chun-Chieh WU 1 , Ying CHEN 1

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AS31-D3-PM1-P-062 | AS31-A054

Determination of Extratropical Transition Time Using

Various Objective Indicators for the Western North Pacific

Tropical Cyclones

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AS31-D3-PM1-P-063 | AS31-A055

Objective Detections and Evaluations of Western North

Pacific Tropical Cyclones in the Reanalysis Datasets

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AS31-D3-PM1-P-064 | AS31-A062

 $Future\ Changes\ of\ Western\ North\ Pacific\ Tropical\ Cyclone$

Intensity as Inferred from Pseudo Global Warming

Experiments

Jilong CHEN^{15*}, Francis TAM¹, Ziqian WANG², Gabriel LAU¹

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AS31-D3-PM1-P-065 | AS31-A064

Meteorological Factor of Directional Severe Wind in Japan

Yoshikazu KITANO^{1‡+}, Yasuo HATTORI¹, Atsushi HASHIMOTO¹, Naohiro SOUDA¹, Tomomi ISHIKAWA¹ ¹Central Research Institute of Electric Power Industry

AS31-D3-PM1-P-066 | AS31-A068

Net Energy Gain Rate Index for Rapid Intensification of

Tropical Cyclone

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AS31-D3-PM1-P-067 | AS31-A070

Mechanism Study of Tropical Cyclone Impact on East Asian

Subtropical Upper-level Jet: a Numerical Case Investigation

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AS31-D3-PM1-P-068 | AS31-A074

Impact of Cloud Microphysics Schemes on Typhoon Forecast over the Western North Pacific

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AS31-D3-PM1-P-069 | AS31-A079

Dynamical Downscaling of the Typhoon Chanthu with the WRF Model

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AS31-D3-PM1-P-070 | AS31-A081

Statistical Typhoon Climate Model Based on GloSea5 Ensemble Outputs

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AS31-D3-PM1-P-071 | AS31-A083

The Phase Difference of Interdecadal Variability of Tropical Cyclone Activities in the Peak-Season and the Late-Season over the Western North Pacific

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AS31-D3-PM1-P-072 | AS31-A094

Decadal Variation of Atlantic Tropical Cyclones' Location of Lifetime Maximum Intensity

Doo-Sun PARK1+, Chang-Hoi HO2, Hyeong-Seog KIM3+, Il-Ju MOON4, Johnny CHAN5

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AS31-D3-PM1-P-073 | AS31-A100

Exploring the Role of Large-Scale Environmental Flow in Tropical Cyclone Genesis: 10-Year Data Analysis Using the PEEMD

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AS34-D3-PM1-P-021 | AS34-A010

El Niño-East Asian Summer Monsoon Teleconnection and its

Diversity: Simulation and Projection in CMIP5 Models

Peng WANG¹⁺, Francis TAM¹⁺, Kang XU²
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AS34-D3-PM1-P-022 | AS34-A013

A "La Niña-Like" State Occurring in the Second Year After Large Tropical Volcanic Eruptions During the Past 1500 Years

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AS34-D3-PM1-P-023 | AS34-A015

Causes and Predictability of the Negative Indian Ocean

Dipole and its Impact on La Niña During 2016

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¹Bureau of Meteorology

AS34-D3-PM1-P-024 | AS34-A021

Why the 2015/16 El Niño Convection Center was Confined to Niño3.4 Region

Wenxiu ZHONG¹⁺, Wenju CAI^{2,3‡}, Xiao-Tong ZHENG¹
¹Ocean University of China, ²Ocean University of China and
Qingdao National Laboratory for Marine Science and Technology,
³Commonwealth Scientific and Industrial Research Organisation

AS34-D3-PM1-P-025 | AS34-A022

Upper Ocean Heat Budget in the Tropical Western Pacific and an El Niño Precursor

Hyung-Bo KIM^{1‡+}, Sung-Hyun NAM¹
¹Seoul National University

AS34-D3-PM1-P-026 | AS34-A031

Evaluating the Role of Wind Bursts in ENSO Development

Using a Sign Adjusted Wind Power Index

Keri KODAMA1#+, Natalie BURLS2

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AS34-D3-PM1-P-027 | AS34-A033

ENSO Impact on the Arabian Peninsula Summer Rainfall

Variability and Predictability

Muhammad Adnan ABID^{1‡+}, Mansour ALMAZROUI², Fred KUCHARSKI¹, Enda O'BRIEN², Ahmed YOUSEF²

¹International Centre for Theoretical Physics, ²King Abdulaziz
University

AS34-D3-PM1-P-028 | AS34-A034

El Niño and La Niña States with the Associated Oceanic Heat

Transport

Mao-Lin SHEN^{1#+}, Noel KEENLYSIDE¹, Gregory DUANE^{1,2}
¹University of Bergen, ²University of Colorado

AS34-D3-PM1-P-029 | AS34-A037

Distinct Effects of the Two Strong El Niño Events in

2015-2016 and 1997-1998 on the Western North Pacific

Monsoon and Tropical Cyclone Activity: Role of Subtropical

Eastern North Pacific Warm SSTA

Yikai WU^{1#+}, Chi-Cherng HONG², Cheng-Ta CHEN¹
¹National Taiwan Normal University, ²University of Taipei

AS34-D3-PM1-P-030 | AS34-A038

Evaluating ENSO Teleconnections Using Observations and CMIP5 Models

Indrani ROY^{1#+}, Alexandre GAGNON², Devendraa SIINGH³
¹University of Exeter, ²University of West Scotland, ³Indian Institute of Tropical Meteorology

AS35-D3-PM1-P-016 | AS35-A001

Variances in Microphysics Characteristics Associated with

Orographic Airflow in the Pyeongchang

Chia-Lun TSAI $^{1\sharp +}$, Kwonil KIM 1 , Yu-Chieng LIOU 2 , Gyu Won LEE 1 , Cheng-Ku YU 3

¹Kyungpook National University, ²National Central University, ³National Taiwan University

AS35-D3-PM1-P-017 | AS35-A005

Sea Breeze and Precipitation over Hainan Island

Zhaoming LIANG1#+

¹Chinese Academy of Meteorological Sciences

AS35-D3-PM1-P-018 | AS35-A007

Seeder-Feeder Mechanism of Orographic Precipitation

Associated with Typhoon Meari (2011)

Syuan-Ping CHEN1#+, Cheng-Ku YU1

¹National Taiwan University

AS35-D3-PM1-P-019 | AS35-A008

Distributions of the Streamfunction and Velocity Potential in

the Tibetan Plateau Region in China

Jie CAO1,2#+

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AS35-D3-PM1-P-020 | AS35-A019

Improving Rainfall Spatial Prediction Using Spatial

Bayesian Hierarchical Regression in a Mountainous

Watershed: Mae Sa, Northern Thailand

Han TSENG1#+, Russell YOST1, Alan ZIEGLER2

¹University of Hawaii at Manoa, ²National University of Singapore

AS35-D3-PM1-P-021 | AS35-A025

Orographic Precipitation on Oahu with Operational

Forecasting Application

Gavin SHIGESATO $^{1\sharp*}$, Robert BALLARD 2 , Alison D. NUGENT 3

¹University of Hawaii, ²National Weather Service, ³University of Hawaii at Manoa

AS36-D3-PM1-P-012 | AS36-A010

Land-Atmosphere-Ocean Interactions in the Southeastern

Atlantic: Interannual Variability

Xiaoming SUN^{1#+}, Edward VIZY², Kerry COOK²
¹University of Connecticut, ²The University of Texas at Austin

AS36-D3-PM1-P-013 | AS36-A013

Role of the Sea Surface Temperature in the Midlatitude

Atmospheric Circulation Anomalies Associated with Pacific

Decadal Oscillation

Lingfeng TAO $^{1\sharp +}$, Xiu-Qun YANG 1 , Xu-Guang SUN 1 , Jiabei FANG 1

¹Nanjing University

AS37-D3-PM1-P-021 | AS37-A001

A Sea Breeze Parametrization for Improving the Simulation

of Coastal Convection

Martin BERGEMANN $^{1\pm +}$, Christian JAKOB 2 , Boualem KHOUIDER 3

¹University of Melbourne, ²Monash University, ³University of Victoria

AS37-D3-PM1-P-022 | AS37-A004

C-Coupler2: A Flexible and User-Friendly Community

Coupler for Model Coupling and Nesting

Li LIU^{1‡+}, Cheng ZHANG¹, Ruizhe LI¹, Bin WANG^{1,2}
¹Tsinghua University, ²Chinese Academy of Sciences

AS37-D3-PM1-P-023 | AS37-A007

Alleviated Double ITCZ Problem in NCAR CESM1: A New

Cloud Scheme and the Working Mechanisms

Yi QIN1+, Yanluan LIN1#

¹Tsinghua University

AS37-D3-PM1-P-024 | AS37-A011

An Analytical Interpretation of the Simulated Greenhouse

Efficiency in Response to the Change of CO2

Colten PETERSON^{1#+}, Xiuhong CHEN¹, Xianglei HUANG¹ ¹University of Michigan

AS37-D3-PM1-P-025 | AS37-A015

Centennial-Scale Drought Events over Eastern China During the Past 1500 Years Simulated by the CESM

Jian LIU^{1#+}, Weiyi SUN¹
¹Nanjing Normal University

AS37-D3-PM1-P-026 | AS37-A017

Development of the China National Climate Center Climate-Chemistry Model (BCC-CSM-GEOS-Chem): Model Development and Evaluation for Atmospheric Chemistry Component

Xiao LU^{1*+}, Michael LONG², Tongwen WU³, Jun WANG⁴, Daniel JACOB², Lin ZHANG¹

¹Peking University, ²Harvard University, ³China Meteorological

¹Peking University, ²Harvard University, ³China Meteorological Administration, ⁴The University of Iowa

AS37-D3-PM1-P-027 | AS37-A018

Assessing the Cloud Radiative Forcing Simulation over Eastern China by CFMIP Models with Multi-Satellite Observations

Yuxi WANG¹⁺, Zhaohui LIN^{1‡}, Xiaohong LIU^{1,2}
¹Chinese Academy of Sciences, ²University of Wyoming

AS37-D3-PM1-P-028 | AS37-A025

Towards a Powerful Tool to Manage Large Amount of Data and Analysis of CMIP

Thomas SCHARTNER¹⁵⁺, Sebastian ILLING¹, Christopher KADOW¹, Ingo KIRCHNER¹, Uwe ULBRICH¹
¹Free University of Berlin

AS37-D3-PM1-P-029 | AS37-A034

The Effect of Different Spectral Shape Parameterizations of Cloud Droplet Size Distribution on First and Second Aerosol Indirect Effects in NACR CAM5 and Evaluation with Satellite Data

Minqi WANG^{1#+}, Yiran PENG¹, Xiaoning XIE², Yangang LIU³
¹Tsinghua University, ²Institute of Earth Environment, Chinese
Academy of Sciences, ³Brookhaven National Laboratory

AS39-D3-PM1-P-008 | AS39-A004

Stable Isotopes in Precipitation over Indonesia Simulated by

Using Regional Isotope Circulation Model

Kimpei ICHIYANAGI^{1,2s+}, Masahiro TANOUE³, Halda Aditya BELGAMAN^{1,4}, Rusmawan SUWARMAN⁵, Kei YOSHIMURA³ ¹Kumamoto University, ²Japan Agency for Marine-Earth Science and Technology, ³The University of Tokyo, ⁴Agency for Assessment and Application of Technology (BPPT), ⁵Bandung Institute of Technology

AS39-D3-PM1-P-009 | AS39-A007

A Study of Gravity Wave Activities Based on Intensive Radiosonde Observations at Bengkulu During YMC-Sumatra 2017

Takenari KINOSHITA¹²⁺, Ryuichi SHIROOKA¹, Junko SUZUKI¹, Shin-Ya OGINO^{1,2}, Suginori IWASAKI³, Kunio YONEYAMA¹, Urip HARYOKO⁴, Dodi ARDIANSYAH⁴, Diah ALYUDIN⁴

¹Japan Agency for Marine-Earth Science and Technology, ²Kobe University, ³National Defense Academy, ⁴Indonesian Agency for Meteorology, Climatology and Geophysics

AS39-D3-PM1-P-010 | AS39-A009

Fresh Water Flux and its Possible Impact to the Oceanic Stratification: Outline and Preliminary Results from YMC-Sumatra 2017 Field Campaign Using Instruments Onboard R/V Mirai, Wave Glider and M-Triton Buoy Masaki KATSUMATA¹⁵⁺, Biao GENG¹, Iwao UEKI¹, Makito YOKOTA¹, Takanori HORII¹, Satoru YOKOI¹

¹Japan Agency for Marine-Earth Science and Technology

AS46-D3-PM1-P-012 | AS46-A004

Global Floods and Their Connections with the El Niño-Southern Oscillation During the TRMM/GPM Era Huan WU^{1‡+}, Yan YAN¹ ¹Sun Yat-sen University

AS46-D3-PM1-P-013 | AS46-A009

Development of Local Monthly Weighted Mean
Temperature Model for Estimating of Highly Accurate GPS
Water Vapor

Dongseob SONG^{1#+}
¹Kangwon National University

AS46-D3-PM1-P-014 | AS46-A010

Taiwan Radio Occultation Process System (TROPS)
Cheng -Yung HUANG^{1‡}, Wen-Hao YEH^{1‡}, Tzu-Pang TSENG²,
Linton CHEN¹

¹National Space Organization, ²National Central University

AS46-D3-PM1-P-015 | AS46-A011 (Invited)

Global Precipitation Product Access at NASA GES DISC Dana OSTRENGA^{1‡+}, Zhong LIU², Bruce VOLLMER³, Andrey SAVTCHENKO¹, David MEYER³

¹NASA Goddard Space Flight Center/ Adnet Systems Inc, ²George Mason University/ Center for Spatial Information Science and Systems/ NASA Goddard Space Flight Center, ³NASA Goddard Space Flight Center AS46-D3-PM1-P-016 | AS46-A012

Relationships Between Maximum Flash Counts, Extreme Rain Rate and System Size of Tropical Thunderstorm Systems

Hong Wen JIAN^{1#+}, Wei-Ting CHEN¹
¹National Taiwan University

AS46-D3-PM1-P-017 | AS46-A021 (Invited)

Satellite and Model Analysis of Short-Term Characteristics

Related with Convective Activity over Tropical Oceans

Kaya KANEMARU¹#+, Masaki SATOH¹

¹The University of Tokyo

AS48-D3-PM1-P-007 | AS48-A004

Role of the Walker Circulation Variability in Seasonal

Predictability over the Circum-Indian Ocean

Daehyun KANG1#+, Myong-In LEE1

¹Ulsan National Institute of Science and Technology

AS48-D3-PM1-P-008 | AS48-A005

Multi-Year Prediction of Climate, Drought, and Wildfire in

Southwestern North America Using CESM

Yoshimitsu CHIKAMOTO^{1‡+}, Axel TIMMERMANN², Matthew WIDLANSKY³, Magdalena BALMASEDA⁴, Lowell STOTT⁵
¹Utah State University, ²Pusan National University, ³University of Hawaii, ⁴European Centre for Medium-Range Weather Forecasts, ⁵University of Southern California

AS48-D3-PM1-P-009 | AS48-A007

Impacts of Climatological Variation on the Production of

Soybean over Northeast China

Dongmin KIM1#+, Myong-In LEE1

¹Ulsan National Institute of Science and Technology

AS48-D3-PM1-P-010 | AS48-A012

Ocean Impacts on Australian Multi-Year Drought

Predictability

Zachary JOHNSON $^{1\sharp *}$, Jing-Jia LUO 2 , Yoshimitsu CHIKAMOTO 1

¹Utah State University, ²Australian Bureau of Meteorology

AS48-D3-PM1-P-011 | AS48-A013

Prediction Capability of a New APCC In-House Model

(SCoPS): Climate Variability, Inter-Basin Relationship, and

Energy Cycle

Seon Tae KIM¹#+, Ji-Hyun OH¹, Yun-Young LEE¹, Won-Moo KIM¹, A-Young LIM¹

¹APEC Climate Center

AS48-D3-PM1-P-012 | AS48-A014

What Drives the Decadal Variation of Global Land Monsoon

Precipitation over the Past 50 Years?

Zhang YANFANG¹+, Yan GUO¹+, Wenjie DONG², Chunxiang

¹Beijing Normal University, ²Sun Yat-sen University, ³Chinese Academy of Sciences

AS48-D3-PM1-P-013 | AS48-A015

Multi-Year Predictability of Total Soil Water, Drought, and

Wildfire over the Globe

June-Yi LEE^{1#+}, Axel TIMMERMANN^{1,2}, Yoshimitsu

CHIKAMOTO3

¹Pusan National University, ²IBS Center for Climate Physics, ³Utah

State University

AS49-D3-PM1-P-013 | AS49-A002

Comparative Analysis on Environmental Conditions and

Mesoscale Features of Two Short-Time Heavy Rainfall

Events

Shuzhen NIU1#+

¹Henan Meteorological Observatory

AS49-D3-PM1-P-014 | AS49-A004

Comparative Analysis of Structure Characteristics of MCC

Between the Spring and the Summer over the Yellow River

Midstream

Guixiang ZHAO1#+

¹Shanxi Meteorological Observatory

AS49-D3-PM1-P-015 | AS49-A007

Precipitation and Airflow Structures of ARC-Shaped Radar

Echoes Along Outer Tropical Cyclone Rainbands Seen from

Radar Observations

Chia-Lun TSAI1#+, Gyu Won LEE1, Cheng-Ku YU2

¹Kyungpook National University, ²National Taiwan University

AS49-D3-PM1-P-016 | AS49-A012

Relationship Between Convective Bursts and the Rapid

Intensification of Typhoon Mujigae (2015)

Fan PING1#+

¹Chinese Academy of Sciences

AS49-D3-PM1-P-017 | AS49-A017

Estimation of Anthropogenic Heat Emissions and its Impact

Factors in Beijing

Bei $HUANG^{1\#+}$, Guangheng NI^1

¹Tsinghua University

AS49-D3-PM1-P-018 | AS49-A021

Application of Non-Traditional Observations in Numerical Model to Improve the Typhoon Heavy Precipitation Forecast over Taiwan Area

Ling-Feng HSIAO¹, Jia-Chyi LIOU¹, Chin-Cheng TSAI^{1*+}, Yu-Chun CHEN¹, Der Song CHEN², Tien-Chiang YEH²
¹Taiwan Typhoon and Flood Research Institute, ²Central Weather Bureau

AS49-D3-PM1-P-019 | AS49-A022

Genesis and Development Processes of a Quasi-Stationary

Linear MCS in the Lee of Taiwan Island

Tetsuya KAWANO¹⁵⁺, Toru MATOBA¹, Ryuichi KAWAMURA¹

¹Kyushu University

AS49-D3-PM1-P-020 | AS49-A025

Temporary Variation of Surface Air Temperature and Atmospheric Pressure Under Convective Clouds in Winter Monsoon

Kenji BABA^{1#+}, Hiroshi UYEDA²
¹Rakuno Gakuen University, ²Nagoya University

AS49-D3-PM1-P-021 | AS49-A027

Impact of the Land-Sea Temperature Contrast on the Snowfall Structure over the Western Coastal Region of the Korean Peninsula

Namgu YEO¹⁺, Eun-Chul CHANG^{1‡} ¹Kongju National University

AS49-D3-PM1-P-022 | AS49-A029

A Study on Factors Affecting Snowfall Structure over the

Daegwallyeong Region

Byeong-Hun HWANG¹⁺, Eun-Chul CHANG^{1‡}
¹Kongju National University

AS49-D3-PM1-P-023 | AS49-A030

Summer Thunderstorm Reproducibility by Numerical Weather Prediction with Sub-Kilometer Horizontal

Resolution

Syugo HAYASHI^{1#+}
¹Japan Meteorological Agency

AS49-D3-PM1-P-024 | AS49-A034

Ontario Winter Lake-Effect Systems (OWLeS): Misovortex characteristics in Long-Lake-Axis-Parallel Snowbands Karen KOSIBA^{1‡+}, Joshua WURMAN¹

¹Center for Severe Weather Research

AS54-D3-PM1-P-020 | AS54-A008

Interpretation of Spaceborne Energy Flux for Arctic Climate Sensitivity

¹Ewha Womans University, ²Jet Propulsion Laboratory, California Institute of Technology

AS54-D3-PM1-P-021 | AS54-A014

Cloud Measurement with All-Sky Camera System for Investigating Long-Term Variability of Cloud Properties at South Pole

Masataka SHIOBARA¹**, Masanori YABUKI²

¹National Institute of Polar Research, ²Kyoto University

AS54-D3-PM1-P-022 | AS54-A015

The Effects of Wind-Generated Oceanic Aerosols on Tropical Cyclone

Yi-Chiu LIN1#+, Jen-Ping CHEN2

¹Taiwan Typhoon and Flood Institute, ²National Taiwan University

AS54-D3-PM1-P-023 | AS54-A017

The Forest Fire Emission and its Injection Height Impacts on the Aerosol Transport in September 2016 Simulated with the NICAM-SPRINTARS

Yousuke YAMASHITA¹, Masayuki TAKIGAWA¹, Daisuke GOTO², Hisashi YASHIRO³, Masaki SATOH⁴

¹Japan Agency for Marine-Earth Science and Technology, ²National Institute for Environmental Studies, ³RIKEN Advanced Institute for Computational Science, ⁴The University of Tokyo

AS54-D3-PM1-P-024 | AS54-A019

Radiative Absorption Enhancement of the East Asian

Aerosol Mixtures

Pengfei TIAN^{1#+}
¹Lanzhou University

AS54-D3-PM1-P-025 | AS54-A021

Assessment and Control for Oil Aerosol

Chane-Yu LAI¹#, Xiang-Yu HUANG²+

¹Chung Shan Medical University, ²Department of Occupational Safety and Health

AS54-D3-PM1-P-026 | AS54-A023

Modelling Ice Microphysics and Aerosol-Cloud Interactions in Mixed-Phase Clouds

Jaakko AHOLA^{1#}, Tomi RAATIKAINEN¹, Juha TONTTILA¹, Sami ROMAKKANIEMI¹, Harri KOKKOLA¹, Hannele KORHONEN¹

¹Finnish Meteorological Institute

AS54-D3-PM1-P-027 | AS54-A025

Fingerprint of Climate Response to Anthropogenic Aerosol Forcing

Hai WANG^{1±+}, Shang-Ping XIE², Qinyu LIU¹
¹Ocean University of China, ²University of California San Diego

AS54-D3-PM1-P-028 | AS54-A032

Simulation of Optical Property and Radiative Forcing of Brown Carbon in Radiative Model and Validation with In-Situ Measurements

Lulu XU1*+, Yiran PENG1, Kirpa RAM2, Yanlin ZHANG3, Mengying BAO3

¹Tsinghua University, ²Banaras Hindu University, ³Nanjing University of Information Science & Technology

AS54-D3-PM1-P-029 | AS54-A041

Evaluate Autoconversion and Accretion Enhancement Factors in GCM Warm-Rain Parameterizations Using Metrices from Ground-Based Measurements at the Azores

Peng WU¹, Xiquan DONG^{1#+}, Baike XI¹, Zhibo ZHANG²
¹University of Arizona, ²University of Maryland, Baltimore County

AS55-D3-PM1-P-012 | AS55-A009

Characteristics of the Turbulence in the Stable Boundary Layer over Complex Terrain of the Loess Plateau, China Jiening LIANG¹²⁺ ¹Lanzhou University

AS55-D3-PM1-P-013 | AS55-A020

A First Look on Cloud Homogeneity from Calipso Charles TREPTE^{1‡+} ¹NASA Langley Research Center

BG Poster Presentations

Wed - 06 Jun, 13:30 - 15:30 | Ballroom B

BG01-D3-PM1-P-011 | BG01-A004

Diversity of Nitrogen Fixing Bacterial Communities in the Coastal Sediments of South Eastern Arabian Sea (SEAS)

Mohamed Hatha A. A. 1 , Jabir THAJUDEEN $^{1+}$, Vipindas T. V. 1 , Jesmi YOUSUF 1

¹Cochin University of Science and Technology

BG01-D3-PM1-P-012 | BG01-A005

The Flux Estimation of Dissolved Organic Carbon from Subtropical Small Mountainous Rivers During Typhoon and Non-Typhoon Periods in Taiwan

Tsung-Yu LEE^{1‡+}, Li-Chin LEE², Jr-Chuan HUANG²
¹National Taiwan Normal University, ²National Taiwan University

BG01-D3-PM1-P-013 | BG01-A006

Intercomparison of Two Cavity Ring-Down Spectroscopy Analyzers for Atmospheric 13CO2/12CO2 Measurement Jiaping $PANG^{1\pm}$

¹Chinese Academy of Sciences

BG01-D3-PM1-P-014 | BG01-A008

Patterns and Environmental Controls of Soil Organic Carbon and Total Nitrogen in Alpine Ecosystems of Northwestern China

Longfei CHEN1#+

¹Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences

BG01-D3-PM1-P-015 | BG01-A011

Agricultural Nitrogen Emissions in Response to Historical Shifts (1980s-2010s) of Fertilizer Application in the Taihu Lake Basin

Hengpeng LI^{1‡+}, Yaqin DIAO², Guishan YANG²
¹Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences, ²Chinese Academy of Sciences

BG01-D3-PM1-P-016 | BG01-A018

Kinetics of Coenzyme F430 Degradation for Application as a Biomarker of Methane Production and Consumption $Masanori~KANEKO^{1\#}$

¹National Institute of Advanced Industrial Science and Technology

BG01-D3-PM1-P-017 | BG01-A019

The Impacts of Nitrogen Dynamics on Plant Growth and Carbon and Water Balances: An Investigation Using

Noah-MP-CN

Jingjing LIANG1#+, Zong-Liang YANG2

¹Chinese Academy of Sciences, ²The University of Texas at Austin

BG01-D3-PM1-P-018 | BG01-A023

Methane and Nitrous Oxide Emissions from Ratoon Rice Fields

Jing MA 1z , Kaifu SONG 1 , Haiyang YU 1 , Guangbin ZHANG 1 , Hua XU 1

¹Chinese Academy of Sciences

BG02-IG-D3-PM1-P-012 | BG02-IG-A004

Habitat Suitability Empirical Model of Albacore Tuna in the North Pacific Ocean Using Multi-Satellite Remote Sensing Data

Ming-An LEE1#+

¹National Taiwan Ocean University

BG02-IG-D3-PM1-P-013 | BG02-IG-A005

Modelling of Winter Potential Fishing Zones for Grey Mullet (Mugil Cephalus L.) Based on IPCC Climate Scenarios in the Northwestern Pacific

Ming-An LEE1#+

¹National Taiwan Ocean University

BG02-IG-D3-PM1-P-014 | BG02-IG-A009

A Simple Method for Correcting the Blooming Effect in DMSP-OLS Images

Xin CAO $^{\mbox{\tiny 15+}},$ Yang $HU^{\mbox{\tiny 1}},$ Xuehong CHEN $^{\mbox{\tiny 1}},$ Jin CHEN $^{\mbox{\tiny 1}},$ Fang FANG $^{\mbox{\tiny 1}}$

¹Beijing Normal University

BG02-IG-D3-PM1-P-015 | BG02-IG-A012

New Insights into the Role of Below-Ground Competition in

Above-Ground Self-Thinning Pattern of Shrub

Xihong CUI^{1‡+}, Xin CAO¹, Jin CHEN¹, Xuehong CHEN¹
¹Beijing Normal University

BG02-IG-D3-PM1-P-016 | BG02-IG-A021

On Operational Monitoring of Water Quality Parameters by Satellite Remote Sensing in a Turbid Inland Lake of Japan Wei YANG^{1‡+}, Bunkei MATSUSHITA², Akihiko KONDOH¹ ¹Chiba University, ²University of Tsukuba BG02-IG-D3-PM1-P-017 | BG02-IG-A022

Spatial Differences of Long-Term Changes of Chlorophyll-A and Red Tide Events in the Taiwan Strait in Spring

Caiyun ZHANG1#+

¹Xiamen University

BG02-IG-D3-PM1-P-018 | BG02-IG-A025

Spatio-Temporal Characteristics of NO2 in Africa and Typical Urban Agglomerations Under the Anthropogenic

Influences Analysis Based on OMI Data

Oun GAO1#+

¹Chinese Academy of Sciences

BG03-IG-D3-PM1-P-008 | BG03-IG-A004

Adjoint Analysis on High CH4 Mole Fractions Observed by Aircraft

Yosuke NIWA¹**, T. MACHIDA¹, Yousuke SAWA², Taku UMEZAWA¹, Kazuhiro TSUBOI², Kazuyuki SAITO², Hidekazu MATSUEDA², Nobuko SAIGUSA¹

¹National Institute for Environmental Studies, ²Japan Meteorological Agency

BG03-IG-D3-PM1-P-009 | BG03-IG-A006

Carbon Dioxide (CO2) Flux Seasonality and Monsoon in the

Indian Subcontinent

Prabir PATRA^{1,2*}, Pramit DEB BURMAN³, Chandra Shekhar JHA⁴, Supriyo CHAKRABORTY³, Dipankar SARMA⁵, Kireet KUMAR⁶, Sandipan MUKHERJEE⁶

¹Japan Agency for Marine-Earth Science and Technology, ²Tohoku University, ³Indian Institute of Tropical Meteorology, ⁴Indian Space Research Organisation, ⁵Tezpur University, ⁶G.B. Pant National Institute of Himalayan Environment and Sustainable Development

BG04-D3-PM1-P-018 | BG04-A006

Implications of Overestimated Anthropogenic CO2 Emissions on East Asian and Global Land CO2 Flux

Inversions

Tazu SAEKI1#+, Prabir PATRA2,3

¹National Institute for Environmental Studies, ²Japan Agency for Marine-Earth Science and Technology, ³Tohoku University

BG04-D3-PM1-P-019 | BG04-A008

Plant Regrowth as a Driver of Recent Enhancement of

Terrestrial Carbon Uptake

Masayuki KONDO^{1,‡+}, Kazuhito ICHII¹, Prabir PATRA^{2,3}, Benjamin POULTER⁴, Leonardo CALLE⁵

¹Chiba University, ²Japan Agency for Marine-Earth Science and Technology, ³Tohoku University, ⁴NASA Goddard Space Flight Center, ⁵Montana State University BG04-D3-PM1-P-020 | BG04-A014

Teleconnection Based Terrestrial Carbon Cycle Forecasting and Attribution System

Benjamin POULTER¹*, Lesley OTT¹, Ashley BALLANTYNE², Philippe CIAIS³, Ana BASTOS³, Abhishek CHATTERJEE⁴, Stephen SITCH⁵, Leonardo CALLE6*

¹National Aeronautics and Space Administration, ²University of Montana, ³Institut Pierre Simon Laplace, ⁴NASA Goddard Space Flight Center, ⁵University of Exeter, ⁶Montana State University

BG04-D3-PM1-P-021 | BG04-A015

Detecting Vegetation Changes Induced by Afforestation in China Using Multiple Satellite Products

Kazuhito ICHII $^{1,2\sharp+}$, Yuji YANAGI 3 , Jingfeng XIAO 4 , Masayuki KONDO 1

¹Chiba University, ²National Institute for Environmental Studies, ³Japan Agency for Marine-Earth Science and Technology, ⁴University of New Hampshire

BG04-D3-PM1-P-022 | BG04-A017

Global Terrestrial Carbon Budget Simulated by VISIT Model

Etsushi KATO^{1#+}

¹Institute of Applied Energy

BG05-SE-D3-PM1-P-009 | BG05-SE-A009 (Invited)

Remotely Measuring the Potential Link Between Vegetation

Health and Extent, and Diffuse Soil Gas Emissions Using

HyspIRI-Like Data at Kilauea Volcano, Hawaii

Chad D. DEERING^{1‡+}, Isabella MARIOTTO², Christie TORRES¹
¹Michigan Tech University, ²University of New Mexico

BG06-AS-D3-PM1-P-017 | BG06-AS-A006

The Improvement of Using Aerosol Information from

CAPI/Tansat Nadir Observation in CO2 Retrieval

Xi CHEN^{1±+}, Dongxu YANG², Yi LIU¹, Zhaonan CAI¹
¹Chinese Academy of Sciences, ²Institute of Atmospheric Physics,
Chinese Academy of Sciences

BG06-AS-D3-PM1-P-018 | BG06-AS-A008

Diurnal and Seasonal Variations of Carbon Dioxide

Concentration and Flux Between Tidal Flat and Atmosphere at the Hampyeong Bay

V II (01# P II

Yoon Hwan $SO^{1z+},$ Dong Hwan KANG¹, Byung Hyuk KWON¹, II-Kyu KIM¹

¹Pukyong National University

BG06-AS-D3-PM1-P-019 | BG06-AS-A013

The Proposal for the Next Generation Tansat

Maohua WANG1#+, Lin QIU2

¹Chinese Academy of Sciences, ²Shanghai Advanced Research Institute, Chinese Academy of Sciences BG06-AS-D3-PM1-P-020 | BG06-AS-A021

Inversion Systems for Surface CO2 and CH4 Flux Estimates in GOSAT/GOSAT-2 Projects

Makoto SAITO^{1*+}, Tazu SAEKI¹, Richao CONG¹, Tatsuya MIYAUCHI¹, Tsuneo MATSUNAGA¹, Shamil MAKSYUTOV¹ ¹National Institute for Environmental Studies

BG06-AS-D3-PM1-P-021 | BG06-AS-A022

Greenhouse Emission from Manure Management at California Dairies: Linking Observations Across Scales for Improved Understanding of Emissions

Francesca HOPKINS1#+

¹University of California, Riverside

BG06-AS-D3-PM1-P-022 | BG06-AS-A024

Carbon Balance of Two Different Cropping Systems over a Paddy Field in South Korea

Yongseok KIM¹⁺, Kyo-Moon SHIM¹⁺, Myung-Pyo JUNG¹, Kee-Kyung KANG¹

¹National Institute of Agricultural Sciences

BG06-AS-D3-PM1-P-023 | BG06-AS-A025

X_CO2 Retrieval Using the Yonsei Carbon Retrieval Algorithm

Jaemin HONG^{1±+}, Jhoon KIM¹, Yeonjin JUNG², Woogyung KIM³, Hartmut BOESCH⁴, Tae-Young GOO⁵, Ja-Ho KOO¹

¹Yonsei University, ²Harvard-Smithsonian Center for Astrophysics,
³NASA Goddard Space Flight Center, ⁴University of Leicester,
⁵Korea Meteorological Administration

BG07-D3-PM1-P-005 | BG07-A001

Arsenic Binding Characteristics to Humic Substances in the Organic Sediments

Junko HARA1#+

¹National Institute of Advanced Industrial Science and Technology

BG08-IG-D3-PM1-P-005 | BG08-IG-A003

Optimized Fertigation Maintains High Crop Yield and Mitigates N2O and NO Emissions in a Wheat/Maize Cropping System

Xin ZHANG¹⁺, Guangmin XIAO¹, Wenliang WU¹, Hu LI², Ligang WANG², Fanqiao MENG^{1‡}

 ${\it ^1China\ Agricultural\ University,\ ^2Chinese\ Academy\ of\ Agricultural}$

BG08-IG-D3-PM1-P-006 | BG08-IG-A004

Microbial Diversity and Community Structure of

Sulfate-Reducing and Sulfur-Oxidizing Bacteria in Sediment

Cores from the East China Sea

Yu ZHEN1#+

¹Ocean University of China

BG08-IG-D3-PM1-P-007 | BG08-IG-A007

Shifts in Stream Hydrochemistry in Responses to Typhoon and Non-Typhoon Precipitation

Chung-Te CHANG $^{1\sharp*}$, Jr-Chuan HUANG 1 , Lixin WANG 2 , Teng-Chiu LIN 3

¹National Taiwan University, ²Indiana University-Purdue University Indianapolis, ³National Taiwan Normal University

BG08-IG-D3-PM1-P-008 | BG08-IG-A010

Structure Analysis of Amino Acid Polymer Synthesized from

an Amino Acid Precursor

Miho SASE^{1#+}, Hajime MITA¹
¹Fukuoka Institute of Technology

BG08-IG-D3-PM1-P-009 | BG08-IG-A013

Analysis of Moor Hot Spring

Saori MIKURIYA^{1#+}, Hajime MITA¹
¹Fukuoka Institute of Technology

BG08-IG-D3-PM1-P-010 | BG08-IG-A014

A Biosynthetic and Metabolic Perspective of Stable Isotopic

Fractionation in Food Webs

Yuko TAKIZAWA 15+, Yoshito CHIKARAISHI 1 $^1 Hokkaido\ University$

BG08-IG-D3-PM1-P-011 | BG08-IG-A015

Is Isotopic Fractionation in Carbon Isotopes Coupling with

that in Nitrogen Isotopes in Food Webs?

Yoshito CHIKARAISHI^{1‡+}, Yuko TAKIZAWA¹ ¹Hokkaido University</sup>

BG10-IG-D3-PM1-P-007 | BG10-IG-A004

Assessing Global Phosphorus Losses from Major Crop

 $Cultivations\ with\ an\ Integrative\ Crop-Soil-Management$

Perspective

Wenfeng LIU1#+, Hong YANG1

¹Swiss Federal Institute of Aquatic Science and Technology

BG10-IG-D3-PM1-P-008 | BG10-IG-A010

Tibetan Plateau Permafrost Carbon Change of the Past 40

Years

Duoying JI^{1#+}, Wenbin SUN¹
¹Beijing Normal University

BG10-IG-D3-PM1-P-009 | BG10-IG-A011

Impacts of Sulfate Geoengineering on Terrestrial Carbon

Cycle and its Climate Sensitivities

Qian ZHANG¹, Duoying JI^{1#+}
¹Beijing Normal University

BG10-IG-D3-PM1-P-010 | BG10-IG-A015

Long-Term Response of Oceanic Carbon Uptake to Global

Warming via Physical and Biological Pumps

Akitomo YAMAMOTO 15+, Ayako ABE-OUCHI², Yasuhiro YAMANAKA³

¹Japan Agency for Marine-Earth Science and Technology, ²The University of Tokyo, ³Hokkaido University

Presentations 7 JUN, 2018 THURSDAY

Day 4 - 07 Jun 2018, Thursday Program Overview

07 Jun 2018, Thursday				
Time / Room	AM1	AM2	PM1	PM2
	08:30 - 10:30	11:00 - 12:30	13:30 - 15:30	16:00 - 18:00
MR301	HS22 (p301)	HS22 (p301)	HS22 (p302)	HS22 (p302)
MR302A	ST04 (p324)	ST04 (p325)	ST04 (p325)	ST12-23 (p328)
MR302B	AS41 (p286)	AS41 (p287)	AS41 (p287)	AS01 (p278)
MR303A	AS42 (p288)	AS42 (p289)	AS50 (p291)	AS50 (p292)
MR303B	AS43-44 (p289)	AS43-44 (p290)	AS23 (p284)	AS23 (p285)
MR304A	PS03 (p312)	PS03 (p312)	PS03 (p313)	PS08 (p316)
MR304B	BG04 (p295)	BG04 (p296)	BG04 (p296)	SS10 (p323)
MR314	SE25-40 (p319)	KL-SE (p13), DL-SE (p8)		SE32 (p319)
MR317A	ST-PS15 (p328)	ST09 (p327)	ST-PS15 (p329)	ST-PS15 (p330)
MR317B	OS24 (p311)	HS08 (p297)	HS20 (p300)	OS08 (p309)
MR318A	HS33 (p304)	HS27 (p303)	HS14 (p299)	HS14 (p300)
MR318B	HS13 (p298)	HS13 (p298)	HS13 (p299)	HS31 (p303)
MR319A	AS30 (p285)	AS30 (p286)	AS45 (p290)	AS45 (p291)
MR319B			SS07 (p322)	SE05 (p318)
MR321A	SE41-33 (p321)			SE41-33 (p322)
MR321B	SE38 (p320)			SE38 (p320)
MR322A	OS10 (p310)		BG03-IG (p294)	BG08-IG (p297)
MR322B	IG20 (p307)	IG21 (p308)	IG16-BG (p306)	IG16-BG (p307)
MR323A	IG02 (p305)	IG25 (p308)	IG02 (p305)	IG02 (p306)
MR323B	PS07 (p314)	PS13 (p317)	PS07 (p314)	PS07 (p315)
MR323C	ST07 (p326)	ST07 (p327)	ST02 (p323)	ST02 (p323)
MR324	OS09 (p309)	KL-OS (p11), DL-OS (p7)		OS09 (p310)
MR325A	AS05 (p280)	AS05 (p281)	AS05 (p281)	AS05 (p282)
MR325B	AS03 (p278)	AS04 (p279)	AS04 (p279)	AS04 (p280)
MR326A	AS07 (p282)	AS21 (p283)	AS21 (p284)	AS18-02-OS (p283)
MR326B	AS56 (p293)	AS56 (p293)	AS56 (p294)	AS51 (p292)
Ballroom B			SE Posters (p341)	
			OS Posters (p331)	

Sessions & Conveners

* Main Convener

AS01-Regional Climate Modelling: Science and Applications

*Srivatsan RAGHAVAN National University of Singapore, Ming Tue VU Clemson University

AS03-Multi-scale Climate Variability Over Asia and Surrounding Oceans

*Tim LI University of Hawaii, Renhe ZHANG Fudan University, Tomoe NASUNO Japan Agency for Marine-Earth Science and Technology, Jong-Seong KUG Pohang University of Science and Technology, Song YANG Sun Yat-sen University

AS04-Atmospheric Chemistry in Highly Polluted

Environments: Emissions, Fate, and Impacts

*Jianlin HU Nanjing University of Information Science & Technology, Hongliang ZHANG Louisiana State University, Sri H. KOTA Indian Institute of Technology Guwahati, Qi YING Texas A and M University

AS05-The Science and Prediction of Heavy Rainfall and Floods

*Yali LUO Chinese Academy of Meteorological Sciences, Johnny CHAN City University of Hong Kong

AS07-Behavior of Monsoon in the Current and Future

Climate: Comparisons Among Different Monsoon Regions

*Wen CHEN Chinese Academy of Sciences, Congwen ZHU Chinese Academy of Meteorological Sciences, Lin WANG Chinese Academy of Sciences, Patama SINGHRUCK Chulalongkorn University, Hirokazu ENDO Japan Meteorological Agency

AS18-02-OS-Climate Change, Tropical Climatic Hazards in

Asia Oceania and Societal Applications of Atmospheric and

Oceanic Regional Models

*Venkata Ratnam JAYANTHI Japan Agency for Marine-Earth Science and Technology, Toru MIYAMA Japan Agency for Marine-Earth Science and Technology, Jaiho OH Pukyong National University, Satyaban B. RATNA University of East Anglia, Yuriy KULESHOV Bureau of Meteorology

AS21-Sub-seasonal to Seasonal Forecasting of High-impact

Weather and Climate Events

*Yuhei TAKAYA Meteorological Research Institute, Hyun-Suk KANG Korea Meteorological Administration, Hai LIN Environment and Climate Change Canada, Mio MATSUEDA University of Tsukuba

AS23-Observation, Modeling, Theory and Climatology of

Mesoscale Processes

*Qinghong ZHANG Peking University, Yu DU Sun Yat-sen University, Yileng CHEN University of Hawaii at Manoa, United States

AS30-Passive and Active Remote Sensing of the Chemistry

and Dynamics of the Middle and Upper Atmosphere

*Patrick ESPY Norwegian University of Science and Technology, Iain REID ATRAD Pty Ltd, Jeng-Hwa YEE The Johns Hopkins University Applied Physics Laboratory

AS41-Extreme Weather Resiliency: Prediction and Response

Strategies

*Everette JOSEPH University at Albany, State University of New York, Pay-Liam LIN National Central University

AS42-Satellite Data Assimilation and Applications for the

Weather Forecasting and Climate Study

*Kozo OKAMOTO Japan Meteorological Agency, Myoung Hwan AHN Ewha Womans University, Chian-Yi LIU National Central University, Chu-Yong CHUNG Korea Meteorological Administration

AS43-44-Atmospheric Blocking and Improvement of Earth System Modeling

*Joong-Bae AHN Pusan National University, Vladimir KRYJOV Hydrometcenter of Russia, Wei-Liang LEE Academia Sinica, Masahiro WATANABE The University of Tokyo, Hsi-Yen MA Lawrence Livermore National Laboratory

AS45- Middle Atmosphere Science

*S. K. DHAKA University of Delhi, Shigeo YODEN Kyoto University, Zeyu CHEN Chinese Academy of Sciences, Hye-Yeong CHUN Yonsei University

AS50-Interactions Between Indo-pacific Ocean and Asian

Monsoon

*Jianping LI Beijing Normal University, Jianping LI Beijing Normal University, Yimin LIU Chinese Academy of Sciences, Ruiqiang DING Chinese Academy of Sciences, Yun QIU Third Institute of Oceanography, State Oceanic Administration, Lin LIU State Oceanic Administration

AS51-Frontiers and Challenges in the Applications of

Radiative Transfer

*Xianglei HUANG University of Michigan, Wei-Liang LEE Academia Sinica, Daniel FELDMAN Lawrence Berkeley National Laboratory

AS56-Haze: Chemistry, Physics, Meteorology, Emissions,

Climate, Processing, Fog, and More. Looking Across Spatial

Scales from Regional to Global

*Jason COHEN Sun Yat-sen University, Yun QIAN Pacific Northwest National Laboratory, Arnico PANDAY International Centre for Integrated Mountain Development (ICIMOD), Bhaskar GUNTURU King Abdullah University of Science and Technology

BG03-IG-The Coupling of Monsoon Systems with Land and

Ocean Biogeochemistry

*Prabir PATRA Japan Agency for Marine-Earth Science and Technology, Benjamin POULTER National Aeronautics and Space Administration, Siew Moi PHANG University of Malaya

BG04-Current Status of Terrestrial Carbon Budget and

Process Understanding

*Masayuki KONDO Chiba University, Forrest HOFFMAN Oak Ridge National Laboratory

BG08-IG-Biogeosciences General Session

*Xiujun WANG Beijing Normal University, Long CAO Zhejiang University, Prabir PATRA Japan Agency for Marine-Earth Science and Technology

HS08-Hydrology in a Changing World: Challenges in Modeling

*Shailesh SINGH National Institute of Water and Atmospheric Research, C. T. DHANYA Indian Institute of Technology Delhi, Rajib MAITY Indian Institute of Technology Kharagpur, Markus PAHLOW University of Canterbury, Mingna WANG China Institute of Water Resources and Hydropower Research

HS13-Urban Water-related Problems

*Akira KAWAMURA Tokyo Metropolitan University, So KAZAMA Tohoku University, Kei NAKAGAWA Nagasaki University, Kenichiro KOBAYASHI Kobe University, Naoko NAKAGAWA Rikkyo University

HS14-Water Cycle Observational and Satellite Remote Sensing Data Products and Their Applications

*Marouane TEMIMI Masdar Institute, Jun WEN Chengdu University of Information Technology, Chenghai WANG Lanzhou University, Xiwu ZHAN National Oceanic and Atmospheric Administration

HS20-Hydrologic Prediction in Data-scarce Situations

*Basudev BISWAL Indian Institute of Technology Hyderabad, Guangyao GAO Chinese Academy of Sciences, Dawen YANG Tsinghua University, Bellie SIVAKUMAR University of New South Wales

HS22-Climate Change Risk Assessment and Adaptation on Water-related Disaster and Water Resources in Asia and the Pacific

*Eiichi NAKAKITA Kyoto University, Deg-Hyo BAE Sejong University, Ching-Pin TUNG National Taiwan University, Yasuto TACHIKAWA Kyoto University, Izuru TAKAYABU Meteorological Research Institute, Japan Meteorological Agency

HS27-Extreme Erosion Processes, Hydrological Drivers and Connectivity

*Roy SIDLE University of the Sunshine Coast, Ben JARIHANI University of the Sunshine Coast, David HIGGITT Beijing Jiaotong University (Lancaster University College), Marco CAVALLI National Research Council of Italy, Research Institute for Geo-Hydrological Protection (IRPI), Stefano CREMA National Research Council of Italy, Research Institute for Geo-Hydrological Protection (IRPI)

HS31-At the Edge of Hydrology: Natural- and Human-induced Changes in Fluxes Across the Land-ocean and Land-atmosphere Interfaces with Impacts on Global and Regional Water Cycle

*Min-Hui LO National Taiwan University, John REAGER Jet Propulsion Laboratory, California Institute of Technology, Wenhong LI Duke Univ, Hyungjun KIM U-Tokyo

HS33-Modeling and Analysis of Hydrologic Processes in the Context of Climate Change

*Van-Thanh-Van NGUYEN McGill University, Shie-Yui LIONG National University of Singapore, Laxmi SUSHAMA McGill University, Zhiming QI McGill University

IG02-High-resolution Terrestrial- and Marine Proxy-inferred Climate and Environment Changes in the Asia-Oceania

Region Since the Last Deglaciation

*Chuan-Chou SHEN National Taiwan University, Liangcheng TAN Chinese Academy of Sciences, Yusuke YOKOYAMA The University of Tokyo, Keyan FANG Fujian Normal University

IG16-BG-From Science to Policy: Lessons and Challenges for Natural and Social Science Collaboration for Mitigation and Adaptation to Environmental Hazards

*Tao WANG Chinese Academy of Sciences, Shaoxiu MA The North-west of Eco-environment and resources, Lihua ZHOU Institutes of Science and Development, CAS, Inez PONCE DE LEON Ateneo de Manila University

IG20-Innovative Technologies of Sensing, Simulation and Mapping to Enhance Disaster Relief and Disaster Medical Systems

*Shunichi KOSHIMURA Tohoku University, Erick MAS Tohoku University, Ann SAKAGUCHI University of Hawaii at Manoa

IG21-Sar Application in Natural Hazard Response

*Sang-Ho YUN NASA Jet Propulsion Laboratory, Yu-Nung Nina LIN Nanyang Technological University, Sang-Ho YUN NASA Jet Propulsion Laboratory

IG25-Tracing Hydrometeorological, Ecohydrological and Hydrological Processes Using Stable Water Isotopes

*Huade GUAN Flinders University, Xinping ZHANG Hunan Normal University, Grzegorz SKRZYPEK The University of Western Australia

OS08-Advances in Oceanic Data Assimilation, Ensemble Prediction, and Coupled Data Assimilation

*Zheqi SHEN State Oceanic Administration, Zheqi SHEN State Oceanic Administration, Jiang ZHU Chinese Academy of Sciences, Shaoqing ZHANG National Oceanic and Atmospheric Administration, Fei ZHENG Chinese Academy of Sciences

OS09-Regional Oceanic Numerical Modeling and

Observations

*Changming DONG Nanjing University of Information Science & Technology, Yusuke UCHIYAMA Kobe University, Hui WU East China Normal University

OS10-The Eastern Indian Ocean Upwelling Research Initiative (EIOURI) and The Second International Indian Ocean Expedition (IIOE-2)

*Yukio MASUMOTO The University of Tokyo, Raleigh HOOD University of Maryland, Michael MCPHADEN National Oceanic and Atmospheric Administration, Nick D'ADAMO Perth Programme Office of the Intergovernmental Oceanographic Commission (IOC) of UNESCO, Yue FANG State Oceanic Administration

OS24-Coastal Hazards: Impacts of Tropical Storms and

Tsunamis

*Xiping YU Tsinghua University, Linlin LI Nanyang Technological University, Philip Li-Fan LIU National University of Singapore, Harry YEH Oregon State University, Zhenhua HUANG University of Hawaii at Manoa

PS03-Microwave and Infrared Remote Sensing of Solar System Objects

*Paul HARTOGH Max Planck Institute for Solar System Research, Yasuko KASAI National Institute of Information and Communications Technology, Yi-Jehng KUAN National Taiwan Normal University

PS07-Juno's Exploration of Jupiter

*Paul HARTOGH Max Planck Institute for Solar System Research, Tristan GUILLOT Observatoire De La Cote D'Azur

PS08-Polarization as a Tool for Exploration of Earth, Solar System and Beyond

*Padma A YANAMANDRA-FISHER Space Science Institute, Shashikiran GANESH Physical Research Laboratory, Svetlana BERDYUGINA Kiepenheuer Institute for Solar Physics, Ludmilla KOLOKOLOVA University of Maryland

PS13-Planetary Interiors and Magnetism

*Keke ZHANG University of Exeter, Johannes WICHT MPG, Emilio HERRERO-BERVERA University of Hawaii at Manoa, Yongxin PAN Chinese Academy of Sciences, John TARDUNO University of Rochester

SE05-Magmatism and Mineral Deposits at Anorogenic Settings

*Greg SHELLNUTT National Taiwan Normal University, Maria Luisa TEJADA Japan Agency for Marine-Earth Science and Technology, Steven DENYSZYN University of Western Australia

SE25-40-New Advance on Tectonics of SE Asia

*Xixi ZHAO University of California Santa Cruz, Baochun HUANG Peking University, Mian LIU University of Missouri, Raymond RUSSO University of Florida

SE32-Accretion and Subduction of the Oceanic Lithosphere, from Ridge to Trench

*Hongfeng YANG Chinese University of Hong Kong, Yajing LIU McGill University, Meng (Matt) WEI University of Rhode Island, Shengji WEI Nanyang Technological University

SE38-Global Mass Transport, Earth Rotation and Low-degree Gravitational Change

*Jianli CHEN The University of Texas at Austin, Richard GROSS NASA's Jet Propulsion Laboratory, Henryk DOBSLAW Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences, Koji MATSUO Geospatial Information Authority of Japan

SE41-33-Environmental and Applied Mineralogy and Ore

Deposits

*Tsutomu SATO Hokkaido University, Carlo ARCILLA University of the Philippines Diliman, Mega ROSANA Padjadjaran University, Indonesia, Hai Thanh TRAN Hanoi University of Mining and Geology, Kotaro YONEZU Kyushu University

SS07-Cascading hazards

*Gerald BAWDEN National Aeronautics and Space Administration (NASA), Jack A. KAYE National Aeronautics and Space Administration (NASA)

SS10-International Land Model Benchmarking (ilamb)

Package Tutorial

*Forrest HOFFMAN Oak Ridge National Laboratory, Nathan COLLIER Oak Ridge National Laboratory

ST02-Particle Acceleration and Transport at the Sun and in the Heliosphere

*Linghua WANG Peking University, Gang LI The University of Alabama in Huntsville, Kyoko WATANABE National Defense Academy of Japan

$ST04-Mesosphere-Thermosphere-Ionosphere\ Coupling$

Processes

*Huixin LIU Kyushu University, Loren CHANG National Central University, Larisa GONCHARENKO Massachusetts Institute of Technology, Jiuhou LEI University of Science and Technology of China

ST07-Global Ionosphere, Thermosphere and Mesosphere System Response to Their Drivers

*Yongliang ZHANG The Johns Hopkins University Applied Physics Laboratory, Jeng-Hwa YEE The Johns Hopkins University Applied Physics Laboratory, Jann-Yenq (Tiger) LIU National Central University, Libo LIU Chinese Academy of Sciences

ST09-Space Weather Radio Science

*Bernard JACKSON *University of California, San Diego,* Munetoshi TOKUMARU *Nagoya University,* Hsiu-Shan YU *University of California, San Diego*

ST12-23-Ionospheric Response to Extreme Terrestrial and Space Weather Events Including Geomagnetic Storms not Caused by CMEs

*Sushil KUMAR The University of the South Pacific, Duggirala PALLAMRAJU Physical Research Laboratory, Mario BISI Science & Technology Facilities Council, David WEBB Boston College, Yihua YAN National Astronomical Observatories - Chinese Academy of Sciences

ST-PS15-Future and Current Space Missions and

Instrumentation for Space and Planetary Science

*Takeshi SAKANOI Tohoku University, Jongho SEON Kyung Hee University, Anil BHARDWAJ Physical Research Laboratory, Takeshi SAKANOI Tohoku University, Andrew YAU University of Calgary

AS01 / Regional Climate Modelling: Science and Applications

Thu - 07 Jun | MR302B

Time 16:00 - 18:00

Chair(s) Minh Tue VU, Clemson Univ

AS01-D4-PM2-302B-001 | AS01-A013

Comparison of Wind Resource Characteristics in Korea

According to Different Mapping Method

Yeon-Hee KIM¹ $^{1\pm}$, Beom-Keun SEO¹, Jinah YUN¹, Sumi YANG¹, Baek-Jo KIM²

¹National Institute of Meteorological Sciences, ²Korea Meteorological Administration

AS01-D4-PM2-302B-002 | AS01-A016

Factor Analysis in Downscaled Regional Climate Change

Yoshiyuki KAJIKAWA $^{1\sharp+}$, Kazuto ANDO 2 , Sachiho ADACHI 3 , Seiya NISHIZAWA 2,4 , Tsuyoshi YAMAURA 2

¹Kobe University, ²RIKEN Advanced Institute for Computational Science, ³RIKEN Center for Computational Science, ⁴Japan Meteorological Agency

AS01-D4-PM2-302B-003 | AS01-A017

Assessment of the Modèle Atmosphérique Régionale (MAR)

Regional Climate Model over High Mountain Asia

Marco TEDESCO $^{1\#*}$, Melissa LINARES 1 , Steve MARGULIS 2 , Xavier FETTWEIS 3 , Patrick ALEXANDER 1

¹Lamont-Doherty Earth Observatory, ²University of California, Los Angeles, ³University of Liège

AS01-D4-PM2-302B-004 | AS01-A020

South Asian Summer Monsoon Breaks: Process-Based

Diagnostics in HIRHAM5

Franziska S. HANF $^{1\pm}$, H. ANNAMALAI 1 , Annette RINKE 2 , Klaus DETHLOFF 2

¹University of Hawaii, ²Alfred Wegener Institute for Polar and Marine Research

AS03 / Multi-scale Climate Variability Over Asia and Surrounding Oceans

Thu - 07 Jun | MR325B

Time 08:30 - 10:30

Chair(s) Zhiwei WU, Fudan University

Lei ZHOU, Shanghai Jiaotong University

AS03-D4-AM1-325B-034 | AS03-A024 (Invited)

Impact of Tropical Lower Stratospheric Cooling on Recent Trends in Tropical Circulation Through Modulation of Deep Convective Activity

Kunihiko KODERA¹²⁺, Nawo EGUCHI², Rei UEYAMA³, Yuhji KURODA⁴, Chiaki KOBAYASHI⁴

 $^1\!Meteorological$ Research Institute, $^2\!Kyushu$ University, $^3\!NASA$ Ames Research Center, $^4\!Japan$ Meteorological Agency

AS03-D4-AM1-325B-035 | AS03-A034

Intensification of the El Niño/Southern Oscillation-Related

Terrestrial Carbon Cycle Under Greenhouse Warming

Jong-Seong KUG^{1‡+}, Jin-Soo KIM¹, Su-Jong JEONG²
¹Pohang University of Science and Technology, ²Seoul National University

AS03-D4-AM1-325B-036 | AS03-A016

Origin of the Seasonally-Dependent Response of the Subtropical Highs and Tropical Precipitation in a Warming Climate

Fengfei SONG^{1‡+}, L. Ruby LEUNG¹, Jian LU¹, Lu DONG¹
¹Pacific Northwest National Laboratory

AS03-D4-AM1-325B-037 | AS03-A050

Different Global Precipitation Responses to Solar, Volcanic and Greenhouse Gas Forcings

Fei LIU1#+, Bin WANG2, Jian LIU3

¹Nanjing University of Information Science , ²University of Hawaii, ³Nanjing Normal University

AS03-D4-AM1-325B-038 | AS03-A061

Key Role of the Tropical Pacific Ocean in the Changes of the Aleutian Low Mean-State and Variability Under Greenhouse Warming

Bolan GAN¹⁵⁺, Lixin WU¹, Fan JIA², Shujun LI¹, Wenju CAI^{3,4}, Hisashi NAKAMURA^{5,6}, Michael ALEXANDER⁷, Art MILLER⁸, Zheng CHEN¹

¹Ocean University of China, ²Chinese Academy of Sciences, ³Ocean University of China and Qingdao National Laboratory for Marine Science and Technology, ⁴Commonwealth Scientific and Industrial Research Organisation, ⁵The University of Tokyo, ⁶Japan Agency for Marine-Earth Science and Technology, ⁷National Oceanic and Atmospheric Administration, ⁸Scripps Institution of Oceanography

AS03-D4-AM1-325B-039 | AS03-A039

Unravelling Regionswise Teleconnections of Indian Rainfall Using Event Synchronization-Based Multiscale Nonlinear Method

Ankit AGARWAL^{1#+}, Maheswaran RATHINASAMY², Norbert MARWAN², Bruno MERZ³, Krishnan RAGHAVAN⁴, Jürgen KURTHS2

¹University of Potsdam, ²Potsdam Institute for Climate Impact Research, 3GFZ German Research Centre for Geosciences, 4Indian Institute of Tropical Meteorology

AS04 / Atmospheric Chemistry in Highly Polluted **Environments: Emissions, Fate, and Impacts**

Thu - 07 Jun | MR325B

Time 11:00 - 12:30

Chair(s) Huan LIU, Tsinghua University

Yang YANG, Pacific Northwest National Laboratory,

United States

AS04-D4-AM2-325B-001 | AS04-A017 (Invited)

Top-Down Estimate of Black Carbon Emissions for City Cluster Using Ground Observations: A Case Study in Southern Jiangsu, China

Yu ZHAO1#+, Xuefen ZHAO1, Dong CHEN1, Jie ZHANG2 ¹Nanjing University, ²Jiangsu Provincial Academy of Environmental Science

AS04-D4-AM2-325B-002 | AS04-A060

Air Quality Impact of Shipping Emissions and Deca Design in China

Huan LIU1#+, Zhaofeng LV1 ¹Tsinghua University

AS04-D4-AM2-325B-003 | AS04-A020

Impacts of Injection Height of Industrial Emissions on Recent

SO2 Trend over China

Yang YANG^{1#+}, Hailong WANG¹, Steven SMITH¹, Philip RASCH1

¹Pacific Northwest National Laboratory

AS04-D4-AM2-325B-004 | AS04-A041

An Inventory of Air Pollutions from Road Transport in

Thailand: Status and Trend During the Past Decade

Penwadee CHEEWAPHONGPHAN1#+, Satoru CHATANI1 ¹National Institute for Environmental Studies

AS04-D4-AM2-325B-005 | AS04-A049

Changes in Ammonia Agricultural Emissions and Their Impact on Surface PM2.5 Pollution in China During 2005-2015

Youfan CHEN1#+, Lin ZHANG1, Yuanhong ZHAO1 ¹Peking University

Time 13:30 - 15:30

Chair(s) Yanlin ZHANG, Nanjing University of Information

Science & Technology

Qi YING, Texas A&M University

AS04-D4-PM1-325B-006 | AS04-A010 (Invited)

Unique Air Chemistry over the Dead Sea

Menachem LURIA1#+

¹The Hebrew University of Jerusalem

AS04-D4-PM1-325B-007 | AS04-A047 (Invited)

Fundamental Importance of Nitrogen Isotopic Fractionation During Particulate Nitrate Formation: Theoretical Calculation, Field Validation and Application in Apportioning NOx

Yanlin ZHANG1#+

Sources

¹Nanjing University of Information Science

AS04-D4-PM1-325B-008 | AS04-A070

Change in Submicron Particle Composition and Characteristics due to Large Amount of Firecrackers Burning

Neeraj RASTOGI1#+, Atinderpal SINGH1, Rangu SATISH1 ¹Physical Research Laboratory

AS04-D4-PM1-325B-009 | AS04-A076

Fate of Pollution Emitted During the 2015 Indonesian Fire

Mijeong PARK1#+, Helen WORDEN1, Louisa EMMONS1, Simone TILMES1, Benjamin GAUBERT1

¹National Center for Atmospheric Research

AS04-D4-PM1-325B-010 | AS04-A008

Long-Term Influence of Aerosols on Tropospheric NO2 Retrieval over China Based on OMI and TropOMI Sensors

Mengyao LIU1+, Jintai LIN1#, K. Folkert BOERSMA2, Gaia PINARDI³, Yang WANG⁴, Julien CHIMOT⁵, Thomas WAGNER⁴, Pinhua XIE⁶, Henk ESKES⁷, Van Roozendael MICHEL³, Francois HENDRICK3

¹Peking University, ²Royal Netherlands Meteorological Institute, ³Royal Belgian Institute for Space Aeronomy, ⁴Max Planck Institute for Chemistry, 5Delft University of Technology, 6Chinese Academy of Sciences, ⁷Royal Dutch Meteorological Institute

Time 16:00 - 18:00

Chair(s) Jia XING, Tsinghua University

Jianlin HU, Nanjing University of Information Science &

Technology

AS04-D4-PM2-325B-011 | AS04-A062 (Invited)

Enhanced Effectiveness of NOx Control from Simultaneous

Reductions of VOC and NH3 for Reducing Air Pollution in

Beijing-Tianjin-Hebei Region, China

Jia XING^{1#+}, Dian DING¹
¹Tsinghua University

AS04-D4-PM2-325B-012 | AS04-A001 (Invited)

Re-Examine the APEC Blue in Beijing 2014

Ting WANG^{1#+}, Pucai WANG¹
¹Chinese Academy of Sciences

AS04-D4-PM2-325B-013 | AS04-A053

Modeling Studies of Haze in China: Emissions, Processes,

Transport, and its Climatic Effect

Xiaoyan MA1#+, Tong SHA2

¹Nanjing University of Information Science , ²Nanjing University of Information Science & Technology

AS04-D4-PM2-325B-014 | AS04-A059

More VOC Controls are Needed in Fighting Increasing

Summer Ozone in China

Qi YING^{1#+}, Peng WANG², Hongliang ZHANG³, Jianlin HU⁴
¹Texas A and M University, ²Texas A&M University, ³Louisiana State
University, ⁴Nanjing University of Information Science & Technology

AS04-D4-PM2-325B-015 | AS04-A023

Design of Ambient Air Quality Monitoring Stations Based on

Human Health Aspects

Vethathirri RAMANUJAM SRINIVASAN^{1#+}, S.M. Shiva NAGENDRA¹

 1 Indian Institute of Technology Madras

AS04-D4-PM2-325B-016 | AS04-A011

Study of the PM2.5 Growth Processes in Two Key Regions of

China

Jinjin SUN¹, Mingjie LIANG¹, Jianlin HU¹⁵+, Jingyi LI¹, Qi YING², Hongliang ZHANG³

¹Nanjing University of Information Science & Technology, ²Texas A and M University, ³Louisiana State University

AS04-D4-PM2-325B-017 | AS04-A075

Long-Term Trends and Sptaial Variations of the

PM2.5-Induced Premature Deaths in South and Southeast Asia

During 1999-2014

Yusheng SHI1#+

¹Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences

reterices

AS05 / The Science and Prediction of Heavy Rainfall and Floods

Thu - 07 Jun | MR325A

Time 08:30 - 10:30

Chair(s) Yali LUO, Chinese Academy of Meteorological Sciences

Johnny CHAN, City University of Hong Kong Kalli FURTADO, Met Office, Exeter, UK

AS05-D4-AM1-325A-001 | AS05-A068 (Invited)

Extreme Precipitation from Tropical Cyclones

Michael BELL1#+

¹Colorado State University

AS05-D4-AM1-325A-002 | AS05-A079 (Invited)

Formation of April-May-June Daily Precipitation Extreme

Events in South China

Zhaoyong GUAN^{1#+}, Jingchao SUN¹, Minggang LI¹
¹Nanjing University of Information Science & Technology

AS05-D4-AM1-325A-003 | AS05-A020 (Invited)

Modeling Extreme Precipitation over East China with a Global

Variable-Resolution Modeling Framework (MPAS)

Chun ZHAO¹#+, Mingyue XU¹, Yu WANG¹

¹University of Science and Technology of China

AS05-D4-AM1-325A-004 | AS05-A028

Progress of the Southern China Monsoon Rainfall Experiment

(SCMREX) in 2016-17

Yali LUO^{1;+}, Xinghua BAO¹, Ling HUANG¹, Zhina JIANG¹, Rudi XIA¹, Da-Lin ZHANG², Jinfang YIN¹, Kalli FURTADO³, Xiantong LIU⁴

¹Chinese Academy of Meteorological Sciences, ²University of Maryland, ³Met Office, ⁴China Meteorological Administration

AS05-D4-AM1-325A-005 | AS05-A074

Sensitivity of Extreme Precipitation to SST: Case Study of

Heavy Precipitation Event in Japan on 9 August 2013

Satoshi IIZUKA1#+

¹National Research Institute for Earth Science and Disaster Resilience

AS05-D4-AM1-325A-006 | AS05-A015

Sensitivity of the Impact of Anthropogenic Heating on a

Warm-Sector Heavy Precipitation in South China

Shuai YANG1#+, Shuwen LI1, Shouting GAO1

¹Chinese Academy of Sciences

Time 11:00 - 12:30

Chair(s) Michael BELL, Colorado State University

AS05-D4-AM2-325A-007 | AS05-A034 (Invited)

Investigation of Beijing Extreme Flooding Event on July 21 2012

Xiaoding YU1#+

¹China Meteorological Administration Training Center

AS05-D4-AM2-325A-008 | AS05-A026 (Invited)

Diurnal Variations of Presummer Rainfall over Southern

China

Zhina JIANG1#+

¹Chinese Academy of Meteorological Sciences

AS05-D4-AM2-325A-009 | AS05-A045

Convection-Permitting Simulations of Heavy Rainfall During

the East Asian Summer Monsoon

Kalli FURTADO¹⁵⁺, Yali LUO², Paul FIELD¹, Puxi LI³, Zhun GUO³, Tianjun ZHOU⁴, Xi LIU⁵

¹Met Office, ²Chinese Academy of Meteorological Sciences, ³Institute of Atmospheric Physics, ⁴Chinese Academy of Sciences, ⁵Nanjing University of Information Science & Technology

AS05-D4-AM2-325A-010 | AS05-A011

Topographic Effects on Spatiotemporal Variations of

Short-Duration Rainfall Events in Warm Season of Central

North China

Weihua YUAN1#+

¹Chinese Academy of Sciences

AS05-D4-AM2-325A-011 | AS05-A049

Application of a Convection-Permitting Ensemble Prediction

System to Quantitative Precipitation Forecasts During

SCMREX

Xubin ZHANG1#+

¹China Meteorological Administration

AS05-D4-AM2-325A-012 | AS05-A052

Difference Characteristics of Raindrop Size Distributions and

Polarimetric Radar QPE of Three Typical Heavy Rainfall

Systems During SCMREX

Xiantong LIU^{1#+}, Lu FENG², Wan QILIN¹, Hui XIAO¹
¹China Meteorological Administration, ²Guangzhou Institute of

Tropical and Marine Meteorology

Time 13:30 - 15:30

Chair(s) Yanluan LIN, Tsinghua University

Johnny CHAN, City University of Hong Kong

AS05-D4-PM1-325A-013 | AS05-A081 (Invited)

Forecasting of Warm Season Heavy Precipitation over

Continental China at Convection - Permitting Resolutions

Ming XUE^{1,2#+}, Kefeng ZHU², Lan YANG²
¹University of Oklahoma, ²Nanjing University

AS05-D4-PM1-325A-014 | AS05-A058 (Invited)

Characteristics of Tropical Precipitation on Aqua Planets in A

Non-Hydrostatic Model

Xindong PENG1#+, Xiaohan LI1

¹Chinese Academy of Meteorological Sciences

AS05-D4-PM1-325A-015 | AS05-A016 (Invited)

A Study of Predictability of a Heavy Rainfall Event in Steep

Domains by Using BVs and ESVs

Feifan ZHOU1#+

¹Chinese Academy of Sciences

AS05-D4-PM1-325A-016 | AS05-A083

Synchronizing Different Atmospheric Models in a Supermodel

to Capture Extremes

Gregory DUANE^{1,2#+}, Francine SCHEVENHOVEN¹, Frank

SELTEN3

¹University of Bergen, ²University of Colorado, ³Royal Netherlands

Meteorological Institute

AS05-D4-PM1-325A-017 | AS05-A044

Evaluation and Correction of Quantitative Precipitation

Forecast by Storm-Scale NWP Model in Jiangsu, China

Gaili WANG^{1#+}

¹Chinese Academy of Meteorological Sciences

AS05-D4-PM1-325A-018 | AS05-A031

The Climatology and Long-Term Changes in Extreme Hourly

Precipitation and its Possible Link to Urbanization in Coastal

South China During 1971-2016

Mengwen WU1, Yali LUO1#+

¹Chinese Academy of Meteorological Sciences

Time 16:00 - 18:00

Chair(s) Ming XUE, University of Oklahoma

Yali LUO, Chinese Academy of Meteorological Sciences

AS05-D4-PM2-325A-019 | AS05-A063 (Invited)

Sensitivity of Simulated Organized Convections on Key

Microphysical Processes

Yanluan LIN^{1#+}, Xi ZHAO¹

¹Tsinghua University

AS05-D4-PM2-325A-020 | AS05-A047 (Invited)

Warm-Season Diurnal Variations for Total, Stratiform,

Convective, and Extreme Hourly Precipitation over Central and

Eastern China

Yongguang ZHENG1**, Yanduo GONG², Jiong CHEN³, Fuyou TIAN³

¹China Meteorological Administration, ²Chinese Academy of Meteorological Sciences, ³National Meteorological Centre

AS05-D4-PM2-325A-021 | AS05-A009

A Numerical Study on the Organization and Development of an Intensive Long-Lasting Convective Rain-Band of Landfall

Typhoon "Meranti" (1614): The Impacts of Upstream

Topography

Yuchun ZHAO1#+

¹Xiamen Meteorological Bureau

AS05-D4-PM2-325A-022 | AS05-A001

Development of a Comprehensive Fractions Skill Score to

Improve Precipitation Assessment

Bin ZHAO1#+

¹National Meteorological Center

AS05-D4-PM2-325A-023 | AS05-A076

Preliminary Study of Heavy Rainfall Simulation with

 $Superparameterization\ Scheme$

Guoqiang XU1#+

¹National Meteorological Center of China Meteorological Administration

AS07 / Behavior of Monsoon in the Current and Future Climate: Comparisons Among Different Monsoon Regions

Thu - 07 Jun | MR326A

Time 08:30 - 10:30

Chair(s) Lin WANG, Chinese Academy of Sciences

AS07-D4-AM1-326A-015 | AS07-A037

A Unique Feature of the Asian Summer Monsoon Response to Global Warming: The Role of Different Land-Sea Thermal

Contrast Change Between the Lower and Upper Troposphere

Hirokazu ENDO^{1#+}, Akio KITOH², Hiroaki UEDA³

¹Japan Meteorological Agency, ²Japan Meteorological Business Support Center, ³University of Tsukuba

AS07-D4-AM1-326A-016 | AS07-A046

Characteristics of Bay of Bengal Monsoon Depressions in the

21st Century

Moetasim ASHFAQ^{1,‡+}, Deeksha RASTOGI², L. Ruby LEUNG³, Subimal GHOSH⁴, Anamitra SAHA⁴, Kevin HODGES⁵, Kate EVANS²

¹UT-BATTELLE, ²Oak Ridge National Laboratory, ³Pacific Northwest National Laboratory, ⁴Indian Institute of Technology Bombay, ⁵University of Reading

AS07-D4-AM1-326A-017 | AS07-A009

Changes of the Transitional Climate Zone in East Asia: Past and Future

Lin WANG^{1#+}, Wen CHEN¹, Gang HUANG¹, Gang ZENG²
¹Chinese Academy of Sciences, ²Nanjing University of Information
Science & Technology

AS07-D4-AM1-326A-018 | AS07-A010

How Autumn Eurasian Snow Anomalies Affect East Asian

Winter Monsoon: A Numerical Study

Xiao LUO1#+, Bin WANG2

¹International Pacific Research Center, University of Hawaii, ²University of Hawaii

AS18-02-OS / Climate Change, Tropical Climatic Hazards in Asia Oceania and Societal Applications of Atmospheric and Oceanic Regional Models

Thu - 07 Jun | MR326A

Time 16:00 - 18:00

Chair(s) Venkata Ratnam JAYANTHI, Japan Agency for

Marine-Earth Science and Technology
Jaiho OH, Pukyong National University

AS18-02-OS-D4-PM2-326A-001 | AS18-02-OS-A001 (Invited)

Potential Impact of Ocean Circulation on the Declining

Japanese Eel Catches

Yu-Lin CHANG1#+

¹Japan Agency for Marine-Earth Science and Technology

AS18-02-OS-D4-PM2-326A-002 | AS18-02-OS-A013

High-Resolution Model of Kuroshio Influence on Coastal Area

Around Sukumo Bay

Toru MIYAMA $^{\mbox{\tiny 1}}$, Sergey VARLAMOV $^{\mbox{\tiny 1}}$, Yushi MORIOKA $^{\mbox{\tiny 1}}$, Yasumasa MIYAZAWA $^{\mbox{\tiny 1}}$

¹Japan Agency for Marine-Earth Science and Technology

AS18-02-OS-D4-PM2-326A-003 | AS18-02-OS-A003 (Invited)

A High Resolution Regional Reanalysis for the Arabian

Peninsula

Hariprasad DASARI^{1‡+}, Yesubabu VISWANADHAPALLI², Srinivas DESAMSETTI¹, Sabique LANGODAN¹, Raju ATTADA¹, Ravi Kumar KUNCHALA¹, Ibrahim HOTEIT¹

¹King Abdullah University of Science and Technology, ²National Atmospheric Research Laboratory

AS18-02-OS-D4-PM2-326A-004 | AS18-02-OS-A023

Decadal Variability of Indo-Pacific Climate as Revealed by Kernel Methods

Joanna SLAWINSKA^{1#+}, Dimitris GIANNAKIS²
¹University of Wisconsin-Milwaukee, ²New York University

AS18-02-OS-D4-PM2-326A-005 | AS18-02-OS-A010

Weather Conditions Relevant to Air Quality During the Heat

Waves in Taiwan

Mien-Tze KUEH
15+, Chuan-Yao LIN¹, Chi-Yu LIN², Chu-Yun PENG³

¹Academia Sinica, ²Ministry of Health and Welfare, ³National Taiwan University

AS18-02-OS-D4-PM2-326A-006 | AS18-02-OS-A011

Regional Climate Studies with Dynamical Downscaling to

Generate Information at Some Cities in India

Sushil Kumar DASH1#+

¹Indian Institute of Technology Delhi

AS18-02-OS-D4-PM2-326A-007 | AS18-02-OS-A014

Spatial Distribution, Temporal Variation, and Transport Characteristics of Atmospheric Water Vapor over Central Asia and the Arid Region of China

Guan XUEFENG1#+

¹Institute of Desert Meteorology, China Meteorological Administration

AS18-02-OS-D4-PM2-326A-008 | AS18-02-OS-A016

Study on Atmospheric Circulation Characteristics of

Precipitation Anomalies in Arid Region of Central Asia

Lianmei YANG1#+

¹China Meteorological Administration

AS21 / Sub-seasonal to Seasonal Forecasting of High-impact Weather and Climate Events

Thu - 07 Jun | MR326A

Time 11:00 - 12:30

Chair(s) Hai LIN, Environment and Climate Change Canada

Mio MATSUEDA, Center for Computational Sciences,

University of Tsukuba

AS21-D4-AM2-326A-001 | AS21-A016 (Invited)

An Assessment of Seasonal Predictability of Blocking and Tropical Cyclone Activities Using a Large Ensemble Simulation of Atmospheric General Circulation Model with

Prescribed Sea Surface Temperature and Sea Ice

Masahide KIMOTO^{1‡+}, Joutaro CHIBA¹

¹The University of Tokyo

AS21-D4-AM2-326A-002 | AS21-A017

Eastern Canada Flooding 2017 and its Subseasonal Predictions Hai LIN^{1‡+}, Frederic VITART², Ruping MO¹, Cristiana STAN³ ¹Environment and Climate Change Canada, ²European Centre for Medium-Range Weather Forecasts, ³George Mason University

AS21-D4-AM2-326A-003 | AS21-A002

Predictability and Prediction of the Total Number of Winter Extremely Cold Days over Temperate East Asia and China

Xiao LUO1#+, Bin WANG2

¹International Pacific Research Center, University of Hawaii, ²University of Hawaii

AS21-D4-AM2-326A-004 | AS21-A008

Investigation of the 2016 East Asian Heatwave and its

Representation by the Dynamical Seasonal Forecast System

Eunkyo SEO^{1#+}, Myong-In LEE¹, Hyun-Suk KANG²
¹Ulsan National Institute of Science and Technology, ²Korea
Meteorological Administration

Time 13:30 - 15:30

Chair(s) Mio MATSUEDA, Center for Computational Sciences,

University of Tsukuba

Myong-In LEE, Ulsan National Institute of Science and

Technology

AS21-D4-PM1-326A-005 | AS21-A004 (Invited)

Impact of Initial Land Surface Conditions on Seasonal Forecast

Skill over Australia

Mei ZHAO1#+, Eun-Pa LIM1, Huqiang ZHANG1, Imtiaz DHARSSI1

¹Bureau of Meteorology

AS21-D4-PM1-326A-006 | AS21-A013 (Invited)

Abrupt Termination of the 1997/1998 El Nino by an MJO

Represented with an Ocean-Coupled NICAM (NICOCO)

Tomoki MIYAKAWA1#+, Hisashi YASHIRO2, Tatsuo SUZUKI3, Hiroaki TATEBE3, Masaki SATOH1

¹The University of Tokyo, ²RIKEN Advanced Institute for Computational Science, ³Japan Agency for Marine-Earth Science and Technology

AS21-D4-PM1-326A-007 | AS21-A018

Understanding the Predictability of Short-Term Climate Simulations of African Easterly Waves Using a Global

Mesoscale Model and Idealized Lorenz Model

Bo-Wen SHEN1#+

¹San Diego State University

AS21-D4-PM1-326A-008 | AS21-A012

Concept Study on Seasonal Prediction of Meteorological Droughts Using the Comparative Standardized Precipitation

Index

Akira HASEGAWA^{1,2#+}, Maksym GUSYEV¹

¹Public Works Research Institute, ²the University of Tokyo

AS21-D4-PM1-326A-009 | AS21-A010

A Development of Weeks 3 and 4 Forecast Through the NCEP

GEFS

Xiaqiong ZHOU1#+, Yuejian ZHU1, Wei LI1, Bing FU1, Dingchen HOU1

¹National Oceanic and Atmospheric Administration

AS21-D4-PM1-326A-010 | AS21-A001

Skill of the BCC S2S System in Predicting the Subseasonal

Rainfall over China in Summer and Bias Correction

Anning HUANG1#+

¹Nanjing University

AS23 / Observation, Modeling, Theory and **Climatology of Mesoscale Processes**

Thu - 07 Jun | MR303B

Time 13:30 - 15:30

Chair(s) Qinghong ZHANG, Peking University

Yu DU, Sun Yat-sen Univercity

AS23-D4-PM1-303B-001 | AS23-A008 (Invited)

Self-Organization of Tropical Convection by Gravity Waves

Todd LANE1,2#+

¹The University of Melbourne, ²ARC Centre of Excellence for Climate Extremes

AS23-D4-PM1-303B-002 | AS23-A010 (Invited)

Convective Triggering and Organization Through Colliding

Outflow Boundaries and Vortex Merger in the Lee of a

Mesoscale Mountain Ridge

Kun ZHAO1#+, Fuqing ZHANG2

¹Nanjing University, ²Pennsylvania State University

AS23-D4-PM1-303B-003 | AS23-A027

Damage Survey and Radar Characteristics of a Violent Tornado

on Complex Terrain in North China

Liye LI1+, Zhiyong MENG2#, lanqiang BAI2

¹Foshan Tornado Research Center, ²Peking University

AS23-D4-PM1-303B-004 | AS23-A018

Impact of High-Frequency Observations on Fog Forecasting: A

Case Study of OSSE

Huiqin HU1#+

¹Ocean University of China

AS23-D4-PM1-303B-005 | AS23-A012

Application of a Regional Ocean-Atmosphere-Wave Coupled

Model on Predicted Wind Field Cases in the Northwest Pacific

Ocean

Linlin QI1#+

¹Beijing Aviation Meteorological Institute

AS23-D4-PM1-303B-006 | AS23-A024

Verification for Numerical Models Participated ICE-POP 2018

Seungbo CHOI1#+, Kwang-Deuk AHN2

¹Korea Meteorological Administration, ²National Institute of

Meteorological Research

AS23-D4-PM1-303B-007 | AS23-A001

A Machine Learning Nowcasting Method Based on Real-Time Reanalysis Data

Lei HAN^{1‡+}, Juanzhen SUN², Wei ZHANG¹
¹Ocean University of China, ²National Center for Atmospheric Research

Time 16:00 - 18:00

Chair(s) Yileng CHEN, University of Hawaii at Manoa

Todd LANE, The University of Melbourne

AS23-D4-PM2-303B-008 | AS23-A026 (Invited)

What are the Most Important Causes of Precipitation Diurnal Cycles Along Meiyu Rainband and Sichuan Basin of China? Ming $XUE^{1,2#+}$

¹University of Oklahoma, ²Nanjing University

AS23-D4-PM2-303B-009 | AS23-A007 (Invited)

The Statistics of Warm Sector Rainstorms over the South of Middle and Lower Reaches of the Yangtze River and its Organizational Modes of Mesoscale Convective Systems

Yun CHEN^{1#+}, Lingyao WANG², Shengqi LI³
¹China Meteorological Administration, ²Chengdu University of Information Technology, ³Nanjing University of Information Technology

AS23-D4-PM2-303B-010 | AS23-A015

Heavy Rainfall Associated with Double Low-Level Jets over Southern China

Yu DU^{1#+}, Guixing CHEN¹
¹Sun Yat-sen University

AS23-D4-PM2-303B-011 | AS23-A025

Characteristics of the Marine Boundary Layer Jet over the South China Sea During the Early Summer Rainy Season of Taiwan

Chuan-Chi TU^{1‡+}, Yi-Leng CHEN², Pay-Liam LIN¹, Yu DU³
¹National Central University, ²University of Hawaii at Manoa, ³Sun Yat-sen University

AS23-D4-PM2-303B-012 | AS23-A005

Characteristics of Coastal Low-Level Jets in Bohai Sea of China During Early Warm Season

Fan ZHANG^{1#+}, Qinghong ZHANG¹
¹Peking University

AS23-D4-PM2-303B-013 | AS23-A006

Initiation of Elevated Convection in a Noctual Squall Line

Along Meiyu Front

Qinghong ZHANG^{1#+}
¹Peking University

AS23-D4-PM2-303B-014 | AS23-A020

Numerical Simulations of Local Heavy Afternoon Rainfall

Events over Central Oahu Under Weak Wind Conditions

During the Warm Season

Feng HSIAO^{1#+}, Yi-Leng CHEN¹
¹University of Hawaii at Manoa

AS23-D4-PM2-303B-015 | AS23-A021

Factors Leading to Extreme Precipitation on Dominica from Tropical Storm Erika (2015)

Alison D. NUGENT^{1#+}, Rosimar RIOS-BERRIOS²
¹University of Hawaii at Manoa, ²National Center for Atmospheric Research

AS30 / Passive and Active Remote Sensing of the Chemistry and Dynamics of the Middle and Upper Atmosphere

Thu - 07 Jun | MR319A

Time 08:30 - 10:30

Chair(s) Jeng-Hwa YEE, Johns Hopkins University

AS30-D4-AM1-319A-001 | AS30-A017

Tidal and Planetary Wave Mode Coupling in the Mesosphere and Lower Thermosphere

Patrick ESPY^{1,2#+}, Nora STRAY³, Robert HIBBINS^{1,2}
¹Norwegian University of Science and Technology, ²University of Bergen, ³Teknova AS

AS30-D4-AM1-319A-002 | AS30-A003 (Invited)

Variation of Atmospheric Stability Parameters Measured by

Na Lidar at Andes Lidar Observatory

Alan LIU^{1,2#+}, Fan YANG¹, Yafang GUO¹, Fabio VARGAS³
¹Embry-Riddle Aeronautical University, ²National Institute of Polar Research, ³University of Illinois at Urbana-Champaign

AS30-D4-AM1-319A-003 | AS30-A009

The Buckland Park Rayleigh Lidar: Description and Early Results

Iain REID^{1,2*+}, Jens LAUTENBACH³, Andrew MACKINNON², Andrew KLEKOCIUK⁴, Liam TWIGGER², David OTTAWAY²
¹ATRAD Pty Ltd, ²University of Adelaide, ³Arecibo Observatory,
⁴Australian Antarctic Division

AS30-D4-AM1-319A-004 | AS30-A021

Observations of Deep Mountain Waves over New Zealand During the Deepwave Airborne and Ground-Based

Measurement Program

Dave FRITTS^{1#+}, Biff WILLIAMS¹, Katrina BOSSERT¹, Mike TAYLOR², P. Dominique PAUTET², Stephen D. ECKERMANN³, Christopher KRUSE⁴, Ron SMITH⁴, Iain REID^{5,6}, Damian MIRPHY⁷

¹GATS Inc., ²Utah State University, ³Naval Research Laboratory, ⁴Yale University, ⁵ATRAD Pty Ltd, ⁶University of Adelaide, ⁷Australian Antarctic Division

AS30-D4-AM1-319A-005 | AS30-A012 (Invited)

Recent Scientific and Engineering Results from the PANSY Radar in the Antarctic

Taishi HASHIMOTO $^{1\pi *},$ Koji NISHIMURA 2, Masaki TSUTSUMI 2, Toru SATO 1, Kaoru SATO 3

¹Kyoto University, ²National Institute of Polar Research, ³The University of Tokyo

AS30-D4-AM1-319A-006 | AS30-A004

Vertical Diffusion Transport of Atomic Oxygen in the

Mesopause Region Consistent with Chemical Losses and

Continuity: Global Mean and Inter-Annual Variability

Gary SWENSON^{1*}, Fabio VARGAS¹, Jeng-Hwa YEE², Alan LIU³,⁴

¹University of Illinois at Urbana–Champaign, ²The Johns Hopkins University Applied Physics Laboratory, ³Embry-Riddle Aeronautical University, ⁴National Institute of Polar Research

AS30-D4-AM1-319A-007 | AS30-A001

Effects of the Atmospheric Temperature Structure on the Rotational Distribution of the High Vibrational Levels of the Hydroxyl Airglow

Christoph FRANZEN1 $^{1\#*}$, Patrick ESPY 1,2 , Robert HIBBINS 1,2 , Amanda DJUPVIK 3

¹Norwegian University of Science and Technology, ²University of Bergen, ³Nordic Optical Telescope

Time 11:00 - 12:30

Chair(s) Iain REID, University of Adelaide

Patrick ESPY, Norwegian University of Science and Tech.

AS30-D4-AM2-319A-008 | AS30-A014

Temporal and Spatial Variability of Atomic Oxygen and Atomic Hydrogen in the Mesosphere and Lower Thermosphere Observed by SABER/TIMED

Jeng-Hwa YEE1#+

¹The Johns Hopkins University Applied Physics Laboratory

AS30-D4-AM2-319A-009 | AS30-A006 (Invited)

Empirical Values of Branching Ratios in the Three-Body Recombination Reaction for O(1S) and O2(0,0) Airglow

Chemistry

Yolian AMARO-RIVERA^{1‡+}, Tai-Yin HUANG², Julio URBINA¹, Fabio VARGAS³

¹Pennsylvania State University, ²Penn State Lehigh Valley, ³University of Illinois at Urbana–Champaign

AS30-D4-AM2-319A-010 | AS30-A010

Simulation Study for Sensing the Middle and Upper Atmosphere Using the Molecular and Atomic Oxygen Lines Selected for SMILES-2

Philippe BARON^{1‡+}, Satoshi OCHIAI¹, Richard LARSSON², Hideo SAGAWA³, Makoto SUZUKI⁴, Masato SHIOTANI⁵

¹National Institute of Information and Communications Technology,

²Mac Planck Institute for Solar System Research, ³Kyoto Sangyo

University, ⁴Japan Aerospace Exploration Agency, ⁵Kyoto University

AS30-D4-AM2-319A-011 | AS30-A011 (Invited)

Satellite Observation of the Whole Atmosphere -

 $Superconducting\ Submillimeter-Wave\ Limb-Emission$

Sounder (SMILES-2)

Masato SHIOTANI^{1‡+}, A. SAITO¹, Satoshi OCHIAI², Takatoshi SAKAZAKI¹, Philippe BARON², Takumi ABE³
¹Kyoto University, ²National Institute of Information and Communications Technology, ³Japan Aerospace Exploration Agency

AS30-D4-AM2-319A-012 | AS30-A016

Empirical Model of Nitric Oxide in the Mesosphere from

SCIAMACHY/Envisat Satellite Observations

Stefan BENDER $^{1\#+}$, Miriam SINNHUBER 2 , Patrick ESPY 1,3 , John BURROWS 4

¹Norwegian University of Science and Technology, ²Karlsruhe Institute of Technology, ³University of Bergen, ⁴University of Bremen

AS41 / Extreme Weather Resiliency: Prediction and Response Strategies

Thu - 07 Jun | MR302B

Time 08:30 - 10:30

Chair(s) Pay-Liam LIN, National Central University

AS41-D4-AM1-302B-001 | AS41-A036

Us-Taiwan Partnership for International Research and

Education on Extreme Weather and Decision-making

Everette JOSEPH¹*, Pay-Liam LIN², Chris THORNCROFT¹, Huang-Hsiung HSU³, Wei-Chyung WANG¹, Ryan TORN¹, Shu-Chih YANG², Ming-Jen YANG⁴, Qilong MIN¹, Terri ADAMS⁵, Ya-Pin LYU⁶

¹University at Albany, State University of New York, ²National Central University, ³Academia Sinica, ⁴National Taiwan University, ⁵Howard University, ⁶Taiwan Typhoon and Flood Research Institute AS41-D4-AM1-302B-002 | AS41-A034 (Invited)

Changes in Extreme Precipitation in the Northeast United

States: 1979-2014

Chris THORNCROFT^{1#+}, Macy HOWARTH¹, Lance BOSART¹
¹University at Albany, State University of New York

AS41-D4-AM1-302B-003 | AS41-A015 (Invited)

Future Change in Spring Drought and its Impact on Water Resource in Taiwan

Huang-Hsiung HSU^{1z+} , Chun-Hsiung $WENG^1$, Ping-Gin $CHIU^1$, Chuan-Yao LIN^1 , Tzu-Ming LIU^2

¹Academia Sinica, ²National Science and Technology Center for Disaster Reduction

AS41-D4-AM1-302B-004 | AS41-A013

Heat Stress Changes over East Asia Under 1.5°C and 2°C

Global Warming Target

Sang-Min LEE^{1#+}, Seung-Ki MIN¹
¹Pohang University of Science and Technology

AS41-D4-AM1-302B-005 | AS41-A019

Analysis and Simulations of a Heavy Rainfall Event over

Northern Taiwan During 11-12 June 2012

Yi-Leng CHEN1#+, Pay-Liam LIN2

¹University of Hawaii at Manoa, ²National Central University

AS41-D4-AM1-302B-006 | AS41-A017

A Comparison Study of Summer Season Raindrop Size

Distribution Between Palau and Taiwan, Two Islands in

Western Pacific

Pay-Liam LIN 1* , Balaji Kumar SEELA 1,2 , Jayalakshmi JANAPATI 1 , Krishna Reddy KRISHNAREDDIGIARI 3 , Pao WANG 2,4

¹National Central University, ²Academia Sinica, ³Yogi Vemana University, ⁴University of Wisconsin-Madison

Time 11:00 - 12:30

Chair(s) Pay-Liam LIN, National Central University

AS41-D4-AM2-302B-007 | AS41-A035 (Invited)

Where the Rubber Meets the Road: An Examination of

Contextual Factors that Impact the Decisions Made by

Emergency Managers During Severe Weather Events

Terri ADAMS $^{1\sharp *}$, Ya-Pin LYU², Shadya SANDERS¹, Kenya GOODS¹

¹Howard University, ²Taiwan Typhoon and Flood Research Institute

AS41-D4-AM2-302B-008 | AS41-A005

A Cross-Cultural Examination of the Intersection of Trust in

Forecast Information and Response to Warnings

Ya-Pin LYU1#+, Terri ADAMS2

¹Taiwan Typhoon and Flood Research Institute, ²Howard University

AS41-D4-AM2-302B-009 | AS41-A011

Process-Based Evaluation of Stochastic Perturbed

Parameterization Tendencies on Convective-Resolving

Ensemble Forecasts of Heavy Rainfall Events in New York and

Taiwan

Kevin LUPO^{1‡+}, Shu-Chih YANG², Ryan TORN¹
¹University at Albany, State University of New York, ²National Central University

AS41-D4-AM2-302B-010 | AS41-A033

Investigation of the Sensitivity of Very Short-Term Extreme

Precipitation Forecast in Taiwan by a WRF-Based

Convective-Scale Assimilation System: A Case Study of the

Afternoon Thunderstorm on 16 June 2008

 $Hsiang\text{-}Wen\ CHENG^{{\scriptscriptstyle 1\sharp}*},\ Shu\text{-}Chih\ YANG^{{\scriptscriptstyle 1}},\ Ching\text{-}Sen\ CHEN^{{\scriptscriptstyle 1}}$

¹National Central University

AS41-D4-AM2-302B-011 | AS41-A001

Cell Merger Processes in the Afternoon Thunderstorm Event at

Taipei on 14 June 2015

Jyong-En MIAO1+, Ming-Jen YANG1#

¹National Taiwan University

Time 13:30 - 15:30

Chair(s) Pay-Liam LIN, National Central University

Everette JOSEPH, University at Albany, State University

of New York

AS41-D4-PM1-302B-012 | AS41-A012 (Invited)

On the Predictability of Hurricane Irma's Precipitation

Forecasts During Landfall

Ryan TORN^{1#+}, Rosa VARGAS MARTES¹

¹University at Albany, State University of New York

AS41-D4-PM1-302B-013 | AS41-A023 (Invited)

Application of a High-Resolution Global Model to Forecast of

Typhoons Impinging Taiwan

Ching-Yuang HUANG1#+

¹National Central University

AS41-D4-PM1-302B-014 | AS41-A021

Examining the Predictability of the Extreme Precipitation Event in Taiwan During 1-3 June 2017 Using the Convective-Scale

Ensemble Prediction

Hsiang-Wen CHENG $^{\!\scriptscriptstyle 17}$, Shu-Chih YANG $^{\!\scriptscriptstyle 1+}$, Kevin LUPO², Ryan TORN², Ching-Sen CHEN¹

¹National Central University, ²University at Albany, State University of New York

AS41-D4-PM1-302B-015 | AS41-A007

Identifying Non-Meteorological Signal Using Modified Fuzzy-Logic Algorithm with Objectively Derived Weighting Matrix

Ju-Yu CHEN $^{1\sharp *},$ Wei-Yu CHANG 2, Ke-Xin LU 1, Yu-Chieng LIOU 1, Tai-Chi CHEN WANG 1

¹National Central University, ²Chinese Culture University

AS41-D4-PM1-302B-016 | AS41-A020

A Comparison Study of Tropical Cyclones Raindrop Size

Distribution Characteristics Between Indian and Pacific Ocean

Balaji Kumar SEELA^{1,2+}, Jayalakshmi JANAPATI¹, Pay LIAM^{1‡}, Pao WANG^{2,3}, Krishna Reddy KRISHNAREDDIGIARI⁴, Chi-Huei TSENG⁵, Lei FENG⁵, T. N. RAO⁶

¹National Central University, ²Academia Sinica, ³University of Wisconsin-Madison, ⁴Yogi Vemana University, ⁵Taiwan Typhoon Flood Research Institute, ⁶National Atmospheric Research Laboratory

AS41-D4-PM1-302B-017 | AS41-A029

Numerical Simulation of the Aerosol Impacts on a Winter Storm in Upstate New York Using a WRF-SBM Model $\label{eq:WRF-SBM} \mbox{Model}$ $\mbox{Qilong MIN}^{1s+}, \mbox{Yuyi } \mbox{DU}^1$

¹University at Albany, State University of New York

AS41-D4-PM1-302B-018 | AS41-A025

Analysis of Using Different Microphysics Schemes for

Ensemble Forecasts During SoWMEX-IOP8

Chin-Hung CHEN^{1‡+}, Kaoshen CHUNG¹, Shu-Chih YANG¹
¹National Central University

AS41-D4-PM1-302B-019 | AS41-A028

Numerical Simulation of the Orographic Influences on a

Winter Storm in Upstate New York from a Microphysics

Perspective

Yuyi DU1#+, Qilong MIN1

¹University at Albany, State University of New York

AS42 / Satellite Data Assimilation and Applications for the Weather Forecasting and Climate Study

Thu - 07 Jun | MR303A

Time 08:30 - 10:30

Chair(s) Chian-Yi LIU, National Central University

Kozo OKAMOTO, JMA/MRI

AS42-D4-AM1-303A-001 | AS42-A014 (Invited)

Challenges and Progress on the Assimilation of Satellite Hyperspectral Infrared Sounder Data in Cloudy Skies in Numerical Weather Prediction Models

Jun LI1#+

¹University of Wisconsin-Madison

AS42-D4-AM1-303A-002 | AS42-A008 (Invited)

Evaluation and Assimilation of FY-4A Data in Grapes Wei HAN^{1#+}

¹Numerical Weather Prediction Center of Chinese Meteorological Administration

AS42-D4-AM1-303A-003 | AS42-A013

A Study on Bias Characterization of Himawari-8/AHI Clear Sky Radiance Using RTTOV and CRTM

Inchul SHIN $^{1\sharp\star}$, Boram KIM 1 , Chu-Yong CHUNG 1 , Seonkyun BAEK 1

¹Korea Meteorological Administration

AS42-D4-AM1-303A-004 | AS42-A003

Added Value of Assimilating Himawari-8 AHI Water Vapor Radiances on Analyses and Forecasts for Beijing "7.19" Severe Storm

Zhiquan LIU1#+, Yuanbing WANG2

¹National Center for Atmospheric Research, ²Nanjing University of Information Science & Technology

AS42-D4-AM1-303A-005 | AS42-A005

Preliminary Evaluation and Assimilation of All-Sky Infrared Radiances of Himawari-8 in the Regional and Global Data

Assimilation System at JMA

Kozo OKAMOTO^{1‡+}, Yohei SAWADA¹, Masaru KUNII¹, Tempei HASHINO², Takeshi IRIGUCHI¹, Masayuki NAKAWAGA¹
¹Japan Meteorological Agency, ²Kyushu University

AS42-D4-AM1-303A-006 | AS42-A004

Development of a Total Precipitable Water (TPW) Retrieval Algorithm Using Artificial Neural Network (ANN) for Short-Term Severe Weather Forecasting Yeonjin LEE^{1g+}, Myoung Hwan AHN¹, Su Jeong LEE¹

¹Ewha Womans University

AS42-D4-AM1-303A-007 | AS42-A020

Impacts of Sequential Data Assimilation of Microwave Brightness Temperature on Rainfall Prediction in Meso-Scale

Numerical Weather Simulation

Kenji TANIGUCHI^{1#+}
¹Kanazawa University

Time 11:00 - 12:30

Chair(s) Myoung Hwan AHN, Ewha Womans University

AS42-D4-AM2-303A-008 | AS42-A021

Dust-Contaminated IR Radiance Impact on Data Assimilation for NWP

Jared MARQUIS^{1,*}, Mayra OYOLA², James CAMPBELL³, Ben RUSTON³, Travis TOTH¹, Jianglong ZHANG¹
¹University of North Dakota, ²American Society for Engineering Education, ³Naval Research Laboratory

AS42-D4-AM2-303A-009 | AS42-A022

Forecasts of Asian Dust Storms Using Geostationary Satellite

Data and a Regional Model

Kyoung-Min KIM¹*, Si-Wan KIM¹, Myungje CHOI¹, Mijin KIM¹, Hyunkwang LIM¹, Jhoon KIM¹

¹Yonsei University

AS42-D4-AM2-303A-010 | AS42-A012

The Assimilation of FY-3C GNOS GPS Radio Occultation Observations within Grapes 3D-Var: Assimilation Experiments and Forecast Impact

Jincheng WANG1#+

¹China Meteorological Administration

AS42-D4-AM2-303A-011 | AS42-A011

Spatial Distribution and Temporal Variation of OMI Retrieved

SO2 and NO2 and Aqua/MODIS AOD over East Asia Chin-An LIN^{1‡+}, Chian-Yi LIU²

¹Academia Sinica, ²National Central University

AS43-44 / Atmospheric Blocking and Improvement of Earth System Modeling

Thu - 07 Jun | MR303B

Time 08:30 - 10:30

Chair(s) Joong-Bae AHN, Pusan National University

AS43-44-D4-AM1-303B-001 | AS43-44-A003 (Invited)

Interdecadal Anomaly of Winter Blocking Activity over the Ural Mountains Modulated by the Atlantic Multidecadal Oscillation (AMO)

Shuanglin LI1,2*+, Xiaomin ZHOU1, Walter ROBINSON3, Yongqi GAO1

¹Chinese Academy of Sciences, ²China University of Geosciences, ³North Carolina State University

AS43-44-D4-AM1-303B-002 | AS43-44-A013

Future Projection of North Pacific Blocking Under Globally

Warmed Climate

Joong-Bae AHN^{1‡*}, Doo Young LEE², Kyo-Moon SHIM³, Myung-Pyo JUNG³
¹Pusan National University, ²Barcelona Supercomputing Center,

³National Institute of Agricultural Sciences

AS43-44-D4-AM1-303B-003 | AS43-44-A001 (Invited)

Eurasian Cold Surges Caused by Blockings Due to a Nonlinear Reflection of Stratospheric Planetary Waves in December 2012

Kunihiko KODERA^{1‡+}, Hitoshi MUKOUGAWA²
¹Meteorological Research Institute, ²Kyoto University

AS43-44-D4-AM1-303B-004 | AS43-44-A014

Linking Euro-Atlantic Blocking and Eddy-Driven Jet Variability

Camille LI^{1,2#+}, Erica MADONNA¹, Christian GRAMS³, Tim WOOLLINGS⁴

¹University of Bergen, ²Bjerknes Centre for Climate Research, ³Karlsruhe Institute of Technology, ⁴University of Oxford

AS43-44-D4-AM1-303B-005 | AS43-44-A005

Impact of Snow Cover in Western and Central China on Boreal Winter Blocking

Yeon-Woo CHOI^{1#+}, Joong-Bae AHN¹
¹Pusan National University

AS43-44-D4-AM1-303B-006 | AS43-44-A009

Influence of Boreal Summer Blocking on Circulation in East
Asia

Ha-Gyu JEONG^{1#+}, Yong-Jun PARK¹, Yeon-Woo CHOI¹, Chan-Yeong SONG¹

¹Pusan National University

Time 11:00 - 12:30

Chair(s) Wei-Liang LEE, Acadenia Sinica

Joong-Bae AHN, Pusan National University

AS43-44-D4-AM2-303B-007 | AS43-44-A021

AIRS Obs4MIPs V2 Dataset

Baijun TIAN1,2#+

¹Jet Propulsion Laboratory, California Institute of Technology,

²University of California, Los Angeles

AS43-44-D4-AM2-303B-008 | AS43-44-A015

Surface Warming Patterns Dominate the Uncertainty in the

Water Vapor Plus Lapse Rate Feedback

Jian MA1#+

¹Shanghai Ocean University

AS43-44-D4-AM2-303B-009 | AS43-44-A022

Evaluation of Taiwan Earth System Model

Wei-Liang LEE^{1#+}, Huang-Hsiung HSU¹, Chein-Jung SHIU¹, Yi-Chi WANG¹, I-Chun TSAI¹, Jen-Ping CHEN², Yung-Yao LAN¹ ¹Academia Sinica, ²National Taiwan University

AS43-44-D4-AM2-303B-010 | AS43-44-A018

Simulating Clouds and Precipitation Changes in a Warmer

Climate Using TaiESM with Inclusion of a Two Moment

Cloud Microphysics in CPS

Chein-Jung SHIU¹ª+, Chao-An CHEN¹, Yi-Hsuan CHEN², I-Chun TSAI¹, Wei-Ting CHEN³, Jen-Ping CHEN³, Huang-Hsiung HSU¹ ¹Academia Sinica, ²University of Michigan, ³National Taiwan University

AS43-44-D4-AM2-303B-011 | AS43-44-A020

The Radiative Impacts of Precipitating Ice Hydrometeors on

Tropical Atmosphere over the Pacific in the Warmer Climate

Chao-An CHEN^{1#}, Jui-Lin (Frank) LI², Wei-Liang LEE¹, Huang-Hsiung HSU¹, Mark RICHARDSON², Jia-Yuh YU³ ¹Academia Sinica, ²Jet Propulsion Laboratory, California Institute of Technology, ³National Central University

AS43-44-D4-AM2-303B-012 | AS43-44-A023

Impacts of Convective Trigger Designs on Global Rainfall

Regimes

Yi-Chi WANG^{1#+}
¹Academia Sinica

AS45 / Middle Atmosphere Science

Thu - 07 Jun | MR319A

Time 13:30 - 15:30

Chair(s) Hye-Yeong CHUN, Yonsei University

Zeyu CHEN, Chinese Academy of Sciences

AS45-D4-PM1-319A-001 | AS45-A006 (Invited)

What Do We Really Know About the QBO Behavior over the

Last 150 years?

Kevin HAMILTON^{1‡+}, Takatoshi SAKAZAKI²
¹International Pacific Research Center, ²Kyoto University

AS45-D4-PM1-319A-002 | AS45-A009

Influences of the 11-Year Sunspot Cycle and Polar Vortex

Oscillation on the Observed Winter Temperature Variations in

China

Chunhui LU1#+

¹China Meteorological Administration

AS45-D4-PM1-319A-003 | AS45-A008

Hindcasts of the 2016 Disruption of the Stratospheric

Quasi-Biennial Oscillation

Shingo WATANABE^{1#}, Kevin HAMILTON², Scott OSPREY³,

Yoshio KAWATANI¹, Eriko NISHIMOTO¹

¹Japan Agency for Marine-Earth Science and Technology,

²International Pacific Research Center, ³University of Oxford

AS45-D4-PM1-319A-004 | AS45-A005

The Stratospheric Aerosol and Gas Experiment III /

International Space Station Mission: Ozone and Trace Gas

Morphology

Richard ECKMAN^{1#+}

¹National Aeronautics and Space Administration

AS45-D4-PM1-319A-005 | AS45-A003

A Case Study of Mass Transport Associated with the East-West

Oscillation of the Asian Summer Monsoon Anticyclone

Jiali LUO1#+

¹Lanzhou University

AS45-D4-PM1-319A-006 | AS45-A016

Role of Finite-Amplitude Wave Activity and Mixing in Eddy

Forcing During Stratospheric Sudden Warming

Sandro LUBIS^{1#+}, Clare HUANG¹, Noboru NAKAMURA¹

¹University of Chicago

Time 16:00 - 18:00

Chair(s) Zeyu CHEN, Chinese Academy of Sciences

Hye-Yeong CHUN, Yonsei University

AS45-D4-PM2-319A-007 | AS45-A015 (Invited)

The Quasi-Biennial Oscillation Modulation by the El Nino **Southern Oscillation**

Yoshio KAWATANI1#+, Kevin HAMILTON2, Kaoru SATO3, Shingo WATANABE¹, Tim DUNKERTON⁴, Kazuyoshi KIKUCHI⁵

¹Japan Agency for Marine-Earth Science and Technology, ²International Pacific Research Center, ³The University of Tokyo, ⁴NorthWest Research Associates, ⁵University of Hawaii at Manoa

AS45-D4-PM2-319A-008 | AS45-A039

Thorough Survey of Zonal Mean Influence of the Stratospheric QBO on the Tropospheric Circulations and Moist Convection Shigeo YODEN1#+, Eriko NISHIMOTO2

¹Kyoto University, ²Japan Agency for Marine-Earth Science and Technology

AS45-D4-PM2-319A-009 | AS45-A026

Impact and Predictability of Antarctic

Stratosphere-Troposphere Coupling

Eun-Pa LIM1#+, Harry HENDON1

¹Bureau of Meteorology

AS45-D4-PM2-319A-010 | AS45-A030

Responses of Quasi-2-Day Waves in the MLT Region to the 2013 SSW Revealed by a Meteor Radar Chain

Yun GONG^{1#+}, Zheng MA¹, Shaodong ZHANG¹, Qihou ZHOU², Chunming HUANG¹, Kaiming HUANG¹, You YU^{3,4}, Guozhu LI³, Baiqi NING³

¹Wuhan University, ²Miami University, ³Chinese Academy of Sciences, ⁴University of Chinese Academy of Sciences

AS45-D4-PM2-319A-011 | AS45-A035

Characteristics and Sources of Inertia-Gravity Waves Revealed in Operational Radiosonde at Jang Bogo Station (JBS),

Ji-Hee YOO1+, Taejin CHOI2, Hye-Yeong CHUN1#, Young-Ha KIM3, In-Sun SONG2, Byeong-Gwon SONG1 ¹Yonsei University, ²Korea Polar Research Institute, ³Ewha Womans University

AS45-D4-PM2-319A-012 | AS45-A012

Discovery of a Lunar Air Temperature Tide over the Ocean: A Diagnostic of Air-Sea Coupling

Takatoshi SAKAZAKI^{1#+}, Kevin HAMILTON² ¹Kyoto University, ²International Pacific Research Center

AS45-D4-PM2-319A-013 | AS45-A032

Three-Dimensional Structure of Planetary and Gravity Wave Forcing During the Evolution of the January 2009 Stratospheric Sudden Warming Revealed in MERRA

Byeong-Gwon SONG1#+, Hye-Yeong CHUN1 ¹Yonsei University

AS50 / Interactions Between Indo-pacific Ocean and Asian Monsoon

Thu - 07 Jun | MR303A

Time 13:30 - 15:30

Jianping LI, Beijing Normal University Chair(s)

> Yun QIU, State Oceanic Administration Lin LIU, State Oceanic Administration

AS50-D4-PM1-303A-001 | AS50-A012

A Decadal Drought Event in Southwest China Associated with Asia Monsoon Anormaly and Global Warming

Xingang DAI1#+

¹Chinese Academy of Sciences

AS50-D4-PM1-303A-002 | AS50-A013

Integrated Research Project on the Collaborative Influences of Atmosphere-Land Coupling over the Tibetan Plateau and Oceans

Yimin LIU1#+

¹Chinese Academy of Sciences

AS50-D4-PM1-303A-003 | AS50-A015

Modulation of Tropical Cyclone Activities over the Western North Pacific by the Intra-Seasonal Indo-Western Pacific

Convection Oscillation During the Boreal Extended Summer

Qiuyun WANG1#+, Jianping LI1, Yanjie LI2, Jiaqing XUE2, Yazhou ZHANG¹, Yidan XU¹, Yuehong WANG¹, Jiayu ZHENG³, Jingwen ZHANG⁴

¹Beijing Normal University, ²Chinese Academy of Sciences, ³Second Institute of Oceanography, 4Chendu Meteorological Bureau

AS50-D4-PM1-303A-004 | AS50-A010

Intraseasonal Variability of Ocean Temperatures in the Bay of Bengal and South China Sea Forced by the 30-60-Day Boreal Summer Atmospheric Intraseasonal Oscillation Jiangyu MAO1#+

¹Chinese Academy of Sciences

AS50-D4-PM1-303A-005 | AS50-A024

Onset Processes of Summer Cross-Equatorial Flows over the Eastern Hemisphere and Their Connection to the Asian Summer Monsoon

Xue HAN1#+

¹National Marine Environmental Forecasting Center

Time 16:00 - 18:00

Chair(s) Yimin LIU, Chinese Academy of Sciences

> Lin LIU, State Oceanic Administration Lin LIU, State Oceanic Administration

AS50-D4-PM2-303A-006 | AS50-A018

The Impact of Layer Perturbation Potential Energy on the East Asian Summer Monsoon

Jianping LI1#+, Lidou HUYAN2, Sen ZHAO3,4, Cheng SUN1, Di DONG2, Ting LIU5, Yufei ZHAO6

¹Beijing Normal University, ²Chinese Academy of Sciences, ³University of Hawaii at Manoa, ⁴Nanjing University of Information Science & Technology, 5Second Institute of Oceanography, 6China Meteorological Administration

AS50-D4-PM2-303A-007 | AS50-A002

Change in Coherence of Interannual Variability of Summer Rainfall over the Western Pacific Around the Early 2000s: Role of Indo-Pacific Ocean Forcing

Zhuoqi HE1#+, Renguang WU1, Weiqiang WANG1 ¹Chinese Academy of Sciences

AS50-D4-PM2-303A-008 | AS50-A007

Indian Ocean Warming and East Asian Atmospheric Rivers in

Post El Niño Summer

Youichi KAMAE^{1#+}, Wei MEI², Shang-Ping XIE³, Moeka NAOI¹, Hiroaki UEDA1

¹University of Tsukuba, ²University of North Carolina at Chapel Hill, ³University of California San Diego

AS50-D4-PM2-303A-009 | AS50-A014

Responses of Near-Inertial Motions in the Upper Layer of

Central Bay of Bengal to Monsoon Transition

Shanwu ZHANG1#+, Yun QIU2, Fuwen QIU1, Jing CHA1, Junqiang SHEN1

¹State Oceanic Administration, ²Third Institute of Oceanography, State Oceanic Administration

AS50-D4-PM2-303A-010 | AS50-A004

Sea Surface Temperature Anomalies in the South China Sea **During Mature Phase of ENSO**

Fuwen QIU1#+, Ai-Jun PAN1, Shanwu ZHANG1, Jing CHA1

¹State Oceanic Administration

AS50-D4-PM2-303A-011 | AS50-A005

The Asymmetric Influence of the Positive and Negative IOD

Events on China's Rainfall

Yun QIU1#+, Wenju CAI2,3

¹Third Institute of Oceanography, State Oceanic Administration, ²Ocean University of China and Qingdao National Laboratory for Marine Science and Technology, 3Commonwealth Scientific and Industrial Research Organisation

AS50-D4-PM2-303A-012 | AS50-A016

Impact of the South China Sea Summer Monsoon on the

Indian Ocean Dipole

Yazhou ZHANG1#+, Jianping LI1, Jiaqing XUE2, Juan FENG1, Yidan XU1, Yuehong WANG1, Qiuyun WANG1 ¹Beijing Normal University, ²Chinese Academy of Sciences

AS51 / Frontiers and Challenges in the Applications of Radiative Transfer

Thu - 07 Jun | MR326B

Time 16:00 - 18:00

Chair(s) Xianglei HUANG, University of Michigan

Wei-Liang LEE, Academia Sinica

Dan FELDMAN, Lawrence Berkeley National Laboratory

AS51-D4-PM2-326B-001 | AS51-A014

Simultaneous Use of Successive Orders and Discrete Ordinates

Methods in the Radiative Transfer Applications

Sergev KORKIN1#+, Alexei LYAPUSTIN2

¹Universities Space Research Association GESTAR, ²NASA Goddard Space Flight Center

AS51-D4-PM2-326B-002 | AS51-A011

Impact of Radiation-Topography Interaction on Surface Energy

Budget over the Tibetan Plateau in GCM Simulations

Wei-Liang LEE1#+, Kuo-Nan LIOU2, Yu GU2, Chia-Chi WANG3, Huang-Hsiung HSU1

¹Academia Sinica, ²University of California, Los Angeles, ³Chinese Culture University

AS51-D4-PM2-326B-003 | AS51-A009

Prediction of Time Series Pattern of Surface Solar Irradiance

Using Cloud Properties Derived from Satellite Observation

Takeshi WATANABE1#+, Daisukae NOHARA1 ¹Central Research Institute of Electric Power Industry

AS51-D4-PM2-326B-004 | AS51-A005

Spectral Decomposition of Cloud Radiative Effect and Cloud

Radiative Feedbacks

Xianglei HUANG1#+, Xiuhong CHEN1, Qing YUE2 ¹University of Michigan, ²Jet Propulsion Laboratory, California Institute of Technology

AS51-D4-PM2-326B-005 | AS51-A008

Remote Sensing of Planetary Boundary Layer Water Vapor and

 $Temperature\ Using\ Multi-Spectral\ H2O\ Absorption\ Bands$

Zhao-Cheng ZENG^1**, Chao LIU^1, Tianhao LE^1, Vijay NATRAJ^1, Stanley SANDER^1, Yuk YUNG^1

¹California Institute of Technology

AS51-D4-PM2-326B-006 | AS51-A010

 $Reconstruction\ of\ a\ Deep\ Convective\ Cloud's\ Outer\ Shape$

Using MISR/Terra Data and Simplified 3D Radiative Transfer

Anthony DAVIS1\$+, Guillaume BAL2, Celine CORNET3, David DINER1

¹Jet Propulsion Laboratory, California Institute of Technology, ²University of Chicago, ³Université Lille 1

AS56 / Haze: Chemistry, Physics, Meteorology, Emissions, Climate, Processing, Fog, and More. Looking Across Spatial Scales from Regional to Global

Thu - 07 Jun | MR326B

Time 08:30 - 10:30

Chair(s) Yun QIAN, Pacific Northwest National Laboratory

Jason Blake COHEN, Sun Yat-Sen University

AS56-D4-AM1-326B-001 | AS56-A031 (Invited)

Air Pollution - Boundary Layer - Weather Interactions in Asia

Aijun DING1#+, Xin HUANG1, Congbin FU1

¹Nanjing University

AS56-D4-AM1-326B-002 | AS56-A029

Pre-Industrial Age Atmospheric Carbonyl Sulfide Studied by 1-D Photochemical Model

Sebastian DANIELACHE^{1‡+}, Masumi SHINKAI¹, Gen IWAMA¹ ¹Sophia University

AS56-D4-AM1-326B-003 | AS56-A027

Surface Energy Budget Observed over a Winter Wheat Field in the North China Plain During a Foggy Haze Event in 2016-2017

Winter

Zhiqiu GAO1#+

¹Nanjing University of Information Science & Technology

AS56-D4-AM1-326B-004 | AS56-A010

Microstructures and Temporal Variation Characteristics

During a Sea Fog Event Along the West Coast of the Taiwan

Strait

Shuxian FAN^{1#+}

¹Nanjing University of Information Science & Technology

AS56-D4-AM1-326B-005 | AS56-A030

 $Spatiotemporal\ Ozone\ Characteristics\ at\ Urban,\ Suburban,\ and$

Rural Sites of Shenzhen

Dian HUANG¹+, Qinglan LI¹#, Deli WANG², Shuxin WANG², Guangxin LI¹, Xiaoxue WANG¹, Liqun SUN¹

¹Chinese Academy of Sciences, ²Shenzhen Meteorological Bureau

AS56-D4-AM1-326B-006 | AS56-A009

Decadal Variability in the Occurrence of Wintertime Haze in

Central Eastern China Tied to the Pacific Decadal Oscillation Sen ZHAO^{1,2+}, Jianping LI^{3‡}, Cheng SUN³

¹University of Hawaii at Manoa, ²Nanjing University of Information Science & Technology, ³Beijing Normal University

AS56-D4-AM1-326B-008 | AS56-A023

Recent Intensification of Winter Haze in China Linked to

Foreign Emissions and Meteorology

Yang YANG¹[‡], Hailong WANG¹, Steven SMITH¹, Rudong ZHANG¹, Sijia LOU¹, Yun QIAN¹, Po-Lun MA¹, Philip RASCH¹
¹Pacific Northwest National Laboratory

AS56-D4-AM1-326B-007 | AS56-A012

The Impact of Future Energy Use on Regional Air Quality in

Southeast Asia

Hsiang-He LEE^{1‡+}, Oussama IRAQUI², Chien WANG³
¹Singapore-MIT Alliance for Research and Technology, ²National Institute of Applied Science of Lyon, ³Massachusetts Institute of Technology

Time 11:00 - 12:30

Chair(s) Jianping GUO, Chinese Academy of Meteorological

Sciences

Jason Blake COHEN, Sun Yat-Sen University

AS56-D4-AM2-326B-009 | AS56-A003 (Invited)

Insights into the Climatology of Boundary Layer Height in

China and its Association with Aerosol Pollution: A

Radiosonde Perspective

Jianping GUO1#+

¹Chinese Academy of Meteorological Sciences

AS56-D4-AM2-326B-010 | AS56-A034

Satellite View of Aerosols over India: Implications for Air

Quality and Climate

Falguni PATADIA1#+, Robert LEVY², Pawan GUPTA23, Lorraine REMER4.5

¹NASA GSFC / MSU, ²NASA Goddard Space Flight Center, ³Universities Space Research Association, ⁴University of Maryland, Baltimore County, ⁵Airphoton LLC AS56-D4-AM2-326B-011 | AS56-A013

Agricultural Burning and Air Quality over Northern India: A Satellite Perspective

Hiren JETHVA1 $^{\sharp *}$, Pawan GUPTA 2,3 , Omar TORRES 3 , Falguni PATADIA 4 , Duli CHAND 5

¹Universities Space Research Association/NASA Goddarad Space Flight Center, ²Universities Space Research Association, ³NASA Goddard Space Flight Center, ⁴NASA GSFC / MSU, ⁵Pacific Northwest National Laboratory

AS56-D4-AM2-326B-012 | AS56-A018

Variability of Particulate Matter Concentrations During Dense Winter Fog Period in Northeastern Pakistan

Imran SHAHID^{1‡+}, Farrukh CHISHTIE¹, Muhammad SHAHID²
¹Institute of Space Technology, ²Qatar Energy and Environment
Research Institute

AS56-D4-AM2-326B-013 | AS56-A006

Deducting Polluted Asian Aerosol Chemical, Optical, and Source Properties Using Decadal Scale Aeronet Measurements and a MIE Model

Shengjun XI^{1#+}, Jason COHEN¹
¹Sun Yat-sen University

Time 13:30 - 15:30

Chair(s) Hong LIAO, Nanjing University of Information Science

and Technology

Jason Blake COHEN, Sun Yat-Sen University

AS56-D4-PM1-326B-014 | AS56-A019 (Invited)

Increased Frequency of Beijing Winter Severe Haze Events Contributed by Greenhouse Warming

Hong LIAO1#+

¹Nanjing University of Information Science & Technology

AS56-D4-PM1-326B-015 | AS56-A002

Impacts of High Time and Spatial Frequency Multi-Satellite Constrained Aerosol and Precursor Emissions Using CAM5

Ruoyu LAN1#+, Jason COHEN1

¹Sun Yat-sen University

AS56-D4-PM1-326B-016 | AS56-A026

OMI Observation of SO2 Transport from East Asia

Yan ZHANG1,2#+

¹Earth System Science Interdisciplinary Center, UMD, ²Atmospheric Chemistry and Dynamics Laboratory

AS56-D4-PM1-326B-017 | AS56-A028

Emissions and Deposition of Atmospheric Reactive Nitrogen over China

Lin ZHANG^{1#+}, Youfan CHEN¹, Yuanhong ZHAO¹
¹Peking University

AS56-D4-PM1-326B-018 | AS56-A005

Decadal Surface Deposition Measurements, Reanalysis Meteorology, and Remotely Sensed Measurements to Constrain the Impacts of Asian Haze on the Environment Qiuyang CHEN^{1‡+}, Jason COHEN¹
¹Sun Yat-sen University

AS56-D4-PM1-326B-019 | AS56-A017

Dipole Like Aerosol Variability in East China Associated with El Nino

Jing LI1#+

¹Peking University

AS56-D4-PM1-326B-020 | AS56-A007

Global Quantification of Haze Sources Using a Top-Down Approach Based on MOPITT, MISR, AERONET, CALIOP, and the CESM Model

Chuyong LIN^{1#+}, Jason COHEN¹
¹Sun Yat-sen University

AS56-D4-PM1-326B-021 | AS56-A011

Climate and Health Impacts of Globalizing Air Pollution

Jintai LIN 1* , Qiang ZHANG 2 , Dabo GUAN 3 , Steven DAVIS 4 , Yi HUANG 5 , Kebin HE 2 , Da PAN 6 , Ruijing NI 1 , Dan TONG 2 , Hongyan ZHAO 2

¹Peking University, ²Tsinghua University, ³University of East Anglia, ⁴University of California, Irvine, ⁵McGill University, ⁶Princeton University

BG03-IG / The Coupling of Monsoon Systems with Land and Ocean Biogeochemistry

Thu - 07 Jun | MR322A

Time 13:30 - 15:30

Chair(s) Benjamin POULTER, GSFC/NASA

Fiona KENG, Universiti Malaya

Prabir PATRA, RCGC/IACE/ACMPT, JAMSTEC

BG03-IG-D4-PM1-322A-001 | BG03-IG-A009 (Invited)

The Complex Coupling Between Urbanization, Agricultural

Intensification and the Indian Monsoons

Dev NIYOGI¹#+ ¹Purdue University BG03-IG-D4-PM1-322A-002 | BG03-IG-A007

The Impacts of Various Environments Factors and

Management Strategies on Food Crops in the South and

Southeast Asia Region

Atul JAIN1#+, Tzu-Shun LIN1

¹University of Illinois at Urbana-Champaign

BG03-IG-D4-PM1-322A-003 | BG03-IG-A003

Observed Vegetation-Climate Feedbacks on the

Asian-Australian Monsoon Systems

Yan YU1#-

¹Jet Propulsion Laboratory, California Institute of Technology

BG03-IG-D4-PM1-322A-004 | BG03-IG-A005

Delhi SMOG of 2016: Role of Local Emissions, Crop Residue

Burning and Monsoon Circulation

Ravi SAWLANI¹, Rajesh AGNIHOTRI¹, C. SHARMA¹, Prabir PATRA^{2,3‡+}, A. P. DIMRI⁴, Kirpa RAM⁵, Ramlal VERMA⁶

¹National Physical Laboratory, ²Japan Agency for Marine-Earth Science and Technology, ³Tohoku University, ⁴Jawaharlal Nehru University, ⁵Banaras Hindu University, ⁶Asian Institute of Technology

BG03-IG-D4-PM1-322A-005 | BG03-A002

Interannual Variation in Sinking Particle Flux in the East Sea

in Relation with Climate Variability

Minkyoung KIM^{1‡+}, Young-Il KIM², Kyung-Ae PARK¹, Jeomshik HWANG¹

¹Seoul National University, ²Korea Institute of Ocean Science & Technology

BG03-IG-D4-PM1-322A-006 | BG03-IG-A010

Nutrient-Poor Region Benefited from Madden-Julian

Oscillation-Driven Rainfall Thousand Kilometers Away

Chiung-Wen June CHANG¹⁸⁺, Huang-Hsiung HSU², Wee CHEAH³, Wan-Ling TSENG²

¹Chinese Cultural University, ²Academia Sinica, ³University of Malaya

BG03-IG-D4-PM1-322A-007 | BG03-IG-A008 (Invited)

Measurements of SO2, H2SO4, NO, HNO3, and NOy in the

UTLS in the Asian Summer Monsoon Anticyclone

Hans SCHLAGER1#+

¹German Aerospace Center (DLR)

BG04 / Current Status of Terrestrial Carbon Budget and Process Understanding

Thu - 07 Jun | MR304B

Time 08:30 - 10:30

Chair(s) Masayuki KONDO, Chiba University

Forrest M. HOFFMAN, Oak Ridge National Laboratory

BG04-D4-AM1-304B-001 | BG04-A004

Current States of Terrestrial Carbon Budget Estimates

Masayuki KONDO¹⁵⁺, Prabir PATRA^{2,3}, Stephen SITCH⁴, Kazuhito ICHII¹

¹Chiba University, ²Japan Agency for Marine-Earth Science and Technology, ³Tohoku University, ⁴University of Exeter

BG04-D4-AM1-304B-002 | BG04-A011 (Invited)

Assessing Uncertainty in the Terrestrial Carbon Cycle: An Analysis of Historical Simulations with the Community Land

Gordon BONAN1#+

¹National Center for Atmospheric Research

BG04-D4-AM1-304B-003 | BG04-A020 (Invited)

Regional Changes in Land-Atmospheric CO2 Exchance over Recent Decades Using Trendy DGVMs

Stephen SITCH1*, Anna HARPER1+, Pierre FRIEDLINGSTEIN1 $^1 University\ of\ Exeter$

BG04-D4-AM1-304B-004 | BG04-A021

Does Improving Model Processes Lead to Better Constraints on

Future Carbon Budgets?

Anna HARPER^{1,†}, Karina WILLIAMS², Chris HUNTINGFORD³, Anne VERHOEF⁴, Peter COX¹, Pier VIDALE⁴

¹University of Exeter, ²UK Met Office, ³Centre for Ecology and

Hydrology, 4University of Reading

BG04-D4-AM1-304B-005 | BG04-A013

Evaluating Simulated Terrestrial Carbon Cycles by Earth

System Models and Offline Models Using Data-Driven

Estimations

Kazuhito ICHII^{1,2‡+}, Hiroaki TAKAYAMA³, Tomohiro HAJIMA³, Masayuki KONDO¹, Prabir PATRA^{3,4}, Kaoru TACHIIRI³

¹Chiba University, ²National Institute for Environmental Studies,

³Japan Agency for Marine-Earth Science and Technology, ⁴Tohoku
University

BG04-D4-AM1-304B-006 | BG04-A003

Nonlinear Interactions Between Climate and Atmospheric Carbon Dioxide Drivers of Carbon Cycle Changes from 1850 to 2300

Forrest HOFFMAN^{1,2‡+}, James RANDERSON³, Keith LINDSAY⁴
¹Oak Ridge National Laboratory, ²University of Tennessee, Knoxville, ³University of California, Irvine, ⁴National Center for Atmospheric Research

BG04-D4-AM1-304B-007 | BG04-A007

Continuity of Multi-Sensor Vegetation Index Data Records: A Case Study from MODIS to VIIRS

Tomoaki MIURA1#+

¹University of Hawaii at Manoa

Time 11:00 - 12:30

Chair(s) Masayuki KONDO, Chiba University

Forrest M. HOFFMAN, Oak Ridge National Laboratory

BG04-D4-AM2-304B-008 | BG04-A001 (Invited)

Carbon Balance of Tropical Peat Ecosystems in Southeast Asia

Takashi HIRANO $^{1s+}$, Ryuichi HIRATA 2 , Kiwamu ISHIKURA 1 , Masayuki ITOH 3 , Ayaka SAKABE 4 , Frankie KIEW 1 , Guan Xhuan WONG 1 , Lulie MELLING 5 , Kitso KUSIN 6

¹Hokkaido University, ²National Institute for Environmental Studies, ³Kyoto University, ⁴Osaka Prefecture University, ⁵Sarawak Tropical Peat Research Institute, ⁶University of Palangkaraya

BG04-D4-AM2-304B-009 | BG04-A016

ENSO Effects on the Terrestrial Carbon Cycle in the Tropics Min XU¹⁵⁺, Forrest HOFFMAN^{1,2}, Paul LEVINE³, Nathan COLLIER¹

¹Oak Ridge National Laboratory, ²University of Tennessee, Knoxville, ³University of California, Irvine

BG04-D4-AM2-304B-010 | BG04-A012 (Invited)

How Does Ecosystem Memory Impact the Terrestrial Carbon Balance During ENSO Events?

A. Anthony BLOOM¹⁵*, Kevin BOWMAN¹, Alexandra G. KONINGS², Sassan SAATCHI¹, John WORDEN¹, Helen WORDEN³, Zhe JIANG³, Nicholas PARAZOO¹, Mathew WILLIAMS⁴, David SCHIMEL¹

¹Jet Propulsion Laboratory, California Institute of Technology, ²Stanford University, ³National Center for Atmospheric Research, ⁴University of Edinburgh

BG04-D4-AM2-304B-011 | BG04-A005

Quantifying the Effect of Changes in Climate-Driven Carbon

Cycle Extremes and Land Use Change on the Terrestrial

Carbon Budget Through Year 2300

Bharat SHARMA^{1*}, Forrest HOFFMAN^{2,3}, Jitendra KUMAR², Auroop R. GANGULY¹

¹Northeastern University, ²Oak Ridge National Laboratory, ³University of Tennessee, Knoxville

BG04-D4-AM2-304B-012 | BG04-A022

Assessing the Impact of the 2015-2016 El Niño on Global

Photosynthesis Using Satellite Remote Sensing

Xiangzhong LUO^{1#}, Trevor KEENAN²⁺

¹Lawrence Berkeley National Laboratory, ²UC Berkeley

Time 13:30 - 15:30

Chair(s) Forrest M. HOFFMAN, Oak Ridge National Laboratory

Masayuki KONDO, Chiba University

BG04-D4-PM1-304B-013 | BG04-A018 (Invited)

Enhanced Terrestrial Carbon Uptake and the Role of CO2 Fertilization

Trevor KEENAN^{1‡+}, Colin PRENTICE², Josep CANADELL³, Christopher WILLIAMS⁴, Han WANG⁵

¹UC Berkeley, ²Imperial College London, ³Commonwealth Scientific and Industrial Research Organisation, ⁴Clarke University, ⁵Northwest A&F University

BG04-D4-PM1-304B-014 | BG04-A019 (Invited)

Historical (1700-2012) Global Multi-Model Estimates of Fire

Emissions from Fire Modeling Intercomparison Project

Fang LI¹⁵⁺, Maria VAL MARTIN², Stijn HANTSON³, Silvia KLOSTER⁴, Brian MAGI⁵, Daniel WARD⁶, Dominique BACHELET⁷, Matthew FORREST⁸, Erik KLUZEK⁹, Gitta LASSLOP⁴, Stéphane MANGEON¹⁰, Joe MELTON¹¹, Chao YUE¹², Almut ARNETH³

¹Chinese Academy of Sciences, ²Sheffield University, ³Karlsruhe
Institute of Technology, ⁴Max Planck Institute for Meteorology,

⁵University of North Carolina at Charlotte, ⁶Princeton University,

⁷Oregon State University, ⁸Senckenberg Biodiversity and Climate
Research Institute, ⁹National Center for Atmospheric Research,

¹⁰Singapore-MIT Alliance for Research and Technology, ¹¹Environment
Canada, ¹²Institute Pierre Simon Laplace/ Université Paris-Saclay

BG04-D4-PM1-304B-015 | BG04-A010

Evaluations of Terrestrial Biogeochemical Feedbacks of

Stratospheric Geoengineering Strategies

Cheng-En YANG^{1,2‡+}, Forrest HOFFMAN^{1,2}, Simone TILMES³, Lili XIA⁴, Katie DAGON³, Joshua FU¹, Jadwiga RICHTER³, Michael MILLS³, Ben KRAVITZ⁵, Douglas MACMARTIN⁶

¹University of Tennessee, Knoxville, ²Oak Ridge National Laboratory,

³National Center for Atmospheric Research, ⁴Rutgers University,

⁵Pacific Northwest National Laboratory, ⁶Cornell University BG04-D4-PM1-304B-016 | BG04-A009

Parameter Optimization for Improvement of MODIS Gross

Primary Production over East Asia

Haemi PARK^{1#+}, Jungho IM¹, Miae KIM¹

¹Ulsan National Institute of Science and Technology

BG04-D4-PM1-304B-017 | BG04-A002

A Comparative Study on Anthropogenic Emission Inventory

Development: Case Study Methane Emissions over China

Penwadee CHEEWAPHONGPHAN^{1#+}, Satoru CHATANI¹
¹National Institute for Environmental Studies

BG08-IG / Biogeosciences General Session

Thu - 07 Jun | MR322A

Time 16:00 - 18:00

Chair(s) Long CAO, ZheJiang University

BG08-IG-D4-PM2-322A-001 | BG08-IG-A008 (Invited)

A Comparative Phylogenomics Approach to Understand the Importance of a Coastal Diatom Species in Biogeochemical

Cycling- Molecular Evidences from Thalassiosira Sundarbana

Punyasloke BHADURY1#+

¹Indian Institute of Science Education and Research Kolkata

BG08-IG-D4-PM2-322A-002 | BG08-IG-A011 (Invited)

What are the Interactions Between Environmental Change and

Halocarbon Emission by Macroalgae?

Fiona Seh-Lin KENG $^{1+}$, Siew Moi PHANG $^{1+}$, Emma LEEDHAM ELVIDGE 2 , Gill MALIN 2 , William STURGES 2 , Noorsaadah ABDUL RAHMAN 1

¹University of Malaya, ²University of East Anglia

BG08-IG-D4-PM2-322A-003 | BG08-IG-A016

Characterizing the Moisture, Heat and CO2 Fluxes Under

Heavy Pollution over Urban Area, Beijing, China

Linlin WANG1#+

¹Chinese Academy of Sciences

BG08-IG-D4-PM2-322A-004 | BG08-IG-A020

Simulated Carbon Cycle Response to Solar Geoengineering

Long CAO1#+

¹Zhejiang University

HS08 / Hydrology in a Changing World: Challenges in Modeling

Thu - 07 Jun | MR317B

Time 11:00 - 12:30

Chair(s) Shailesh Kumar SINGH, National Institute of Water and

Atmospheric Research

Rajib MAITY, Indian Institute of Technology Kharagpur

Markus PAHLOW, University of Canterbury

HS08-D4-AM2-317B-001 | HS08-A004

Development of Flood Tracking Technique for Flood Disaster Management in Urban Area

Sukho LEE¹⁺, Byung-Hyun LEE¹, Byung Sik KIM^{1‡}

¹Kangwon National University

HS08-D4-AM2-317B-002 | HS08-A006

Quantifying Reach Vulnerabilities and Uncertainties in Flow and Water Quality Projections from Hydropower Operations, Land Use Conversion, and Climate Change in Key Mekong

Tributaries

Thomas COCHRANE $^{{\scriptscriptstyle 1}\sharp_{^{+}}}$, Bikesh SHRESTHA $^{\scriptscriptstyle 1}$, Mauricio ARIAS $^{\scriptscriptstyle 2}$, Chantha OEURNG $^{\scriptscriptstyle 3}$

¹University of Canterbury, ²University of South Florida, ³Cambodia Institute of Technology

HS08-D4-AM2-317B-003 | HS08-A002

Seasonal Streamflow Forecasting in New Zealand

Shailesh SINGH1#+

¹National Institute of Water and Atmospheric Research

HS08-D4-AM2-317B-004 | HS08-A001

Baseflow Index Characterization in New Zealand

Markus PAHLOW
1 \sharp +, Shailesh SINGH², Doug BOOKER², Ude SHANKAR²

¹University of Canterbury, ²National Institute of Water and Atmospheric Research

HS08-D4-AM2-317B-005 | HS08-A003

Assessment for Irrigation Demand Shortfall

Shailesh SINGH1#+

¹National Institute of Water and Atmospheric Research

HS13 / Urban Water-related Problems

Thu - 07 Jun | MR318B

Time 08:30 - 10:30

Chair(s) Hideo AMAGUCHI, Tokyo Metropolitan University

HS13-D4-AM1-318B-001 | HS13-A009

Where Did the River Water Come From? - Research of the

Togagawa River Flooding in 2008

Kenichiro KOBAYASHI^{1‡+}, Ryo KAWASAKI¹, Ichiro FUJITA¹, Keisuke NAKAYAMA¹

¹Kobe University

HS13-D4-AM1-318B-002 | HS13-A020

Improvement of Inundation Prediction Methods in Urban

Areas

Yeon Moon CHOO¹⁺, Eui Hoon LEE¹, Joong Hoon KIM¹*
¹Korea University

HS13-D4-AM1-318B-003 | HS13-A032

Evaluation and Analysis of the Design Rainfall an Urban

Sewer System

Ju Hyun PARK¹+, Jae Yeong HEO², Deg-Hyo BAE¹‡ ¹Sejong University, ²

HS13-D4-AM1-318B-004 | HS13-A030

Impacts of Land-Use/cover Change at Upstream Region on

Flood Inundation in Jakarta, Indonesia

Bambang Adhi PRIYAMBODHO
12+, Shuichi KURE¹, So ${\rm KAZAMA^2}$

¹Toyama Prefectural University, ²Tohoku University

HS13-D4-AM1-318B-005 | HS13-A003

Barriers that Impede Flood Risk Management in Metro Manila, Philippines

Jean Margaret Roces MERCADO $^{1\#*},$ Akira KAWAMURA 1, Hideo AMAGUCHI 1

¹Tokyo Metropolitan University

HS13-D4-AM1-318B-006 | HS13-A021 (Invited)

Hydrodynamic Investigation of Laguna Lake, Philippines for

Water Security and Flood Risk Management of Metro Manila

Eugene HERRERA1#+, Bryan Clark HERNANDEZ2

¹University of the Philippines-Diliman, ²University of the Philippines

HS13-D4-AM1-318B-007 | HS13-A027 (Invited)

IoT-DRR in Hii River Basin for Flood Prediction and Control

Toshiyuki MORIYAMA^{1#+}, Katsuhiro MORISHITA², Shinobu IZUMI³, Koji NISHIYAMA⁴, Jun TERAMURA⁴, Fumiko TAURA⁴ ¹Fukuoka Institute of Technology, ²National Institute of Technology, ³Sojo University, ⁴Kyushu University

Time 11:00 - 12:30

Chair(s) Akira KAWAMURA, Tokyo Metropolitan University

HS13-D4-AM2-318B-008 | HS13-A004

Kimura's Versus Prasad's Storage Function Model for an

Urban Watershed

Saritha PADIYEDATH GOPALAN¹, Akira KAWAMURA¹, Hideo AMAGUCHI¹, Gubash AZHIKODAN¹

¹Tokyo Metropolitan University

HS13-D4-AM2-318B-009 | HS13-A028

Evaluation of Snow and Groundwater Storages by Distributed Hydrological Model

Koji SAKAMOTO^{1‡+}, Kazama SO¹, Yoshiya TOUGE¹
¹Tohoku University

HS13-D4-AM2-318B-010 | HS13-A029

Estimation of the Damage Cost on Compound Water Related

Disaster for Each Prefecture

Yukako TANAKA
1#+, So KAZAMA¹, Daisuke KOMORI¹, Yoshiya TOUGE¹

¹Tohoku University

HS13-D4-AM2-318B-011 | HS13-A026

Evaluation of the Green Infrastructure Performance for Urban

Water Sustainability in Water Supply and Drainage Systems

Sang Hoon JUN¹+, Eui Hoon LEE¹, Young Hwan CHOI¹, Joong Hoon KIM¹+

¹Korea University

HS13-D4-AM2-318B-012 | HS13-A036

Assessing the Hydrologic Effects of Low Impact Development at Urban Catchment Scale Under Different Rainfall Conditions

Changmei LIANG^{1#+}, Xiang ZHANG¹, Xia ZHAO^{1,2}
¹Wuhan University, ²China Institute of Water Resources and Hydropower Research

HS13-D4-AM2-318B-013 | HS13-A033

Study on Blue-Green Algae Countermeasures by Washout

Effect in Lakes

Daiki KAKINUMA^{1#+}, Tadashi YAMADA²
¹, ²Chuo University

Time 13:30 - 15:30

Chair(s) So KAZAMA, Tohoku University

HS13-D4-PM1-318B-014 | HS13-A012

Surface Water Chemistry and Nitrate Pollution in Shimabara, Nagasaki, Japan

Kei NAKAGAWA^{1#+}, Hiroki AMANO¹, Ronny BERNDTSSON² ¹Nagasaki University, ²Lund University

HS13-D4-PM1-318B-015 | HS13-A013

Relationship Between Coprostanol and Nitrate Pollution in Surface Water

Kei NAKAGAWA^{1#}, Hiroki AMANO¹, Ronny BERNDTSSON²
¹Nagasaki University, ²Lund University

HS13-D4-PM1-318B-016 | HS13-A005

Conversion of Sewage Sludge and Livestock Manure into

Valuable Fertilizer Using Subcritical Water Treatment Reactors

Naoko NAKAGAWA
1 $^{1\pm}$, Sabro MATSUI², Jun MATSUSHIA², Tomonao MIYASHIRO
3

¹Rikkyo University, ²Chuo University, ³G-8 International Trading Co., I.td.

HS13-D4-PM1-318B-017 | HS13-A010

An Analysis on Pollutant Loads in Kinokawa River Basin by Using Hydrological Prediction for the Environment (HYPE) Model

Hiroto TANOUCHI^{1*+}, Makoto NAKAMURA¹, Yuki NAKAMURA¹, Nobuyuki EGUSA¹, Jonas OLSSON², Akira KAWAMURA³, Hideo AMAGUCHI³

¹Wakayama University, ²Swedish Meteorological and Hydrological Institute, ³Tokyo Metropolitan University

HS13-D4-PM1-318B-018 | HS13-A039

Comparative Investigation on Urban Runoff Pollution in China and Benefit-Cost Analysis on Different Control

Drainage System

Jiping JIANG^{1‡+}, Baoyu WANG², Yi ZHENG¹
¹Southern University of Science and Technology, ²Harbin Institute of Technology

HS13-D4-PM1-318B-019 | HS13-A035 (Invited)

Provenance and Destination of Pollutants in the Atoyac River,

Tlaxcala, Puebla, Mexico, Central America

Estefania MARTINEZ TAVERA^{1‡+}, Pedro Francicsco RODRIGUEZ ESPINOSA², Genoveva ROSANO ORTEGA¹, Aquileo Gabriel HERNÁNDEZ RAMÍREZ³

¹Universidad Popular Autónoma del Estado de Puebla (UPAEP),

²Instituto Politecnico Nacional, ³National Polytechnic Institute

HS13-D4-PM1-318B-020 | HS13-A037 (Invited)

Impact of De-Silting of Tanks on Fluvial Flooding

Characteristics: A Case Study of the 2015 Chennai Flood in

Adyar River

Nithila DEVI N. 14+, Sridharan BALAKRISHNAN 1, Soumendra Nath KUIRY 1

¹Indian Institute of Technology Madras

HS14 / Water Cycle Observational and Satellite Remote Sensing Data Products and Their Applications

Thu - 07 Jun | MR318A

Time 13:30 - 15:30

Chair(s) Marouane TEMIMI, Masdar Institute

HS14-D4-PM1-318A-001 | HS14-A003 (Invited)

Hydrology from Space

Venkataraman LAKSHMI^{1#+}
¹University of South Carolina

HS14-D4-PM1-318A-002 | HS14-A006

Variability of Spring Soil Moisture and its Impacts on Summer

Precipitation in the Northern Hemisphere

Chenghai WANG¹#+, Kai YANG¹¹Lanzhou University

HS14-D4-PM1-318A-003 | HS14-A007

Using Satellite Remote Sensing Data to Support Development of Next Phase GLDAS, NLDAS, and NULDAS Systems

Youlong XIA^{1*}, Jesse MENG², Jiarui DONG², Weizhong ZHENG², Helin WEI², Yihua WU², Michael EK², Jack KAIN², David MOCKO³, Christa PETERS-LIDARD³

¹IMSG at National Oceanic and Atmospheric Administration, ²National Oceanic and Atmospheric Administration, ³NASA Goddard Space Flight Center

HS14-D4-PM1-318A-004 | HS14-A004

Annual Maps of Open Surface Water Bodies Through Analyses of Landsat and Sentinel Images During 1985-2016 with Google

Earth Engine

Xiangming XIAO¹²+, Zhenhua ZOU¹, Jinwei DONG², Bangqian CHEN³, Xinxin WANG⁴

¹University of Oklahoma, ²Chinese Academy of Sciences, ³Chinese Academy of Tropical Agricultural Sciences, ⁴Fudan University

HS14-D4-PM1-318A-005 | HS14-A002

Establishment and Analysis of a High-Resolution Assimilation

Dataset of the Water-Energy Cycle in China

Xiaohang WEN $^{1\sharp*}$, Xian ZHU 2 , Zhiyuan ZHENG 3 , Dongdong YAN 2 , Wenjie DONG 3

¹Chengdu University of Information Technology, ²Beijing Normal University, ³Sun Yat-sen University

HS14-D4-PM1-318A-006 | HS14-A001

Effective and Layered Soil Moisture Study Using Cosmic-Ray Neutron Sensor in Yellow River Source Region of Tibetan

Plateau

Xin WANG 1 , Jun WEN 2 , Rong LIU $^{1\#+}$

¹Chinese Academy of Sciences, ²Chengdu University of Information Technology

HS14-D4-PM1-318A-007 | HS14-A015

Prediction of Low Flow in Mid-Sized Natural Basin Using Grace Derived Daily Total Water Storage Anomaly

Durga SHARMA^{1#+}, Basudev BISWAL¹
¹Indian Institute of Technology Hyderabad

Time 16:00 - 18:00

Chair(s) Marouane TEMIMI, Masdar Institute

HS14-D4-PM2-318A-008 | HS14-A017 (Invited)

Soil Moisture-Precipitation Feedbacks Diagnosing on the

Tibetan Plateau Based on Observations and Simulations

Xianhong MENG $^{1s+}$, Shi-Hua LV 2 , Tangtang ZHANG 2 , Lin ZHAO 2 , Zhaoguo LI 2 , Hao CHEN 2

¹Cold and Arid Regions Environmental and Engneering Institute, Chinese Academy of Sciences, ²Chinese Academy of Sciences

HS14-D4-PM2-318A-009 | HS14-A010

Study on the Water Physiology Characteristics of Dominant

Desert Plants with Different Leaf Type

Zijuan ZHOU¹²+, Peixi SU¹, Tingting XIE¹, Shanjia LI¹.²¹ Chinese Academy of Sciences, ²Lanzhou University of Technology

HS14-D4-PM2-318A-010 | HS14-A027

The Improved Subsurface Water Observation from an Integration of Optical Remote Sensing and Gravimetry Satellites

Kuo-Hsin TSENG $^{1\pm}$, Chung-Yen KUO², Min-Hui LO³, Shih PO-HUNG 4

¹National Central University, ²National Cheng Kung University, ³National Taiwan University, ⁴Chung Hsing Surveying Co., Ltd.

HS14-D4-PM2-318A-011 | HS14-A012

Evaluation of Different Soil Moisture Products over Mountain Regions

Tangtang ZHANG^{1#}, Mekonnen GEBREMICHAEL², Jun WEN³, Xin MA¹, Zuoliang WANG¹

¹Chinese Academy of Sciences, ²University of California, Los Angeles, ³Chengdu University of Information Technology

HS14-D4-PM2-318A-012 | HS14-A016

The Experimental Studies on the Land-Atmospheric

Interactions over the Source Region of the Three Rivers

Jun WEN1#+, Xin WANG2, Zuoliang WANG2

¹Chengdu University of Information Technology, ²Chinese Academy of Sciences

HS20 / Hydrologic Prediction in Data-scarce Situations

Thu - 07 Jun | MR317B

Time 13:30 - 15:30

Chair(s) Bellie SIVAKUMAR, University of New South Wales

Sydney, Indian Institute of Technology Bombay

HS20-D4-PM1-317B-001 | HS20-A004

Estimating Flow Duration Curve in the Humid Tropics: The

Effect of Low Flow Storage on the Low End Shape

Chris LEONG^{1#+}, Yoshiyuki YOKOO¹

¹Fukushima University

HS20-D4-PM1-317B-002 | HS20-A007

Development of Fine-Gridded Meteorological Data Sets Using

Atmospheric Reanalysis and Local Observations for

Hydrological Modelling in a Complex Terrain

Tomas GOMEZ $^{1\#}$, Juan Pablo BOISIER 1 , Javier CEPEDA 1 , Nicolas VASQUEZ 1 , Ximena VARGAS 1 , Roberto RONDANELLI 1 University of Chile

HS20-D4-PM1-317B-003 | HS20-A005

Catchment Classification as a Tool to Understand Hydrology in

Data Scarce Regions

Riddhi SINGH1#+, Ankit DESHMUKH2

¹Indian Institute of Technology Bombay, ²Indian Institute of Technology Hyderabad

HS20-D4-PM1-317B-004 | HS20-A011

Effects of Land Use/Cover Changes on Multiscale Variability of Flow-Sediment Relationships During 1950s-2014 in the

Loess Plateau of China

Guangyao GAO1#+

¹Chinese Academy of Sciences

HS20-D4-PM1-317B-005 | HS20-A010

An Improved Instantaneous Dryness-Index Based Model for Streamflow Prediction in Data-Scarce Regions

Basudev BISWAL1#+

¹Indian Institute of Technology Hyderabad

HS20-D4-PM1-317B-006 | HS20-A013

Multi-Objective Parameters Calibration Model of Muskingum and its Solution Using the Wolf Pack Algorithm

Tao BAI^{1#+}, Qiang HUANG¹, Wangwang YANG¹
¹Xi'an University of Technology

HS22 / Climate Change Risk Assessment and Adaptation on Water-related Disaster and Water Resources in Asia and the Pacific

Thu - 07 Jun | MR301

Time 08:30 - 10:30

Chair(s) Deg-Hyo BAE, Sejong University

Eiichi NAKAKITA, Kyoto University

HS22-D4-AM1-301-001 | HS22-A026 (Invited)

A Review of a Climate Model Development in Japan

Akimasa SUMI1#+

¹The University of Tokyo

HS22-D4-AM1-301-002 | HS22-A051

Taiwan Climate Adaptation Technology Service (TaiCATS) –

TCCIP - Team2

Ching-Pin TUNG $^{1\sharp *}$, Yung-Ming CHEN 2 , Jung-Hsuan TSAO 1 , Po Wen PERNG 1

¹National Taiwan University, ²National Science and Technology Center for Disaster Reduction

HS22-D4-AM1-301-003 | HS22-A029

Bridging Between Projection Studies and Impact Studies in Climate Change Projects

Izuru TAKAYABU^{1‡+}, Eiichi NAKAKITA²
¹Meteorological Research Institute, Japan Meteorological Agency,
²Kyoto University

HS22-D4-AM1-301-004 | HS22-A007

Integrated Research Program for Advancing Climate Models

(TOUGOU) - Theme D: Integrated Hazard Prediction -

Eiichi NAKAKITA $^{1\sharp *},$ Nobuhito MORI 1, Kenji TANAKA 1, Tetsuya TAKEMI 1, Yasuto TACHIKAWA 1, Toshikazu KITANO 2, Hirokazu TATANO 1

¹Kyoto University, ²Nagoya Institute of Technology

HS22-D4-AM1-301-005 | HS22-A052

Transdisciplinary Climate Risk Assessment and Climate

Adaptation Technology Service

Ching-Pin TUNG^{1‡*}, Jung-Hsuan TSAO¹, Jung HUANG², Po Wen PERNG¹, Yu-Han HUANG¹, Bing-Chen JHONG¹

¹National Taiwan University, ²National Central University

HS22-D4-AM1-301-006 | HS22-A012

Typhoon Hazard Maps Developed by the Typhoon Ensemble Simulations

Hironori FUDEYASU^{1±+}, Shun MIYAZAKI¹, Shota YAMASAKI², Tetsuya TAKEMI², Masaya KATO³, Kazuhisa TSUBOKI³
¹Yokohama National University, ²Kyoto University, ³Nagoya University

HS22-D4-AM1-301-007 | HS22-A017

Improved Typhoon Intensity Analysis for Advanced Dvorak Technique (ADT) Using Microwave Satellite Observations.

Sungwook HONG^{1#+}, Sumin RYU¹ ¹Sejong University

HS22-D4-AM1-301-008 | HS22-A006

Projections of Future Changes in Heavy Rainfall and

Atmospheric Circulation Pattern in Japan During the Baiu

Season by Multi-Scale Analysis

Yukari OSAKADA¹#+, Eiichi NAKAKITA¹ ¹Kyoto University

Time 11:00 - 12:30

Chair(s) Izuru TAKAYABU, Japan Meteorological Agency

HS22-D4-AM2-301-009 | HS22-A057

Dynamical Downscaling of Typhoons Around Taiwan in

Climate Projection of High-Resolution AGCM

Chao-Tzuen CHENG 1* , Hsin-Yu CHIANG 1 , Huang-Hsiung HSU 2 , Chia-Ying TU 2 , Akio KITOH 3

¹National Science and Technology Center for Disaster Reduction, ²Academia Sinica, ³Japan Meteorological Business Support Center

HS22-D4-AM2-301-010 | HS22-A023

Strategies on Future Climate Projections for Asian Countries and Understanding of Mechanisms of Changes in Climate

Extremes in a Future Climate

Tosiyuki NAKAEGAWA $^{\mbox{\tiny 1F+}}$, Izuru TAKAYABU $^{\mbox{\tiny 2}}$, Hidetaka SASAKI $^{\mbox{\tiny 1}}$

¹Japan Meteorological Agency, ²Meteorological Research Institute, Japan Meteorological Agency

HS22-D4-AM2-301-011 | HS22-A025

River Discharge Simulation by a Distributed Hydrologic

Model Utilizing NHRCM 5km Output in Thailand

Aulia Febianda ANWAR TINUMBANG^{1‡+}, Kazuaki YOROZU¹, Yasuto TACHIKAWA¹, Yutaka ICHIKAWA¹, Hidetaka SASAKI² ¹Kyoto University, ²Japan Meteorological Agency

HS22-D4-AM2-301-012 | HS22-A003

Quantitative Assessment of Climate Change Impacts on Flood Risk in Davao Oriental, Philippines

Jonathan CABRERA^{1,2#+}, Han Soo LEE¹

¹Hiroshima University, ²Davao Oriental State College of Science and Technology

HS22-D4-AM2-301-013 | HS22-A036

Future Flood Simulation in Midlatitude Region (Hokkaido)

Using High-Resolution Heavy-Rainfall Data

Nobuaki KIMURA^{1#+}, Hirohide KIRI¹

¹National Agriculture and Food Research Organization

Time 13:30 - 15:30

Chair(s) Keh-Chia YEH, National ChiaoTong University

HS22-D4-PM1-301-014 | HS22-A031

Future Change Analysis of Extreme Floods Using Large

Ensemble Climate Simulation Data

Yasuto TACHIKAWA¹⁺, Tomohiro TANAKA¹, Kohei MIYAWAKI¹, Kazuaki YOROZU¹, Yutaka ICHIKAWA¹, Sunmin KIM², Masaya KATO³

¹Kyoto University, ², ³Nagoya University

HS22-D4-PM1-301-015 | HS22-A020

Changes in Future Flood Estimation Under Climate Change

Scenarios in Han-River Basin, South Korea

Sunghun KIM¹+, Younghun JUNG¹, Hyunjun AHN¹, Jun-Haeng HEO¹ $^{\!\scriptscriptstyle \rm I}$

¹Yonsei University

HS22-D4-PM1-301-016 | HS22-A038

Impact of Climate and Land Cover Changes on Flooding in a

Humid Tropic River Basin in Sumatra, Indonesia

Takahiro SAYAMA $^{1\sharp +}$, Kodai YAMAMOTO¹, Apip APIP², Kaoru TAKARA¹

¹Kyoto University, ²Indonesian Institute of Sciences

HS22-D4-PM1-301-017 | HS22-A047

On Consecutive-Storm Event Based (ConSEB) Model for Short

Term Flood Runoff Simulation

Duck Hwan KIM¹, Hung Soo KIM¹‡+¹Inha University

HS22-D4-PM1-301-018 | HS22-A054

Analysis of the Return Period of Flash Flood in Small

Mountainous Basins Under Climate Change

Hwa Yeon KIM¹⁺, Deg-Hyo BAE^{1#}
¹Sejong University

HS22-D4-PM1-301-019 | HS22-A011

Flood Risk Assessment and Adaptation Under Extreme Climate

Scenarios in Tainan City, Taiwan

Yi-Chiung CHAO¹*, Yi-Hua HSIAO¹, Lun-Tsun CHEN², Chih-Tsung HSU², Keh-Chia YEH³, Chao-Tzuen CHENG¹, Hsinchi LI¹

¹National Science and Technology Center for Disaster Reduction, ²National Center for High-performance Computing, ³National Chiao Tung University

HS22-D4-PM1-301-020 | HS22-A024

Landslide Risk Assessment for Various Land-Use Categories

Under Climate Change

Chi-Wen CHEN1+, Tingyeh WU1#

¹National Science and Technology Center for Disaster Reduction

HS22-D4-PM1-301-021 | HS22-A040

Vulnerability and Adaptation of Glacier Change in China

Jianping YANG1#+

¹Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences

Time 16:00 - 18:00

Chair(s) Seong-Joon KIM, Konkuk University

HS22-D4-PM2-301-022 | HS22-A008

Seamless Climate Change Impact Assessment Until the End of

21st Century

Kenji TANAKA1#+

¹Kyoto University

HS22-D4-PM2-301-023 | HS22-A009

Water Resources Risk Assessment of Northern Taiwan for

Climate Change Adaptation

Tzu-Ming LIU^{1*}, Ming-Hsu LI²⁺, Ching-Pin TUNG³
¹National Science and Technology Center, ²National Central University, ³National Taiwan University

HS22-D4-PM2-301-024 | HS22-A013

Evaluation of Water Supply Capability for Drought Risk

Management Considering Reserve Storage on Multi-Purpose

Dam

Jinhyeog PARK^{1*}, Suhyung JANG¹, Shinuk KANG¹, Youngteck HUR¹, Jungmin KIM¹, Hyeongung KANG¹, Jaeeung YI²

¹K-water Institute, ²Ajou University

HS22-D4-PM2-301-025 | HS22-A027

Comparative Standardized Precipitation Evapotranspiration

Index Analysis of d4PDF_GCM Dataset

Akira HASEGAWA^{1,2#+}, Maksym GUSYEV¹
¹Public Works Research Institute, ²the University of Tokyo

HS22-D4-PM2-301-026 | HS22-A030

Application of Climate Scenario Planning to Assess

Vulnerability of Water Supply in Nakdong River Basin, Korea

Si-Jung CHOI^{1#+}, Seongkyu KANG¹, Dong-Ryul LEE¹
¹Korea Institute of Civil Engineering and Building Technology

HS22-D4-PM2-301-027 | HS22-A033

Impact of Climate Change on Rice Production and Strategies

for Adaptation in Taiwan

Ming-Hwi YAO1#+

¹Taiwan Agricultural Research Institute

HS22-D4-PM2-301-028 | HS22-A045

Progressive Assessment of Future Climate and Land Use

Changes Impact on Watershed Hydrology and Stream Water

Quality Using SWAT

Ji-Wan LEE^{1#+}, Seong-Joon KIM¹, Chung Gil JUNG¹
¹Konkuk University

HS22-D4-PM2-301-029 | HS22-A049

Improved Confidence in Drought Projections over Korea Based on the Multiple Climate Change Scenarios and Multiple

Drought Indices

Moon-Hwan LEE¹⁺, Eun-Soon IM^{1#}, Deg-Hyo BAE²

¹The Hong Kong University of Science and Technology, ²Sejong University

HS27 / Extreme Erosion Processes, Hydrological Drivers and Connectivity

Thu - 07 Jun | MR318A

Time 11:00 - 12:30

Chair(s) Ben JARIHANI, University of the Sunshine Coast

David HIGGITT, Lancaster University College at Beijing

Jiaotong University

HS27-D4-AM2-318A-001 | HS27-A009

Earthquake-Induced Landslides as Drivers of Sediment

Delivery

David HIGGITT1#+

¹Beijing Jiaotong University (Lancaster University College)

HS27-D4-AM2-318A-002 | HS27-A001

Changes in Erosion Rate of Fresh Bedrock and Weathered

Bedrock Based on Abrasion Mill

Takuya INOUE^{1#+}, Satomi KAWAMURA¹, Jonathan NELSON²
¹Civil Engineering Research Institute for Cold Region, ²United States
Geological Survey

HS27-D4-AM2-318A-003 | HS27-A003

Fine Sediment Connectivity from Mountain to Sea During

Extreme Rainfall Event

Shigeru MIZUGAKI $^{{\scriptscriptstyle 15}}$, Junichi OHTSUKA $^{\scriptscriptstyle 1}$, Masami OHASHI $^{\scriptscriptstyle 1}$, Atsushi TANISE $^{\scriptscriptstyle 1}$, Ryuichi SHIMME $^{\scriptscriptstyle 1}$

¹Public Works Research Institute

HS27-D4-AM2-318A-004 | HS27-A008

Formulating a Hillslope Sediment Yield Equation from

Laboratory Experiments with a Photogrammetry Approach

Hyoungseok KANG¹⁺, Younchan KIM¹, Jongmin BYUN¹, Kyungrock PAIK^{1‡}

¹Korea University

HS27-D4-AM2-318A-005 | HS27-A004

Distributed Modelling of Stormflow Generation: Assessing the

Effect of Ground Cover

Ben JARIHANI $^{1\#+}$, Roy SIDLE 1 , Christian ROTH 2 , Rebecca BARTLEY 2 , Scott WILKINSON 2

¹University of the Sunshine Coast, ²Commonwealth Scientific and Industrial Research Organisation

HS27-D4-AM2-318A-006 | HS27-A010

Effects of Climate and Hydrogeomorphic Processes on Severe

Surface Erosion and Landslide Initiation

Roy SIDLE^{1#+}, Ben JARIHANI¹
¹University of the Sunshine Coast

HS31 / At the Edge of Hydrology: Natural- and Human-induced Changes in Fluxes Across the Land-ocean and Land-atmosphere Interfaces with Impacts on Global and Regional Water Cycle

Thu - 07 Jun | MR318B

Time 16:00 - 18:00

Chair(s) Min-Hui LO, National Taiwan University

John REAGER, NASA/JPL

HS31-D4-PM2-318B-001 | HS31-A001

Hydro-Ecological Impacts of the Changing Flood Pulse

Dynamics in the Mekong River Basin

Yadu POKHREL^{1#+}, Dai YAMAZAKI², Zihan LIN¹, Jiaguo QI¹
¹Michigan State University, ²Tokyo University

HS31-D4-PM2-318B-002 | HS31-A003

Approaching Aerial River Management: Cases in Amazonia Wei WENG^{1,2#+}, Luís COSTA², Matthias LÜDEKE², Delphine ZEMP³

¹Humboldt Universität zu Berlin, ²Potsdam Institute for Climate Impact Research, ³University of Göttingen

HS31-D4-PM2-318B-003 | HS31-A004

Characterizing Variability in Oceanic Sources of Terrestrial Water, with Implications for Changing Hydrologic Extremes

Hrishikesh CHANDANPURKAR^{1#+}, John REAGER²
¹NASA Jet Propulsion Laboratory, California, ²Jet Propulsion Laboratory, California Institute of Technology

HS31-D4-PM2-318B-004 | HS31-A005

Towards a Better Understanding of Hydrological Extremes
Using an Integrated Hydrological Modeling Framework

Wen-Ying WU¹⁸⁺, Zong-Liang YANG¹, Peirong LIN¹

¹The University of Texas at Austin

HS31-D4-PM2-318B-005 | HS31-A008

At Which Timescales Does Water Cycle Variability Matter for Sea Level?

John REAGER^{1‡+}, Benjamin HAMLINGTON², David WIESE¹
¹Jet Propulsion Laboratory, California Institute of Technology, ²Old
Dominion University

HS31-D4-PM2-318B-006 | HS31-A009

Land-atmosphere Interactions Associated with Anthropogenic Impacts

Tomohito J. YAMADA^{1#+}, Yadu POKHREL²
¹Hokkaido University, ²Michigan State University

HS33 / Modeling and Analysis of Hydrologic Processes in the Context of Climate Change

Thu - 07 Jun | MR318A

Time 08:30 - 10:30

Chair(s) Van-Thanh-Van NGUYEN, McGill University

Shie-Yui LIONG, National University of Singapore

Laxmi SUSHAMA, McGill University

HS33-D4-AM1-318A-001 | HS33-A004

Quantifying Moisture Sources and Transport Pathways for Summer Precipitation over the Mid-Lower Yangtze River Basin Xin-Min ZENG $^{1\#+}$ 1 Hohai University

HS33-D4-AM1-318A-002 | HS33-A005

Effects of Precipitation and Parameters of Hydrological Model on Hydrological Simulation Under Climate Change

Qian ZHU1#+, Yue-Ping XU2

¹Southeast University, ²Zhejiang University

HS33-D4-AM1-318A-003 | HS33-A011

Runoff Variability Analysis of Jangun Mountainous Wetland

in Korea Using Water Balance Method

Seunghyun OH1+, Jungwook KIM1, Jonghun LIM1, Hung Soo KIM1+

¹Inha University

HS33-D4-AM1-318A-004 | HS33-A003

Impacts of Climate Change on Water Resources in the Yellow River Basin

Junliang JIN $^{1s+}$, Guoqing WANG 1 , Jianyun ZHANG 1 , Cuishan LIU 1 , Yanli LIU 1 , Tao MA 1

¹Nanjing Hydraulic Research Institute

HS33-D4-AM1-318A-005 | HS33-A008

Flood Characteristics Across Canada in Current and Future

Climates

Laxmi SUSHAMA^{1#+}
¹McGill University

HS33-D4-AM1-318A-006 | HS33-A012

Coupling Dynamic-Stochastic Downscaling for Climate

Change Assessments of Rainfall Extremes

Shie-Yui LIONG^{1‡+}, Ngoc Son NGUYEN¹, Jiandong LIU¹, Ming Tue VU², Srivatsan RAGHAVAN¹

¹National University of Singapore, ²Clemson University

HS33-D4-AM1-318A-007 | HS33-A013

On Statistical Downscaling of Multi-Site Hydrologic Processes

in the Context of Climate Change

Van-Thanh-Van NGUYEN^{1#+}

¹McGill University

IG02 / High-resolution Terrestrial- and Marine Proxy-inferred Climate and Environment Changes in the Asia-Oceania Region Since the Last Deglaciation

Thu - 07 Jun | MR323A

Time 08:30 - 10:30

Chair(s) Chuan-Chou SHEN, National Taiwan University

Liangcheng TAN, Institute of Earth Environment,

Chinese Academy of Sciences

IG02-D4-AM1-323A-001 | IG02-A007

Synchronous Multi-Decadal Climate Variability of the Whole

Pacific Areas Revealed in Tree Rings Since 1567

Keyan FANG1#+

¹Fujian Normal University

IG02-D4-AM1-323A-002 | IG02-A002

Multi-Decadal Summer Monsoon Rainfall Changes in the Wuling Mountain Area Between the MCA and LIA Revealed

by an Aragonite Stalagmite

Jianjun YIN^{1,5+}, Hong-Chun LI^{2,3}, Wei TANG¹, Zhijun WANG¹, Hai CHENG⁴, R. Lawrence EDWARDS⁵, Xia WU¹, Moucheng PAN¹

¹Chinese Academy of Geological Sciences, ²National Taiwan University, ³Northeast Normal University, ⁴Xi'an Jiaotong University, ⁵University of Minnesota

IG02-D4-AM1-323A-003 | IG02-A030

${\bf A} \ {\bf Stalagmite\text{-}Inferred} \ {\bf High\text{-}Resolution} \ {\bf Hydroclimate} \ {\bf Record}$

During Mid-Holocene in Okinawa, Japan

Ryu UEMURA $^{1s+}$, Kanako OMINE 1 , Kosuke MASAKA 1 , Ryuji ASAMI 2 , Mahjoor Ahmad LONE 3 , Yu-Chen CHOU 3 , Chuan-Chou SHEN 3

 $^1 University$ of the Ryukyus, $^2 Tohoku\ University,$ $^3 National\ Taiwan\ University$

IG02-D4-AM1-323A-004 | IG02-A021

Hydroclimate Variations of the Past 1000 Years over Eastern China

Zhixin HAO¹+, Xiu GENG¹, Quansheng GE¹, Jingyun ZHENG¹‡ ¹Chinese Academy of Sciences

IG02-D4-AM1-323A-005 | IG02-A012

Understanding the Distinct Intensification of Australian

Monsoon During the Last Glacial Maximum

Mi YAN^{1‡+}, Bin WANG², Jian LIU¹, Liang NING³
¹Nanjing Normal University, ²University of Hawaii, ³Nanjing Normal University & University of Massachusetts

Time 13:30 - 15:30

Chair(s) Yusuke YOKOYAMA, The University of Tokyo

IG02-D4-PM1-323A-006 | IG02-A001

4.2 Ka Event in the Loess Plateau of China

Liangcheng TAN^{1#+}

¹Chinese Academy of Sciences

IG02-D4-PM1-323A-008 | IG02-A008

Laminated Sediments from the Late Glacial Transition in

Northeastern Australia

Mark BURROWS12+, Simon HABERLE1, Henk HEIJNIS2, Patricia GADD2

¹Australian National University, ²Australian Nuclear Science and Technology Organisation

IG02-D4-PM1-323A-007 | IG02-A004

How to Use Bomb C-14 Curve to Establish Chronology of

Recent Geological Archives

Hong-Chun LI1,2#+

¹National Taiwan University, ²Northeast Normal University

IG02-D4-PM1-323A-009 | IG02-A010

Trace Metals in Speleothems Record Atmospheric Dust

Activity: A Case Study from NE Sichuan, Central China

Houyun ZHOU¹**, Xiaotao PENG¹, Ke CHENG¹, Shuhua LIU¹¹South China Normal University

IG02-D4-PM1-323A-010 | IG02-A011

Precise U-Th Concentration and 234U/238U Determination of

Seawater from the Okinawa Trough

Lisheng WANG^{1#+}, Zhibang MA¹
¹Chinese Academy of Sciences

IG02-D4-PM1-323A-011 | IG02-A014

230Th/U Chronology of a Cold-Seep Precipitated Carbonate

Chimney in Okinawa Trough

Zhibang MA^{1#+}, Lisheng WANG¹
¹Chinese Academy of Sciences

IG02-D4-PM1-323A-012 | IG02-A015

Multiple Severe Typhoons Revealed by Coral Boulders of

Northwestern Luzon, Philippines

Shou-Yeh GONG $^{1\pm}$, Tso-Ren WU^2 , Chuan-Chou SHEN 3 , Fernando SIRINGAN 4

¹National Museum of Natural Science, ²National Central University, ³National Taiwan University, ⁴University of the Philippines

IG02-D4-PM1-323A-013 | IG02-A017

Enhanced Contribution of ENSO to the East Asian Winter

Monsoon in Northeast China Since the Mid-Holocene

Jing WU^{1#+}, Qiang LIU¹, Guoqiang CHU¹, Luo WANG¹, Jiaqi LIU¹ ¹Chinese Academy of Sciences

Time 16:00 - 18:00

Chair(s) Chuan-Chou SHEN, National Taiwan University

IG02-D4-PM2-323A-014 | IG02-A022

A Reconstruction of Subtropical Western North Pacific SST Variability Back to 1578, Based on a Porites Coral Sr/Ca Record from the Northern Ryukyus, Japan

Yuta KAWAKUBO¹, Chantal ALIBERT¹, Yusuke YOKOYAMA¹²+¹The University of Tokyo

IG02-D4-PM2-323A-015 | IG02-A019

Geochemical Characteristics of Cave Drip Water Respond to ENSO Based on a 6-Year Monitoring Work in Yangkou Cave, Southwestern China

Ting-Yong LI^{1#+}, Chao-Jun CHEN¹
¹Southwest University

IG02-D4-PM2-323A-016 | IG02-A027

Paleoenvironment of Southwestern Taiwan Inferred from Stable Oxygen and Carbon Isotope Records of Archaeological Crassostrea Oyster Shells

Horng-Sheng MII^{1#}, Manh Ling NGUYEN¹, Kuang-Ti Ll² ¹National Taiwan Normal University, ²Academia Sinica

IG02-D4-PM2-323A-017 | IG02-A029

Chemical and Physical Properties of Sediments from the East China Sea and its Provenance Implications

Yan ZHENG¹⁵⁺, Qianying GUO², Haiyan LI²
¹IVPP, Chinese Academy of Sciences, ²China University of Geosciences

IG02-D4-PM2-323A-018 | IG02-A032

Local Marine Reservoir Age Variability During the

Mid-Holocene in the Northwest Pacific

Shoko HIRABAYASHI¹**, Yusuke YOKOYAMA², Atsushi SUZUKI³, Tezer ESAT⁴, Yosuke MIYAIRI², Takahiro AZE², Fernando SIRINGAN⁵, Yasuo MAEDA⁶

¹Kyushu University, ²The University of Tokyo, ³National Institute of Advanced Industrial Science and Technology, ⁴The Australian National University, ⁵University of the Philippines, ⁶University of Hyogo

IG02-D4-PM2-323A-019 | IG02-A033

Lake Sediment Hydroclimate Proxies from the Tropical South Pacific Reveal Large Scale Changes in the South Pacific

Convergence Zone over the Holocene

David SEAR1#+

¹University of Southampton

IG16-BG / From Science to Policy: Lessons and Challenges for Natural and Social Science Collaboration for Mitigation and Adaptation to Environmental Hazards

Thu - 07 Jun | MR322B

Time 13:30 - 15:30

Chair(s) James Scott HAUGER, College of Security Studies,

APCSS

Shaoxiu MA, Northwest Institute of Eco-Environment and

Resources, Chinese Academy of Sciences

IG16-BG-D4-PM1-322B-001 | IG16-A002 (Invited)

Considerable Gaps Between Policy and Science:

Desertification and Restoration in China

Xian XUE1#+

¹Chinese Academy of Sciences

IG16-BG-D4-PM1-322B-002 | IG16-BG-A009 (Invited)

Glacier Hazards and its Countermeasures in the

China-Pakistan Economic Corridor Area

Zhongqin LI1#+

¹Cold and Arid Regions Environmental and Engineering Research Institute,Chinese Academy of Sciences

IG16-BG-D4-PM1-322B-003 | IG16-BG-A017 (Invited)

Drought Vulnerability Assessment of Maize in Sub-Saharan

Africa: Insights From Physical and Social Perspectives

Hong YANG^{1‡+}, Bahareh KAMALI¹, Karim ABBASPOUR¹
¹Swiss Federal Institute of Aquatic Science and Technology

IG16-BG-D4-PM1-322B-004 | IG16-BG-A022

Science and Policy Interacted for Combating

Desertification/Land Degradation - Case Summary from China Tao WANG^{1,2‡+}

¹Chinese Academy of Sciences, ²Lanzhou Branch of Chinese Academy of Sciences

IG16-BG-D4-PM1-322B-005 | IG16-BG-A014

Responses of Vegetation to Climatic Variations in the Desert Regions of Northern China

Yuqing ZHANG¹**, Yakun ZHU¹, Jutao ZHANG¹, Shugao QIN¹, Yanying SHAO¹, Yan GAO¹
¹Beijing Forestry University

IG16-BG-D4-PM1-322B-006 | IG16-BG-A019

Vegetation Growth Trend and its Response to Drought in the Inner Mongolia of Northern China, 1998-2013

Shulin LIU^{1‡+}, Tao WANG^{1,2}, Wenping KANG¹, Zichen GUO¹
¹Chinese Academy of Sciences, ²Lanzhou Branch of Chinese Academy of Sciences

IG16-BG-D4-PM1-322B-007 | IG16-A008

Identification of Human Induced Aeolian Desertified Land to Facilitate Sand Control Practice - A Case in Horqin Sandy Land, China

Jian GUO1#+

¹Chinese Academy of Sciences

Time 16:00 - 18:00

Chair(s) Tao WANG, Northwest Institute of Eco-Environment and

Resources, Chinese Academy of Sciences

Inez Ponce de LEON, Ateneo de Manila University

IG16-BG-D4-PM2-322B-008 | IG16-A003 (Invited)

Climate Change and the U.S. Security Sector: The

Desecuritization of Climate Change

James Scott HAUGER1#+

¹Asia-Pacific Center for Security Studies

IG16-BG-D4-PM2-322B-009 | IG16-BG-A013 (Invited)

Evidence for Urban-Rural Disparity in Temperature–Mortality

Relationships in Zhejiang Province, China

Xuchao YANG^{1#+}, Kejia HU¹, Yuming GUO² ¹Zhejiang University, ²Monash University

IG16-BG-D4-PM2-322B-010 | IG16-BG-A020 (Invited)

Interaction Between Transformation Processes of Agricultural

Structure and the Environmental Rehabilitation Policies in the

Modern Chinese Loess Plateau

Yuta HARA1#+, Izuru SAIZEN1

¹Kyoto University

IG16-BG-D4-PM2-322B-011 | IG16-BG-A028 (Invited)

Think Global Act Local: A Case Study on the Local Climate Change Action Plans of the Municipalities of Alaminos and

Pagsanjan, Laguna, Philippines

Anthony AGUILLO^{1‡+}, Ryanne Stephanie CO¹, June SY¹
¹Ateneo de Manila University

IG16-BG-D4-PM2-322B-012 | IG16-BG-A012

Options for Cooling a City Without Increasing Human Heat
Stress

Shaoxiu MA1#+

¹The North-west of Eco-environment and resources

IG16-BG-D4-PM2-322B-013 | IG16-A004

Cash Gifts, Perception of Social Sphere and Distribution of Water Resources for Rural Farmers in a Typical Oasis Region in Northwest China

Oiantao ZHU1#+

¹Chinese Academy of Sciences

IG20 / Innovative Technologies of Sensing, Simulation and Mapping to Enhance Disaster Relief and Disaster Medical Systems

Thu - 07 Jun | MR322B

Time 08:30 - 10:30

Chair(s) Shunichi KOSHIMURA, Tohoku University

Erick MAS, Tohoku University

IG20-D4-AM1-322B-001 | IG20-A007

Quantitative Uncertainties Estimation of the Rapidly Estimated Coseismic Fault Model Based on the Real-Time GNSS Data

Yusaku OHTA^{1#+}, Keitaro OHNO¹
¹Tohoku University

IG20-D4-AM1-322B-002 | IG20-A006

Performance Evaluation of a Real-Time Tsunami Inundation

Forecast System on Modern Supercomputers

Akihiro MUSA^{1‡+}, Takumi KISHITANI¹, Takuya INOUE¹, Hiroaki HOKARI², Masayuki SATO¹, Kazuhiko KOMATSU¹, Yoichi MURASHIMA³, Shunichi KOSHIMURA¹, Hiroaki KOBAYASHI¹

¹Tohoku University, ²NEC Corporation, ³Kokusai Kogyo Co. Ltd.

IG20-D4-AM1-322B-003 | IG20-A005

Damaged Building Recognition Using Deep Learning with Aerial Photographs Taken After the 2016 Kumamoto

Earthquake, Japan

Masashi MATSUOKA^{1‡+}, Yuma KAMAGATANI¹, Yutaka HORAKU², Hiroyuki SHIMOMURA²

¹Tokyo Institute of Technology, ²PASCO Corporation

IG20-D4-AM1-322B-004 | IG20-A002

Deep Learning-Based Approach for Automated Classification of Building Damage from Remote Sensing Images

Hiroyuki MIURA^{1‡+}, Tomohiro ARIDOME¹
¹Hiroshima University

IG20-D4-AM1-322B-005 | IG20-A009

A New Unsupervised Classification Method to Identify Collapsed Buildings

Luis Angel MOYA HUALLPA^{1#+}, Erick MAS¹, Bruno ADRIANO¹, Shunichi KOSHIMURA¹

¹Tohoku University

IG20-D4-AM1-322B-006 | IG20-A011 (Invited)

National Disaster Medical System and its Coordination in

Japan

Shinichi EGAWA^{1‡+}, Hiroyuki SASAKI¹
¹Tohoku University

IG20-D4-AM1-322B-007 | IG20-A012

Relation Between the Damage of Medical Institute in Miyagi Prefecture Due to the Great East Japan Earthquake and Tsunami and the Occurrence of Preventable Disaster Death at Medical Institutions

Hiroyuki SASAKI $^{1\#}$, Erick MAS 1 , Shunichi KOSHIMURA 1 , Shinichi EGAWA 1

¹Tohoku University

IG21 / Sar Application in Natural Hazard Response

Thu - 07 Jun | MR322B

Time 11:00 - 12:30

Chair(s) Sang-Ho YUN, Jet Propulsion Laboratory

Yunung Nina LIN, Earth Observatory of Singapore

IG21-D4-AM2-322B-001 | IG21-A004 (Invited)

Integrated Multiple Satellite Application for Flood Mapping

Using ALOS-2 and Sentinel-1 Data

Young-Joo KWAK^{1**}, Ramona PELICH², Jounggeol PARK³
¹International Centre for Water Hazard and Risk Management
(ICHARM)/ UNESCO, ²Luxembourg Institute of Science and
Technology, ³Tokyo University of Information Sciences

IG21-D4-AM2-322B-002 | IG21-A006

Flood Mapping with Spaceborne SAR Data: Potentials and

Challenges

Sang-Ho YUN^{1‡+}, Yu-Nung Nina LIN², Emma HILL³
¹NASA Jet Propulsion Laboratory, ²Nanyang Technological University, ³Earth Observatory of Singapore / NTU

IG21-D4-AM2-322B-003 | IG21-A003 (Invited)

An Optimal Approach for the Monitoring of Deep-Seated

Landslides in Tropical Mountainous Environment

Rou-Fei CHEN $^{\mbox{\tiny 1}}^{\mbox{\tiny 4}}$, Li-Yuan FEI $^{\mbox{\tiny 2}}$, Chen-Yang LEE $^{\mbox{\tiny 3}}$, Hsiao-Yuan YIN $^{\mbox{\tiny 3}}$, Ching-Weei LIN $^{\mbox{\tiny 4}}$

¹Chinese Culture University, ²Ministry of Economic Affairs, ³Soil and Water Conservation Bureau, ⁴National Cheng Kung University

IG21-D4-AM2-322B-004 | IG21-A008

PSInSAR Time Series Analysis of the 2018 Mayon Volcano

Eruption

Jolly Joyce SULAPAS¹.2#+, Alfredo Mahar LAGMAY².3, Rodrigo ECO³

¹University of the Philippines, ²University of the Philippines Nationwide Operational Assessment of Hazards (UP-NOAH), ³University of the Philippines Diliman

IG21-D4-AM2-322B-005 | IG21-A001

Characterize Hydrologically Driven Ground Deformation Using InSAR and Numerical Modeling: Applications to

Landslides and Mine Tailings Impoundment

Xie HU^{1#+}, Zhong LU¹
¹Southern Methodist University

IG25 / Tracing Hydrometeorological, Ecohydrological and Hydrological Processes Using Stable Water Isotopes

Thu - 07 Jun | MR323A

Time 11:00 - 12:30

Chair(s) Huade GUAN, Flinders University

Xinping ZHANG, Hunan Normal University

IG25-D4-AM2-323A-001 | IG25-A010 (Invited)

Stable Water Isotopes and Deuterium Excess in the

Hydrological Processes

Zhonghe PANG^{1#+}, Tianming HUANG², Yanlong KONG¹, Jie LI¹ ¹Chinese Academy of Sciences, ²Institute of Geology and Geophysics, Chinese Academy of Sciences

IG25-D4-AM2-323A-002 | IG25-A016 (Invited)

A Study on Water Cycle Mechanism at Different Scales Using

Environmental Isotopes

Xianfang $SONG^{1\#+}$

¹Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

IG25-D4-AM2-323A-003 | IG25-A015 (Invited)

 $\label{eq:cosystem} \textbf{Ecosystem Water Partitioning - An Isotopic View} \\ \textbf{David WILLIAMS}^{1\#+}, \textbf{William BOWERS}^1, \textbf{Jason MERCER}^1 \\$

¹University of Wyoming

IG25-D4-AM2-323A-004 | IG25-A012

Plant Water Source Replenishment and Persistence in a Native

Vegetated Catchment Under Mediterranean Climate

Xiang XU1**, Huade GUAN², Grzegorz SKRZYPEK³, Craig T. SIMMONS²

¹Lanzhou University, ²Flinders University, ³The University of Western Australia

IG25-D4-AM2-323A-005 | IG25-A006

Hydrometric Influences on Isotope Hydrograph Separation to Different Source Controls in a Small-Scale Forest Catchment Simin QU^{1g_+}

¹Hohai University

OS08 / Advances in Oceanic Data Assimilation, Ensemble Prediction, and Coupled Data Assimilation

Thu - 07 Jun | MR317B

Time 16:00 - 18:00

Chair(s) Zheqi SHEN, State Oceanic Administration

Fei ZHENG, Chinese Academy of Sciences

OS08-D4-PM2-317B-001 | OS08-A012 (Invited)

Advances in Ocean and Coupled Data Assimilation at NCEP

Stephen PENNY^{1#+}

¹University of Maryland

OS08-D4-PM2-317B-002 | OS08-A005 (Invited)

An El Nino-Southern Oscillation Forecast System Formulated by an Intermediate Coupled Model and its Nonlinear Forcing Singular Vector Assimilation

Wansuo DUAN1#+

¹Chinese Academy of Sciences

OS08-D4-PM2-317B-003 | OS08-A002

Progress and Challenge in Ensemble-Based Filters

Youmin TANG1#+, Zheqi SHEN2

¹University of Northern British Columbia, ²State Oceanic Administration

OS08-D4-PM2-317B-004 | OS08-A013

Evaluation of Oceanic Surface Observation for Reproducing

the Upper Ocean Structure in ECHAM5/MPI-OM

Fei ZHENG $^{1\sharp +}$, Hao LUO 1 , Jiang ZHU 1

¹Chinese Academy of Sciences

OS08-D4-PM2-317B-005 | OS08-A011

Multi-Model Probabilistic Projections Accounting for Model

Skill in Nonlinear Trend, Variability, and Autocorrelation

Roman OLSON¹*+, Soon-II AN¹, Yanan FAN², Jason EVANS²
¹Yonsei University, ²University of New South Wales

OS08-D4-PM2-317B-006 | OS08-A006

Localized Particle Filter and Vector Weights for the Data

Assimilation of Non-Gaussian Model Systems

Zheqi SHEN1#+, Youmin TANG2

¹State Oceanic Administration, ²University of Northern British Columbia

OS08-D4-PM2-317B-007 | OS08-A004

A Short-Term Climate Prediction System Using a Weakly Coupled Assimilation: Results for Summer Rainfall Prediction of China

Renping LIN¹⁺, Jiang ZHU^{1‡}, Fei ZHENG¹
¹Chinese Academy of Sciences

OS09 / Regional Oceanic Numerical Modeling and Observations

Thu - 07 Jun | MR324

Time 08:30 - 10:30

Chair(s) Changming DONG, Nanjing University of Information

Science and Technology

Yusuke UCHIYAMA, Kobe University

OS09-D4-AM1-324-001 | OS09-A014 (Invited)

Residual-mean Circulation of the Leeuwin Current System in an Eddy-resolving General Circulation Model

Ryo FURUE^{1#+}
¹JAMSTEC

OS09-D4-AM1-324-002 | OS09-A019 (Invited)

Evolution of the North Pacific Subtropical Mode Water in

Anticyclonic Eddies

Lixia
o $XU^{1\sharp *}$, Shang-Ping XIE², Qinyu LIU¹, Cong LIU¹, Peiliang LI¹, Xia
opei LIN¹

¹Ocean University of China, ²University of California San Diego

OS09-D4-AM1-324-003 | OS09-A022

Regional Dependence of Atmospheric Responses to Oceanic

Eddies in the North Pacific

Jin-Lin JI1 $^{1\pm}$, Jing MA 2 , Changming DONG 2,3 , John CHIANG 4 , Dake CHEN 5

¹Xiamen University, ²Nanjing University of Information Science & Technology, ³University of California, Los Angeles, ⁴University of California, Berkeley, ⁵State Oceanic Administration

OS09-D4-AM1-324-004 | OS09-A003

A Modeling Study of the Circulation in a Weakly Stratified Strait, Northwestern South China Sea

Yang DING^{1‡}*, Dehai SONG¹, Zhigang YAO¹, Xianwen BAO¹ ¹Ocean University of China

OS09-D4-AM1-324-005 | OS09-A039

Global Ocean Circulation Velocity Decomposition Using Observational Data

Kenny T.C. LIM KAM SIAN¹⁺, Changming DONG^{1,2‡}
¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles

OS09-D4-AM1-324-006 | OS09-A012

Physical Oceanography After the 2011 Great East Japan

Earthquake and Tsunami in the Sanriku Coastal Area, Japan

Kiyoshi TANAKA^{1‡+}, Hiroyasu HASUMI¹, Kosei KOMATSU¹, Sachihiko ITOH¹, Daigo YANAGIMOTO¹, Takashi SAKAMOTO¹, Yutaka MICHIDA¹, Kazuhiro KOGURE¹

¹The University of Tokyo

Time 16:00 - 18:00

Chair(s) Changming DONG, Nanjing University of Information

Science and Technology

OS09-D4-PM2-324-007 | OS09-A026 (Invited)

Observational Analyses of the Structure and Effect of Ocean Chlorophyll-Induced Heating Feedback Associated with ENSO Rong-Hua $ZHANG^{1z+}$

¹Institute of Oceanology, Chinese Academy of Sciences

OS09-D4-PM2-324-008 | OS09-A001

Dynamics of the Bottom Gravity Currents in Deep-Water

Channels of the Atlantic Ocean Dmitry FREY^{1#+}

¹Russian Academy of Sciences

OS09-D4-PM2-324-009 | OS09-A037

Seasonal and Inter-Annual Variability of the Great Whirl and its Impact on Atmospheric Processes

Sen WANG1#+

¹Nanjing University of Information Science & Technology

OS09-D4-PM2-324-010 | OS09-A013

Numerical Simulation of the Deep Western Boundary Current in the South China Sea Interaction with Eddy

Muping ZHOU1+, Guihua WANG2#

¹Xiamen University, ²Fudan University

OS09-D4-PM2-324-011 | OS09-A028

Synoptic Variability of the Coastal Circulation in the Northern South China Sea Revealed by Observation and High

Resolution Numerical Model

Tingting $ZU^{1\pm}$, Lixin QU^2 , Dongxiao WANG³, Robert HETLAND²

¹Chinese Academy of Sciences, ²Texas A&M University, ³South China Sea Institute of Oceanology, Chinese Academy of Sciences

OS09-D4-PM2-324-012 | OS09-A049

Simulation on the Effects of Suspended Sediment Matters Induced by High Riverine Discharge on Vertical Mixing in a Hypopycnal Plume

Yasuhiro HOSHIBA¹**, Yoshimasa MATSUMURA¹, Hiroyasu HASUMI¹, Sachihiko ITOH¹, Satoshi NAKADA²

¹The University of Tokyo, ²Kobe University

OS09-D4-PM2-324-013 | OS09-A025

Observing and Modelling the Response of Placentia Bay to Extratropical Cyclone of 11 March 2017

Guangjun $XU^{1#+}$, Guoqi HAN^2 , Changming DONG 1,3 , Jingsong $YANG^4$

¹Nanjing University of Information Science & Technology, ²Fisheries and Oceans Canada, ³University of California, Los Angeles, ⁴State Oceanic Administration

OS10 / The Eastern Indian Ocean Upwelling Research Initiative (EIOURI) and The Second International Indian Ocean Expedition (IIOE-2)

Thu - 07 Jun | MR322A

Time 08:30 - 10:30

Chair(s) Yukio MASUMOTO, The University of Tokyo

OS10-D4-AM1-322A-001 | OS10-A008

Process-Specific Contributions to Anomalous Java Mixed Layer

Cooling During Positive IOD Events

Andrew DELMAN $^{1\sharp*}$, Julie MCCLEAN 2 , Janet SPRINTALL 3 , Lynne TALLEY 2 , Frank BRYAN 4

¹Jet Propulsion Laboratory, California Institute of Technology, ²University of California San Diego, ³Scripps Institution of

Oceanography, ⁴National Center for Atmospheric Research

OS10-D4-AM1-322A-002 | OS10-A007

Subsurface Salinity Variation in the Eastern Equatorial Indian

Ocean During Positive Indian Ocean Dipole Events

Shoichiro KIDO1#+, Tomoki TOZUKA1

¹The University of Tokyo

OS10-D4-AM1-322A-003 | OS10-A006

Influence of the South China Sea Summer Monsoon on the Indian Ocean Dipole

Yazhou ZHANG¹⁸⁺, Jianping LI¹, Jiaqing XUE², Juan FENG¹, Qiuyun WANG¹, Yidan XU¹, Yuehong WANG¹
¹Beijing Normal University, ²Chinese Academy of Sciences

OS10-D4-AM1-322A-004 | OS10-A001

Chlorophyll Variability Induced by Mesoscale Eddies in the

Southeastern Tropical Indian Ocean

Guang YANG $^{1s+}$, Xia ZHAO 2 , Yuanlong LI 2 , Lin LIU 1 , Fan WANG 2 , Weidong YU 1,3

¹State Oceanic Administration, ²Chinese Academy of Sciences, ³Thailand-China Joint Laboratory for Climate and Marine Ecosystem

OS10-D4-AM1-322A-005 | OS10-A010

Ningaloo Niño as a Phenomenon Independent of El

Niño/Southern Oscillation

Takahito KATAOKA¹^{**}, Sebastien MASSON², Takeshi IZUMO³, Tomoki TOZUKA⁴, Toshio YAMAGATA¹

¹Japan Agency for Marine-Earth Science and Technology, ²Institute Pierre-Simon Laplace, ³Laboratory of Oceanography and Climate: Experiments and Numerical Approaches, ⁴The University of Tokyo

OS10-D4-AM1-322A-006 | OS10-A009

Interannual Forcing of Mesoscale Eddy Kinetic Energy in the Subtropical Southern Indian Ocean

Andrew DELMAN^{1#+}, Lee TONG¹, Bo QIU²
¹Jet Propulsion Laboratory, California Institute of Technology,
²University of Hawaii

OS10-D4-AM1-322A-007 | OS10-A002

Mean Subsurface Upwelling Induced by Intraseasonal

Variability over the Equatorial Indian Ocean

Tomomichi OGATA^{1#+}, Motoki NAGURA¹, Yukio MASUMOTO²
¹Japan Agency for Marine-Earth Science and Technology, ²The
University of Tokyo

OS24 / Coastal Hazards: Impacts of Tropical Storms and Tsunamis

Thu - 07 Jun | MR317B

Time 08:30 - 10:30

Chair(s) Harry YEH, Oregon State University

Linlin LI, Nanyang Technological University

OS24-D4-AM1-317B-015 | OS24-A037 (Invited)

Numerical Study on the Rockslide Generated Tsunamis by

Rigid Water Method

Tso-Ren WU^{1‡+}, Shun-Kai HU¹, Mei-Hui CHUANG¹, Pei-Yu LI¹, Chia-Ren CHU¹, Chung-Yue WANG¹

¹National Central University

OS24-D4-AM1-317B-016 | OS24-A008

A Two-Phase Model for Landslide Tsunami

Xiping YU^{1#+}, Pengfei SI¹
¹Tsinghua University

OS24-D4-AM1-317B-017 | OS24-A044

Numerical Simulation of the 1792 Mt. Mayuyama Collapse and

the Resulting Tsunami Using Two-Layer Model

Hideaki YANAGISAWA1#+

¹Tohoku Gakuin University

OS24-D4-AM1-317B-018 | OS24-A029

Evaluation of Terrestrial and Subaqueous Landslide Tsunami

Hazard in Lake Tekapo, New Zealand

Xiaoming WANG^{1‡+}, William POWER¹, Joshu MOUNTJOY², Yaoru LIU³

¹GNS Science, ²National Institute of Water and Atmospheric Research, ³Tsinghua University

OS24-D4-AM1-317B-019 | OS24-A030

Three-Phase Flow Simulation of Submarine Granular Slides and Generated Waves

Cheng-Hsien LEE $^{1#+}$, Ming-Lan YU 1 Tamkang University

OS24-D4-AM1-317B-020 | OS24-A013

Preliminary Results of a Scalability Study on Three-Phase

Flow Modeling of Wave-Induced Scour at a Bottom-Sitting

Wave Energy Converter

Conghao XU¹⁺, Zhenhua HUANG^{1‡}
¹University of Hawaii at Manoa

OS24-D4-AM1-317B-021 | OS24-A002

Theoretical Solution and Applications of Ocean-Bottom

Pressure Induced by Seismic Seafloor Motion

Chao AN15+, Chen CAI2, Yong ZHENG3, Lingsen MENG4, Philip LIU5

¹Shanghai Jiao Tong University, ²Washington University in St. Louis, ³China University of Geosciences, ⁴University of California, Los Angeles, ⁵National University of Singapore

OS24-D4-AM1-317B-022 | OS24-A007

NASA's GPS-Aided Tsunami Early Detection System

Y. Tony SONG1#+

¹NASA Jet Propulsion Laboratory

PS03 / Microwave and Infrared Remote Sensing of Solar System Objects

Thu - 07 Jun | MR304A

Time 08:30 - 10:30

Chair(s) Paul HARTOGH, Max Planck Institute for Solar System

Research

Yi-Jehng KUAN, National Taiwan Normal University

PS03-D4-AM1-304A-001 | PS03-A001 (Invited)

SL9 Species Imaging in Jupiter's Auroral Regions with ALMA

Thibault CAVALIÉ^{1*}, Raphael MORENO¹, Emmanuel LELLOUCH¹, Thierry FOUCHET¹, Vincent HUE², Thomas GREATHOUSE², James SINCLAIR³, Michel DOBRIJEVIC⁴, Franck HERSANT⁴, Christopher JARCHOW⁵, Ladislav REZAC⁵, Bruno BEZARD¹, Randy GLADSTONE², Laurent LAMY¹, Edwige CHAPILLON⁴

¹Paris Observatory, ²Southwest Research Institute, ³Jet Propulsion Laboratory, California Institute of Technology, ⁴University of Bordeaux, ⁵Max Planck Institute for Solar System Research

PS03-D4-AM1-304A-002 | PS03-A030 (Invited)

The Juno Micowave Radiometer for the Investigation of Jupiter

Michael JANSSEN¹⁸⁺, Scott BOLTON², Steven LEVIN¹, Shannon BROWN¹, Virgil ADUMITROAIE¹, Michael ALLISON³, John ARBALLO¹, Sushil ATREYA⁴, Amadeo BELOTTI⁵, Samuel GULKIS¹, Andrew INGERSOLL⁶, Cheng LI¹, Jonathan LUNINE⁷, Sidharth MISRA¹, Glenn ORTON¹, Fabiano OYAFUSO¹, Daniel SANTOS-COSTA², Paul STEFFES⁵, Fachreddin TABATABA-VAKILI¹, Zhimeng ZHANG¹

¹Jet Propulsion Laboratory, California Institute of Technology, ²Southwest Research Institute, ³Goddard Institute of Space Studies, ⁴University of Michigan, ⁵Georgia Institute of Technology, ⁶California Institute of Technology, ⁷Cornell University

PS03-D4-AM1-304A-003 | PS03-A010

Probing the Atmospheres of Saturn and Uranus with

Ground-Based Radio Observations

Mark HOFSTADTER¹, Virgil ADUMITROAIE¹, Sushil ATREYA², Bryan BUTLER³

¹Jet Propulsion Laboratory, California Institute of Technology, ²University of Michigan, ³National Radio Astronomy Observatory

PS03-D4-AM1-304A-004 | PS03-A011

Picture this SELFI: A Maturation Project for a Submillimeter

Enceladus Life Fundamentals Instrument (SELFI)

Gordon CHIN^{1‡+}, Carrie ANDERSON¹, Damon BRADLEY¹, Tilak HEWAGAMA¹, Terry HURFORD¹, Paul RACETTE¹
¹NASA Goddard Space Flight Center

PS03-D4-AM1-304A-005 | PS03-A007

Answering the Big Question: Measuring IO's Lava Eruption

Temperatures with a Novel Infrared Detector and Readout

Circuit

Ashley DAVIES¹º+, Alexander SOIBEL², David TING², William JOHNSON², Paul HAYNE³, Sarath GUNAPALA², Megan BLACKWELL⁴, Michael KELLY⁵

¹Jet Propulsion Laboratory - California Institute of Technology, ²NASA Jet Propulsion Laboratory, ³University of Colorado Boulder, ⁴Massachusetts Institute of Technology: Lincoln Laboratory, ⁵Copious Imaging LLC

PS03-D4-AM1-304A-006 | PS03-A028 (Invited)

Perspectives in Microwave Tracking Systems for Planetary

Geodesy and Solar System Dynamics

Luciano IESS¹⁺, Mauro DI BENEDETTO¹, Andrea DI RUSCIO¹, Virginia NOTARO¹, Paolo RACIOPPA¹
¹Sapienza University of Rome

PS03-D4-AM1-304A-007 | PS03-A031

Study on 3D Radiation Transfer Model in the Coma of 67P /

CG Using Lime from Early Stage Miro Observations

Yuhui ZHAO^{1‡+}, Ladislav REZAC², Paul HARTOGH²
¹Chinese Academy of Sciences, ²Max Planck Institute for Solar System Research

PS03-D4-AM1-304A-008 | PS03-A023

The Inner Coma of Comet 67P/Churyumov-Gerasimenko as Seen by MIRO

David MARSHALL^{1#+}, Ladislav REZAC¹, Paul HARTOGH¹
¹Max Planck Institute for Solar System Research

Time 11:00 - 12:30

Chair(s) Yasuko KASAI, National Institute of Information and

Communications Technology

Paul HARTOGH, Max Planck Institute for Solar System

Research

PS03-D4-AM2-304A-009 | PS03-A026 (Invited)

Ultra-Broadband Submillimeter-Wave Receivers for High

Spectral Resolution Spectroscopy of Moons and Comets

Jose SILES^{1#+}, Imran MEHDI¹, Ken COOPER¹
¹NASA Jet Propulsion Laboratory

PS03-D4-AM2-304A-010 | PS03-A017

The Herschel Catalogue of Solar System Object Observations

Mark KIDGER $^{1\sharp *}$, Cristina ROMERO², Miriam RENGEL 1,3 , Jürgen OBERST²

¹European Space Astronomy Centre, ²Technical University of Berlin, ³Max Planck Institute for Solar System Research PS03-D4-AM2-304A-011 | PS03-A022

Spectral Observation of Vesta in the Mid-IR

Ernesto PALOMBA^{1s+}, Emiliano D'AVERSA¹, Takao M. SATO², Andrea LONGOBARDO¹, Fabrizio DIRRI¹, Shohei AOKI³
¹National Institute for Astrophysics, ²Japan Aerospace Exploration Agency, ³Institut d'Aéronomie Spatiale de Belgique

PS03-D4-AM2-304A-012 | PS03-A025

Water Ortho-to-Para Ratios in the Solar System

Eva WIRSTRÖM^{1#+}

¹Chalmers University of Technology

PS03-D4-AM2-304A-013 | PS03-A016

The Potential Constrains for the Vertical Variation in Rock Abundance of the Moon by Chang'E Microwave Radiometer (MWR) Observations

Guoping $HU^{1\sharp *}$, Kwing Lam CHAN 1 , Yongchun ZHENG 2 , Aoao XU^1

¹Macau University of Science and Technology, ²Chinese Academy of Sciences

PS03-D4-AM2-304A-014 | PS03-A027

Overview of the Tera-Hertz Explorer, TEREX, Mission

Yasuko KASAI^{1‡+}, Takayoshi YAMADA^{1,2}, Richard LARSSON³, Takeshi KURODA^{1,4}, Yuki UCHIYAMA^{1,5}, Shigeru SATO¹, Akifumi WACHI⁶, Ryo SAKAGAMI⁶, Ryohei TAKAHASHI⁶, Shinichi NAKASUKA⁶, Toshiyuki NISHIBORI⁷, Hiroyuki MAEZAWA⁸

¹National Institute of Information and Communications Technology, ²Tokyo Institute of Technology, ³Mac Planck Institute for Solar System Research, ⁴Tohoku University, ⁵Tokyo Gakugei University, ⁶The University of Tokyo, ⁷Japan Aerospace Exploration Agency, ⁸Osaka Prefecture University

Time 13:30 - 15:30

Chair(s) Yi-Jehng KUAN, National Taiwan Normal University

Yasuko KASAI, National Institute of Information and

Communications Technology

PS03-D4-PM1-304A-015 | PS03-A006 (Invited)

First Measurements of Water and D/H on Mars with ExoMars / NOMAD

Geronimo VILLANUEVA^{1‡+}, Giuliano LIUZZI¹, Michael MUMMA¹, AnnCarine VANDAELE², Michael SMITH¹, Severine ROBERT², Frank DAERDEN², Ian THOMAS², Bojan RISTIC², Manish PATEL³, Giancarlo BELLUCCI⁴, Jose Juan LOPEZ-MORENO⁵

¹NASA Goddard Space Flight Center, ²Belgian Institute for Space Aeronomy, ³Open University, ⁴Istituto Di Astrofisica E Planetologia Spaziali, ⁵Instituto de Astrofisica de Andalucía PS03-D4-PM1-304A-016 | PS03-A005

A Measurement of D/H on Mars Using Exes Aboard Sofia

Therese ENCRENAZ¹³¹, Shohei AOKl², Curtis DEWITT³, Matthew RICHTER³, Thomas GREATHOUSE⁴, Thierry FOUCHET¹, Franck MONTMESSIN⁵, Franck LEFÈVRE⁶, Bruno BEZARD¹, Sushil ATREYA⁷, Hideo SAGAWA®¹Paris Observatory, ²Institut d'Aéronomie Spatiale de Belgique, ³University of California Davis, ⁴Southwest Research Institute, ⁵National Center for Scientific Research (CNRS)/ Institut Pierre Simon Laplace (IPSL)/ Université de Versailles Saint-Quentin-en-Yvelines (UVSQ) / University Pierre et Marie Curie (UPMC), ⁶University Pierre et Marie Curie, ⁷University of Michigan, ⁶Kyoto Sangyo University

PS03-D4-PM1-304A-017 | PS03-A014 (Invited)

Oxygen Isotopic Enrichment of Asymmetric-18 Ozone Derived from the SMILES Observation

Tomohiro SATO^{1‡+}, Naohiro YOSHIDA²
¹National Institute of Information and Communications Technology,
²Tokyo Institute of Technology

PS03-D4-PM1-304A-018 | PS03-A032

Water in the Lower Atmosphere of Mars from Herschel

Observations and General Circulation Modeling

Alexander S. MEDVEDEV $^{1\sharp *}$, Dmitry S. SHAPOSHNIKOV 2 , Alexander RODIN 2 , Paul HARTOGH 1

¹Max Planck Institute for Solar System Research, ²Moscow Institute of Physics and Technology

PS03-D4-PM1-304A-019 | PS03-A009

Spectral Scan and Line Catalogue of the Martian Atmosphere

from Herschel-HIFI Observations

Miriam RENGEL^{1,2#+}, Christopher JARCHOW¹, Paul HARTOGH¹ ¹Max Planck Institute for Solar System Research, ²European Space Astronomy Centre

PS03-D4-PM1-304A-020 | PS03-A013

Conceptual Design Result and Feasibility Study of Small,

Simple Mars Lander Mission TEREX-1

Ryo SAKAGAMI $^{1\sharp *}$, Ryohei TAKAHASHI 1 , Akifumi WACHI 1 , Shinichi NAKASUKA 1 , Yasuko KASAI 2

¹The University of Tokyo, ²National Institute of Information and Communications Technology

PS03-D4-PM1-304A-021 | PS03-A008

O2 and Related Chemistry on Mars: Potential Scientific Targets

for the Future Mars Terahertz Sensor Missions

Takeshi KURODA $^{1,2\pi_+}$, Richard LARSSON 3 , Hideo SAGAWA 4 , Shohei AOKI 5 , Yasuko KASAI 1

¹National Institute of Information and Communications Technology,

²Tohoku University, ³Mac Planck Institute for Solar System Research, ⁴Kyoto Sangyo University, ⁵Institut d'Aéronomie Spatiale de Belgique

PS07 / Juno's Exploration of Jupiter

Thu - 07 Jun | MR323B

Time 08:30 - 10:30

Chair(s) Steve LEVIN, JPL

PS07-D4-AM1-323B-001 | PS07-A037

The New Jupiter

Scott BOLTON^{1‡*}, J. E. P. CONNERNEY², Steven LEVIN³
¹Southwest Research Institute, ²NASA Goddard Space Flight Center,
³Jet Propulsion Laboratory, California Institute of Technology

PS07-D4-AM1-323B-002 | PS07-A019 (Invited)

Results from the Juno's JunoCam

Fachreddin TABATABA-VAKILI^{1;*}, Candice HANSEN², Glenn ORTON¹, Michael RAVINE³, Michael CAPLINGER³, Gerald EICHSTAEDT⁴, John ROGERS⁵, Thomas MOMARY¹, Scott BOLTON⁶

¹Jet Propulsion Laboratory, California Institute of Technology, ²Planetary Science Institute, ³Malin Space Science Systems, ⁴N/A, ⁵British Astronomical Association, ⁶Southwest Research Institute

PS07-D4-AM1-323B-003 | PS07-A010 (Invited)

Results from the Juno Exploration of Jupiter's Interior

David STEVENSON1#+

¹California Institute of Technology

PS07-D4-AM1-323B-004 | PS07-A014

A Degree 10 Spherical Harmonic Model of Jupiter's Magnetic

Field from the Juno Magnetometer Investigation

J. E. P. CONNERNEY^{1‡+}, Ronald OLIVERSEN¹, Jared HALEKAS¹, Stavros KOTSIAROS¹, John JORGENSEN², Peter JORGENSEN², Jose M.G. MERAYO², Matija HERCEG², Jeremy BLOXHAM³, Kimberly MOORE³, Scott BOLTON⁴, Steven LEVIN⁵

¹NASA Goddard Space Flight Center, ²Technical University of Denmark, ³Harvard University, ⁴Southwest Research Institute, ⁵Jet Propulsion Laboratory, California Institute of Technology

PS07-D4-AM1-323B-005 | PS07-A001 (Invited)

Implications of Initial Juno Magnetic Field Models for the

Iovian Dvnamo

Kimberly MOORE^{1*+}, Jeremy BLOXHAM¹, John CONNERNEY², John JORGENSEN³, Jose M.G. MERAYO³, Steven LEVIN⁴, Scott BOLTON⁵

¹Harvard University, ²NASA Goddard Space Flight Center, ³Technical University of Denmark, ⁴Jet Propulsion Laboratory, California Institute of Technology, ⁵Southwest Research Institute

PS07-D4-AM1-323B-006 | PS07-A030

Interplanetary Dust Detection and Characterization Along Juno's Trajectory Observed by the ASCS of the Magnetometer Investigation

John JORGENSEN^{1,+}, Mathias BENN¹, Peter JORGENSEN¹, Troelz DENVER¹, Finn JOERGENSEN¹, J. E. P. CONNERNEY², Anja ANDERSEN³, Scott BOLTON⁴, Steven LEVIN⁵

¹Technical University of Denmark, ²NASA Goddard Space Flight Center, ³University of Copenhagen, ⁴Southwest Research Institute, ⁵Jet Propulsion Laboratory, California Institute of Technology

PS07-D4-AM1-323B-007 | PS07-A002

First Detection of Lightning Sferics on Jupiter and the

Distribution of Moist Convection

Shannon BROWN^{1‡+}, Michael JANSSEN¹, Virgil ADUMITROAIE¹, Sushil ATREYA², Scott BOLTON³, Sam GULKIS¹, Andrew INGERSOLL⁴, Steven LEVIN¹, Cheng LI¹, Jonathan LUNINE⁵, Sidharth MISRA¹, Glenn ORTON¹

¹Jet Propulsion Laboratory, California Institute of Technology,

²University of Michigan, ³Southwest Research Institute, ⁴California Institute of Technology, ⁵Cornell University

Time 13:30 - 15:30

Chair(s) Paul HARTOGH, Max Planck Institute for Solar System

Research

Scott BOLTON, Southwest Research Institute

PS07-D4-PM1-323B-008 | PS07-A024 (Invited)

Results from the Juno's Investigation of Jupiter's Atmosphere with JIRAM

Alberto ADRIANI^{1*}, Alessandro MURA¹, Davide GRASSI¹, Maria Luisa MORICONI², Giuseppe SINDONI¹, Scott BOLTON³, J. E. P. CONNERNEY⁴, Steven LEVIN⁵, Andrew INGERSOLL⁶, Sushil ATREYA⁷, Jonathan LUNINE⁸, Heidi BECKER⁵, Candice HANSEN⁹, Glenn ORTON⁵, Randy GLADSTONE³, William KURTH¹⁰, Barry MAUK¹¹, Philip VALEK³

¹National Institute for Astrophysics, ²National Research Council, ³Southwest Research Institute, ⁴NASA Goddard Space Flight Center, ⁵Jet Propulsion Laboratory, California Institute of Technology, ⁶California Institute of Technology, ⁷University of Michigan, ⁸Cornell University, ⁹Planetary Science Institute, ¹⁰The University of Iowa, ¹¹The Johns Hopkins University Applied Physics Laboratory PS07-D4-PM1-323B-009 | PS07-A026

Juno/JIRAM Observations of Jupiter's Main Aurorae and Satellite Footprints.

Alessandro MURA^{1#+}, Alberto ADRIANI², J. E. P. CONNERNEY³, Scott BOLTON⁴, Francesca ALTIERI², Fran BAGENAL⁵, Bertrand BONFOND⁶, Bianca Maria DINELLI⁷, Jean-Claude GERARD⁶, Thomas GREATHOUSE⁴, Denis GRODENT⁶, Steven LEVIN⁸, Barry MAUK9, Maria Luisa MORICONI7, Christina PLAINAKI10, Joachim SAUR¹¹, J. Hunter WAITE, JR.⁴

¹National Institute for Astrophysics VAT: O6895721006, ²National Institute for Astrophysics, 3NASA Goddard Space Flight Center, ⁴Southwest Research Institute, ⁵University of Colorado Boulder, ⁶University of Liege, ⁷National Research Council, ⁸Jet Propulsion Laboratory, California Institute of Technology, 9The Johns Hopkins University Applied Physics Laboratory, 10 Italian Space Agency, 11University of Cologne

PS07-D4-PM1-323B-010 | PS07-A005 (Invited)

Results from the Juno MWR Instrument

Steven LEVIN^{1#+}, Michael JANSSEN¹, Scott BOLTON², J. E. P. CONNERNEY3, Virgil ADUMITROAIE1, Michael ALLISON4, John ARBALLO¹, Sushil ATREYA⁵, Amadeo BELOTTI⁶, Shannon BROWN¹, Samuel GULKIS¹, Andrew INGERSOLL⁷, Cheng LI¹, Jonathan LUNINE⁸, Sidharth MISRA¹, Glenn ORTON¹, Fabiano OYAFUSO1, Daniel SANTOS-COSTA2, Edwin SARKISSIAN1, Paul STEFFES6, Fachreddin TABATABA-VAKILI1, Zhimeng ZHANG1

¹Jet Propulsion Laboratory, California Institute of Technology, ²Southwest Research Institute, ³NASA Goddard Space Flight Center, ⁴Goddard Institute for Space Studies, ⁵University of Michigan, ⁶Georgia Institute of Technology, ⁷California Institute of Technology, ⁸Cornell University

PS07-D4-PM1-323B-011 | PS07-A027 (Invited)

How Deep is Jupiter's Great Red Spot?

Cheng LI1#+, Fabiano OYAFUSO2, Shannon BROWN2, Sushil ATREYA3, Glenn ORTON2, Andrew INGERSOLL1, Michael JANSSEN2, Scott BOLTON4

¹California Institute of Technology, ²Jet Propulsion Laboratory, California Institute of Technology, 3University of Michigan, ⁴Southwest Research Institute

PS07-D4-PM1-323B-012 | PS07-A016 (Invited)

Results of Joint Observations of Jupiter's Atmosphere by Juno

and a Network of Earth-Based Observing Stations

Glenn ORTON^{1#+}, Thomas MOMARY¹, Scott BOLTON², Steven LEVIN1, Candice HANSEN3, Michael JANSSEN1, Alberto ADRIANI⁴, Randy GLADSTONE², Fran BAGENAL⁵, Andrew INGERSOLL6

¹Jet Propulsion Laboratory, California Institute of Technology, ²Southwest Research Institute, ³Planetary Science Institute, ⁴National Institute for Astrophysics, ⁵University of Colorado Boulder, ⁶California Institute of Technology

PS07-D4-PM1-323B-013 | PS07-A036 (Invited)

Juno-UVS Observations of Jupiter's Aurora and Airglow

Emissions

Randy GLADSTONE^{1#+}, Thomas GREATHOUSE¹, Maarten VERSTEEG1, Vincent HUE1, Joshua KAMMER1, Jean-Claude GERARD², Denis GRODENT², Bertrand BONFOND², Scott BOLTON1, J. E. P. CONNERNEY3, Steven LEVIN4, Alberto ADRIANI5, Frederic ALLEGRINI1,6, Fran BAGENAL7, Emma BUNCE8, Graziella BRANDUARDI-RAYMONT9, George CLARK¹⁰, William DUNN⁹, Robert EBERT¹, Candice HANSEN¹¹, Caitriona JACKMAN¹², Ralph KRAFT¹³, William KURTH¹⁴, Barry MAUK¹⁰, Alessandro MURA¹⁵, Glenn ORTON⁴, Drake RANQUIST7, Michael RAVINE16, Philip VALEK1 ¹Southwest Research Institute, ²University of Liege, ³NASA Goddard Space Flight Center, ⁴Jet Propulsion Laboratory, California Institute of Technology, ⁵National Institute for Astrophysics, ⁶University of Texas at San Antonio, 7University of Colorado Boulder, 8Leicester University, ⁹University College London, ¹⁰The Johns Hopkins University Applied Physics Laboratory, 11Planetary Science Institute, 12University of Southampton, ¹³Harvard-Smithsonian Center for Astrophysics, ¹⁴The University of Iowa, ¹⁵National Institute for Astrophysics VAT: O6895721006, ¹⁶Malin Space Science Systems

PS07-D4-PM1-323B-014 | PS07-A003

New Detections of Jupiter Dispersed Pulses During Juno

Masafumi IMAI1#+, Ivana KOLMASOVA23, Ondrej SANTOLIK23, William KURTH1, George HOSPODARSKY1, Donald GURNETT¹, Scott BOLTON⁴, J. E. P. CONNERNEY⁵, Steven

¹The University of Iowa, ²Czech Academy of Sciences, ³Charles University, ⁴Southwest Research Institute, ⁵NASA Goddard Space Flight Center, ⁶Jet Propulsion Laboratory, California Institute of Technology

16:00 - 18:00 Time

Chair(s) Jack CONNERNEY, SRC Alberto ADRIANI, IAPS

PS07-D4-PM2-323B-015 | PS07-A028 (Invited)

Results from the Juno JADE Instrument and Juno's Exploration of Jupiter's Magnetosphere

Robert EBERT^{1#+}, Philip VALEK¹, Frederic ALLEGRINI^{1,2}, Fran BAGENAL3, Scott BOLTON1, John CONNERNEY4, Randy GLADSTONE¹, Thomas KIM^{1,2}, Steven LEVIN⁵, Philippe LOUARN6, William KURTH7, David MCCOMAS8, Craig POLLOCK9, Drake RANQUIST3, Michelle THOMSEN10, Rob

¹Southwest Research Institute, ²University of Texas at San Antonio, ³University of Colorado Boulder, ⁴NASA Goddard Space Flight Center, ⁵Jet Propulsion Laboratory, California Institute of Technology, ⁶Institut de Recherche en Astrophysique et Planétologie (IRAP), ⁷The University of Iowa, 8Princeton University, 9Denali Scientific, 10Planetary Science Institute

PS07-D4-PM2-323B-016 | PS07-A009 (Invited)

Results from the Juno JEDI Instrument and Juno's Exploration of Jupiter's Magnetosphere

Barry MAUK^{1‡+}, Dennis HAGGERTY¹, Chris PARANICAS¹, George CLARK¹, Peter KOLLMANN¹, Abigail RYMER¹, Scott BOLTON², Steven LEVIN³, Alberto ADRIANI⁴, Fran BAGENAL⁵, Bertrand BONFOND⁶, John CONNERNEY⁷, Robert EBERT², Randy GLADSTONE², William KURTH⁸, David MCCOMAS⁹, Drake RANQUIST⁵, Philip VALEK²

¹The Johns Hopkins University Applied Physics Laboratory, ²Southwest Research Institute, ³Jet Propulsion Laboratory, California Institute of Technology, ⁴National Institute for Astrophysics, ⁵University of Colorado Boulder, ⁶Université de Liège, ⁷NASA Goddard Space Flight Center, ⁸The University of Iowa, ⁹Princeton University

PS07-D4-PM2-323B-017 | PS07-A006

Observations of >10 MeV Electron Beams in Jupiter's Polar

Regions by Juno's Radiation Monitoring Investigation

Heidi BECKER¹[‡], Alexandre GUILLAUME¹, Martin BRENNAN¹, James ALEXANDER¹, Kelly PERRY¹, John JORGENSEN², Troelz DENVER², Randy GLADSTONE³, Thomas GREATHOUSE³, Vincent HUE³, Maarten VERSTEEG³, John CONNERNEY⁴, Scott BOLTON³, Steven LEVIN¹

¹Jet Propulsion Laboratory, California Institute of Technology, ²Technical University of Denmark, ³Southwest Research Institute, ⁴NASA Goddard Space Flight Center

PS07-D4-PM2-323B-018 | PS07-A011 (Invited)

The Juno Waves Investigation Explores the Jovian

Magnetosphere

William KURTH^{1#+}, George HOSPODARSKY¹, Masafumi IMAI¹, Sadie ELLIOTT¹, Donald GURNETT¹, Ali SULAIMAN¹, Philip VALEK², Frederic ALLEGRINI^{2,3}, Randy GLADSTONE², Philippe LOUARN⁴, Scott BOLTON², Alberto ADRIANI⁵

¹The University of Iowa, ²Southwest Research Institute, ³University of Texas at San Antonio, ⁴Institut de Recherche en Astrophysique et Planétologie, ⁵National Institute for Astrophysics

PS07-D4-PM2-323B-019 | PS07-A020

Bow Shock and Magnetopause Encounters at Jupiter by the

Juno Spacecraft

George HOSPODARSKY¹⁵⁺, William KURTH¹, Frederic ALLEGRINI^{2,3}, Scott BOLTON², George CLARK⁴, John CONNERNEY⁵, Robert EBERT², Daniel GERSHMAN⁵, Dennis HAGGERTY⁴, Steven LEVIN⁶, Chris PARANICAS⁴, Drake RANQUIST⁷, Abigail RYMER⁴, Philip VALEK², Chihiro TAO⁸, Michael R. COLLIER⁵, Jacob GRUESBECK⁵

¹The University of Iowa, ²Southwest Research Institute, ³University of Texas at San Antonio, ⁴The Johns Hopkins University Applied Physics Laboratory, ⁵NASA Goddard Space Flight Center, ⁶Jet Propulsion Laboratory, California Institute of Technology, ⁷University of Colorado Boulder, ⁸National Institute of Information and Communications Technology

PS07-D4-PM2-323B-020 | PS07-A023

Energy Flux of Precipitating Electrons over Jupiter's Main Auroral Emission

Frederic ALLEGRINI^{1,2±}, Barry MAUK³, Randy GLADSTONE¹, Fran BAGENAL⁴, Scott BOLTON¹, George CLARK³, John CONNERNEY⁵, Robert EBERT¹, Thomas GREATHOUSE¹, Vincent HUE¹, George HOSPODARSKY⁶, William KURTH⁶, Steven LEVIN⁷, Philippe LOUARN⁸, David MCCOMAS⁹, Drake RANQUIST⁴, Craig POLLOCK¹⁰, Michelle THOMSEN¹¹, Philip VALEK¹, Rob WILSON⁴

¹Southwest Research Institute, ²University of Texas at San Antonio, ³The Johns Hopkins University Applied Physics Laboratory, ⁴University of Colorado Boulder, ⁵NASA Goddard Space Flight Center, ⁶The University of Iowa, ⁷Jet Propulsion Laboratory, California Institute of Technology, ⁸Institut de Recherche en Astrophysique et Planétologie (IRAP), ⁹Princeton University, ¹⁰Denali Scientific, ¹¹Planetary Science Institute

PS08 / Polarization as a Tool for Exploration of Earth, Solar System and Beyond

Thu - 07 Jun | MR304A

Time 16:00 - 18:00

Chair(s) Padma A. YANAMANADRA-FISHER, Space Science

Institute

PS08-D4-PM2-304A-001 | PS08-A008 (Invited)

Identifying Aerosol Types over the Contagious United States

with Polarized Angular Light Scattering Measurements

Reed ESPINOSA $^{1\sharp +}$, J. Vanderlei MARTINS 2 , Lorraine REMER 2,3 , Anin PUTHUKKUDY 2 , Oleg DUBOVIK 4

¹NASA Goddard Space Flight Center, ²University of Maryland, Baltimore County, ³Airphoton LLC, ⁴UniversitÉLille 1

PS08-D4-PM2-304A-002 | PS08-A006

Wide-Angle Polarimetric Camera for Korea Pathfinder Lunar Orbiter

Young-Jun CHOI¹⁸⁺, Sungsoo KIM², Kyungin KANG³, Yuriy SHKURATOV⁴, Ian GARRICK-BETHELL^{2,5}

¹Korea Astronomy and Space Science Institute, ²Kyung Hee University, ³KAIST, ⁴V. N. Karazin Kharkiv National University, ⁵University of California, Santa Cruz

PS08-D4-PM2-304A-003 | PS08-A011

Polarimetry of the Near Earth Asteroid (357439) 2004 Bl86 on its

Closest Approach

Shashikiran GANESH¹⁵⁺, Indhu VARATHARAJAN², Ashish MISHRA¹, Kumar VENKATARAMANI¹, Kiran BALIYAN¹, Umesh JOSHI¹, Jorn HELBERT², Alessandro MATURILLI² ¹Physical Research Laboratory, ²German Aerospace Center PS08-D4-PM2-304A-004 | PS08-A001

Spectro-Polarimetric Signals of Comet 2P/Encke During its 2017 Apparition

Yuna KWON1#+

¹Seoul National University

PS08-D4-PM2-304A-005 | PS08-A016

Photopolarimetric Observations of Comet 2P/Encke in

Apparition of 2017

Nikolai KISELEV¹, Vera ROSENBUSH², Olexandra IVANOVA³, Ludmilla KOLOKOLOVA⁴²+, Viktor AFANASIEV⁵, Olena SHUBINA⁶

¹Crimean Astrophysical Observatory, ²University of Kyiv, ³Astronomical Institute of the Slovak Academy of Sciences, ⁴University of Maryland, ⁵Russian Academy of Sciences, ⁶Main Astronomical Observatory of the National Academy of Sciences of Ukraine

PS08-D4-PM2-304A-006 | PS08-A007 (Invited)

High Precision Polarimetry of Planets and Stars

Jeremy BAILEY^{1‡+}, Lucyna CHUDCZER¹, Daniel COTTON¹
¹University of New South Wales

PS08-D4-PM2-304A-007 | PS08-A018

Exoplanet Surface Imaging: Biosignatures and

Technosignatures

Svetlana BERDYUGINA 1#+, Jeff KUHN 2

¹Kiepenheuer Institute for Solar Physics, ²University of Hawaii

PS13 / Planetary Interiors and Magnetism

Thu - 07 Jun | MR323B

Time 11:00 - 12:30

Chair(s) Andrew ROBERTS, Australian National University

Dali KONG, SHAO

 ${\bf Emilio\ HERRERO-BERVERA},\ University\ of\ Hawaii\ at$

Manoa

PS13-D4-AM2-323B-001 | PS13-A001

A Self-Consistent Multi-Layered Model of Saturn and

Gravitational Effect of Equatorially Symmetric Zonal Winds

Dali KONG $^{1\sharp +}$, Keke ZHANG 2 , Gerald SCHUBERT 3 , John ANDERSON 4

¹Chinese Academy of Sciences, ²University of Exeter, ³University of California, Los Angeles, ⁴Jet Propulsion Laboratory, California Institute of Technology

PS13-D4-AM2-323B-002 | PS13-A003

Saturn's Gravitational Field Induced by its Equatorially

Antisymmetric Zonal Winds

Keke ZHANG $^{1s+}$, Dali KONG 2 , Gerald SCHUBERT 3 , John ANDERSON 4

¹University of Exeter, ²Chinese Academy of Sciences, ³University of California, Los Angeles, ⁴Jet Propulsion Laboratory, California Institute of Technology

PS13-D4-AM2-323B-003 | PS13-A005

Initial Iron-60 Abundance in the Solar Nebula Constrained by

Delayed Onset of a Planetesimal Dynamo

Huapei WANG^{1#+}, Benjamin WEISS², John CROWLEY³
¹China University of Geosciences, ²Massachusetts Institute of Technology, ³Natural Resources Canada

PS13-D4-AM2-323B-004 | PS13-A006

Ultra-High Resolution Evidence for Complex Transitional Field Behaviour During the Upper Olduvai Geomagnetic Polarity Reversal

Andrew ROBERTS^{1,8+}, Chorng-Shern HORNG², Xiang ZHAO¹
¹Australian National University, ²Academia Sinica

PS13-D4-AM2-323B-005 | PS13-A008

Saturn's Internal Magnetic Field Revealed by Cassini Grand Finale

Hao CAO^{1,2±+}, Michele DOUGHERTY³, Krishan KHURANA⁴, Gregory HUNT³, Gabrielle PROVAN⁵, Stephen KELLOCK³, Thomas BURK⁶, Marcia BURTON⁶

¹Harvard University, ²California Institute of Technology, ³Imperial College London, ⁴University of California, Los Angeles, ⁵University of Leicester, ⁶Jet Propulsion Laboratory, California Institute of Technology

PS13-D4-AM2-323B-006 | PS13-A009

The Fluxgate Magnetometer of the Low Orbit Pearl Satellites Hao LUO¹⁵⁺, Aimin DU¹, Ying ZHANG¹, Ye ZHU¹, Yasong GE¹, Lin ZHAO¹, Shuquan SUN¹, Jiaming OU¹ ¹Chinese Academy of Sciences

PS13-D4-AM2-323B-007 | PS13-A004

Geomagnetic Reversal Records from Long Volcanic Sequences

Registered Along the Hawaiian Island Chain

Emilio HERRERO-BERVERA1#+

¹University of Hawaii at Manoa

SE05 / Magmatism and Mineral Deposits at Anorogenic Settings

Thu - 07 Jun | MR319B

Time 16:00 - 18:00

Chair(s) Maria L. TEJADA, Japan Agency for Marine-Earth

Science and Technology

Steven W. DENYSZYN, The University of Western

Australia

J. Gregory SHELLNUTT, National Taiwan Normal

University

SE05-D4-PM2-319B-001 | SE05-A013 (Invited)

Petrologic and Geochemical Evidence for a Paleozoic Hotspot in the Iranian Tethysides

Kwan-Nang PANG $^{1s+}$, Sun-Lin CHUNG 2 , Mohammad Hossein ZARRINKOUB 3 , Liang QI 4 , Ben-Xun SU 4 , Hao-Yang LEE 1 , Han-Yi CHIU 1

¹Academia Sinica, ²National Taiwan University, ³Birjand University, ⁴Chinese Academy of Sciences

SE05-D4-PM2-319B-002 | SE05-A015

ID-TIMS U-Pb Geochronology of Mafic Dykes from the

Yilgarn Craton (Australia) and Bastar Craton (India): New

Piercing Points for Paleogeographic Reconstruction

Steven DENYSZYN $^{1\sharp +}$, Camilla STARK 2 , Alice LIAO 3 , Greg SHELLNUTT 3 , Zhengxiang LI 2

¹University of Western Australia, ²Curtin University, ³National Taiwan Normal University

SE05-D4-PM2-319B-003 | SE05-A002

Assimilation of the Mafic-Ultramafic Magma: A Case Study of

Diabase Dyke at the Beidaihe, North China Craton

Haijin $XU^{1\sharp +}$, Junfeng $ZHANG^1$

¹China University of Geosciences

SE05-D4-PM2-319B-004 | SE05-A014

Precise Age Determination of Silicic Rocks from the Extended Emeishan Large Igneous Province in Phan Si Pan Uplift Area and Tu Le Basin, Northwestern Vietnam

Thuy PHAM¹.2²+, Greg SHELLNUTT¹, Steven DENYSZYN³, Tuan Tran ANH²

¹National Taiwan Normal University, ²Vietnam Academy of Science and Technology, ³University of Western Australia

SE05-D4-PM2-319B-005 | SE05-A003

Identification of Two Distinct Intrusive Units in the Early

Paleogene Silhouette/North Island Complex, Seychelles

Greg SHELLNUTT^{1#+}, Tung-Yi LEE¹, Hao-Yang LEE², Yoshiyuki IIZUKA²

¹National Taiwan Normal University, ²Academia Sinica

SE05-D4-PM2-319B-006 | SE05-A004

Geochemistry of Volcanic Rocks from Oldoinyo Lengai,

Tanzania: Implications for Source Rocks

Seung Gi JUNG¹+, Sung Hi CHOI¹*, Kang Hyun JI², Jong-Sik RYU³

¹Chungnam National University, ²Korea Institute of Geoscience and Mineral Resources, ³Korea Basic Science Institute

SE05-D4-PM2-319B-007 | SE05-A020 (Invited)

Magnetic Anomalies Imply Tamu Massif Formed by Seafloor Spreading

William W. SAGER^{1‡+}, Yanming HUANG², Masako TOMINAGA², John GREENE², Jinchang ZHANG³, Masao NAKANISHI⁴

¹University of Houston, ²Texas A&M University, ³Chinese Academy of Sciences, ⁴Chiba University

SE05-D4-PM2-319B-008 | SE05-A016

Morphology of a Large Igneous Province from High Resolution

Bathymetry: The Philippine Rise Region

John Agustin ESCUDERO^{1‡+}, Mario AURELIO¹, Toshiya FUJIWARA², Maria Luisa TEJADA², Jan Bryan NAVARRO³
¹University of the Philippines, ²Japan Agency for Marine-Earth Science and Technology, ³National Mapping and Resource Information Authority

SE05-D4-PM2-319B-009 | SE05-A006

Flood Basalt-Related Magmatism and Mineralization in the Naturaliste Plateau? Preliminary Findings from IODP

Expedition 369

Maria Luisa TEJADA¹⁵⁺, Eun Young LEE², Hans-Jurgen BRUMSACK³, Richard HOBBS⁴, Brian HUBER⁵, Kara BOGUS⁶, Carl RICHTER⁷, Yong-Xiang LI⁸, Dennis HARRY⁹, Tao JIANG¹⁰, Laurent RIQUIER¹¹, Carmine WAINMAN¹², Junichiro KURODA¹³, Shannon J. HAYNES¹⁴, Alessandro MARITATI¹⁵, Gabriel TAGLIARO¹⁶, IODP EXPEDITION 369 SCIENTITSTS⁶ ¹Japan Agency for Marine-Earth Science and Technology, ²Chonnam National University, ³University of Oldenburg, ⁴University of Durham, ⁵Smithsonian Institution, ⁶Texas A&M University, ⁷University of Louisiana at Lafayette, ⁸Nanjing University, ⁹Colorado State University, ¹⁰China University of Geosciences, ¹¹University Pierre et Marie Curie, ¹²University of Adelaide, ¹³The University of Tokyo, ¹⁴Princeton University, ¹⁵University of Tasmania, ¹⁶University of Texas at Austin

SE25-40 / New Advance on Tectonics of SE Asia

Thu - 07 Jun | MR314

Time 08:30 - 10:30

Chair(s) Xiaodong SONG, University of Illinois U-C

Mian LIU, University of Missouri

SE25-40-D4-AM1-314-013 | SE25-40-A035 (Invited)

Plate Tectonics, Stress Conditions and Earthquake Potential within the Indochinese Region

Kevin P. FURLONG 15+, Matthew HERMAN2, Passakorn PANANONT3

¹Penn State University, ²Utrecht University, ³Kasetsart University

SE25-40-D4-AM1-314-014 | SE25-40-A039

Ambient Noise Love Wave Tomography Across China

Zhigao YANG^{1*+}, Xiaodong SONG^{2,3}, Xuemei ZHANG¹
¹China Earthquake Networks Center, ²U of Illinois Urbana-Champaign
/ Wuhan U, ³Wuhan University

SE25-40-D4-AM1-314-015 | SE25-40-A046

The Structure Interpretation in Southeast Margin and Adjacent Area of Qiangtang Block and the Seimogenesis of Milin M6.9 Earthquake

Guiju WU $^{{\mbox{\tiny 1}}*}$, Shen CHANGYANG $^{\mbox{\tiny 1}}$, Hongbo TAN $^{\mbox{\tiny 1}}$, Songbai XUAN $^{\mbox{\tiny 1}}$, Jiapei WANG $^{\mbox{\tiny 1}}$

¹China Earthquake Administration

SE25-40-D4-AM1-314-016 | SE25-40-A040 (Invited)

The First Portable Seismic Array in Myanmar and the Crustal and Uppermost Mantle Structures Beneath North-Central Myanmar

Yumei $HE^{1\sharp*}$, Tianyu ZHENG¹, Mingming JIANG¹, Chit Thet MON¹, Myo THANT², 3 , Yinshuang AI¹, Qi-Fu CHEN¹, Kyaing SEIN⁴

¹Chinese Academy of Sciences, ²Monywa University, ³Myanmar Earthquake Committee, ⁴Myanmar Geosciences Society

SE25-40-D4-AM1-314-017 | SE25-40-A042

3D Velocity Structure of the Central Myanmar Basin from Seismic Observations and Gravity Modeling

Wang XIN^{1‡+}, Shengji WEI¹, Yu WANG^{1,2}
¹Nanyang Technological University, ²National Taiwan University

SE25-40-D4-AM1-314-018 | SE25-40-A043

Local Seismicity and Crustal Structure in Myanmar

Phyo Maung MAUNG^{1#+}, Chen MENG¹, Xin WANG¹, Shengji WEI¹

¹Nanyang Technological University

SE32 / Accretion and Subduction of the Oceanic Lithosphere, from Ridge to Trench

Thu - 07 Jun | MR314

Time 16:00 - 18:00

Chair(s) Hongfeng YANG, Chinese University of Hong Kong

Shengji WEI, Nanyang Technological University

SE32-D4-PM2-314-001 | SE32-A020

Three-Dimensional Forward and Inverse Gravity Modeling of

Ocean Core Complexes at the Central Indian Ridge

Seung-Sep KIM $^{1\sharp *}$, Leonardo UIEDA 2 , Michael CHANDLER 3 , Sang-Joon PAK 3 , Seung-Kyu SON 3

 $^{1}\mbox{Chungnam}$ National University, $^{2}\mbox{University}$ of Hawaii at Manoa,

³Korea Institute of Ocean Science and Technology

SE32-D4-PM2-314-002 | SE32-A002

Structures within the Oceanic Crust of the Central South China Sea Basin and Their Implications for Oceanic Accretionary Processes

Weiwei DING $^{1\#+}$, Zhen SUN 2

¹State Oceanic Administration, ²South China Sea Institute of Oceanology, Chinese Academy of Sciences

SE32-D4-PM2-314-003 | SE32-A006

Seismic Velocity Variations in the Uppermost Oceanic Mantle

of the Incoming Pacific Plate Along the Japan Trench

Koichiro OBANA^{1**}, Gou FUJIE¹, Yasuyuki NAKAMURA¹, Tsutomu TAKAHASHI¹, Takashi TONEGAWA¹, Yojiro YAMAMOTO¹, Yuka KAIHO¹, Seiichi MIURA¹, Shuichi KODAIRA¹

¹Japan Agency for Marine-Earth Science and Technology

SE32-D4-PM2-314-004 | SE32-A014 (Invited)

Evolution of the South China Sea from Subduction to

Rifting-Drilling and Modeling Constraints

Zhen SUN^{1#+}, Fucheng LI²
¹South China Sea Institute of Oceanology, Chinese Academy of Sciences, ²Chinese Academy of Sciences

SE32-D4-PM2-314-005 | SE32-A009 (Invited)

Seismic Characters of Oceanic Lithosphere Entering the Japan

Trench Seismogenic Zone

Shuichi KODAIRA¹♯+, Yasuyuki NAKAMURA¹, Koichiro OBANA¹, Akane OHIRA¹, Seiichi MIURA¹

¹Japan Agency for Marine-Earth Science and Technology

SE32-D4-PM2-314-006 | SE32-A010

Along-Strike Variation of Earthquake Distribution in the Southern Mariana Subduction Zone Inferred from Ocean

Bottom Seismic Experiments

Hongfeng YANG^{1#+}, Gaohua ZHU¹, Jian LIN^{2,3}
¹Chinese University of Hong Kong, ²Woods Hole Oceanographic Institution, ³Chinese Academy of Sciences

SE32-D4-PM2-314-007 | SE32-A019

The Xigaze Ophiolites Revisited: An Analogue to Oceanic Lithosphere Formed in Ultraslow Spreading Ridges

Chuan-Zhou LIU1#+

¹Chinese Academy of Sciences

SE32-D4-PM2-314-008 | SE32-A021

Crustal Structure and Deformation in the Manila Trench:

Insights on Seamount Subduction and Forearc Evolution

Leo ARMADA¹⁵⁺, Carla DIMALANTA¹, Shu-Kun HSU², Creszyl Joy ARELLANO¹, Yi-Ching YEH², Noelynna RAMOS¹, Teresito BACOLCOL³, Graciano YUMUL, JR.^{4,5}

¹University of the Philippines Diliman, ²National Central University, ³Philippine Institute of Volcanology and Seismology, ⁴Monte Oro Resources & Energy, Inc., ⁵Apex Mining Co. Inc.

SE38 / Global Mass Transport, Earth Rotation and Low-degree Gravitational Change

Thu - 07 Jun | MR321B

Time 08:30 - 10:30

Chair(s) Jianli CHEN, Center for Space Research, University of

Texas at Austin

Maik THOMAS, Helmholtz Centre Potsdam GFZ German

Research Centre for Geosciences

SE38-D4-AM1-321B-001 | SE38-A025 (Invited)

Earth's Oblateness J2 Variations and Geophysical Causes

Benjamin Fong CHAO^{1#+}, Yao YU²
¹Academia Sinica, ²Wuhan University

SE38-D4-AM1-321B-002 | SE38-A013 (Invited)

Toward High-Accuracy Data-Based Geocenter Motion

Determination to Complement Grace and Grace Follow-On

Missions

Xiaoping WU^{1#+}, Bruce HAINES¹, Yan JIANG², Felix LANDERER¹

¹Jet Propulsion Laboratory, California Institute of Technology, ²Geological Survey of Canada

SE38-D4-AM1-321B-003 | SE38-A003

Short-Term to Seasonal Predictions of Earth Orientation

Changes from Hydrodynamic Numerical Modelling

Henryk DOBSLAW¹, Robert DILL¹, Maik THOMAS^{1‡+}
¹GFZ Helmholtz Centre Potsdam

SE38-D4-AM1-321B-004 | SE38-A014

Consistent Estimation for AAM, Atmospheric Torque and LOD

Change

Haoming YAN^{1#+}, Yong HUANG², Min ZHONG¹, Yaozhong ZHU¹

¹Chinese Academy of Sciences, ²Wuhan University of Technology

SE38-D4-AM1-321B-005 | SE38-A016

Interannual Oscillations in Earth Rotation and Low Degree

Gravitational Change

Jianli CHEN1#+

¹The University of Texas at Austin

SE38-D4-AM1-321B-006 | SE38-A007

A Unified Theory for 20th Century Polar Motion

Surendra ADHIKARI $^{1#}$, Lambert CARON 1 , Erik IVINS 1 , Eric LAROUR 1 , John REAGER 1

¹Jet Propulsion Laboratory, California Institute of Technology

SE38-D4-AM1-321B-007 | SE38-A004

The Impact of Mass and Motion Terms of Atmosphere and

Ocean on Polar Motion Excitation

Justyna ŚLIWIŃSKA¹², Jolanta NASTULA¹⁺, Małgorzata WIŃSKA²

¹Polish Academy of Sciences, ²Space Research Center Polish Academy of Sciences

Time 16:00 - 18:00

Chair(s) Jianli CHEN, Center for Space Research, University of

Texas at Austin

 $Maik\ THOMAS,\ Helmholtz\ Centre\ Potsdam\ GFZ\ German$

Research Centre for Geosciences

SE38-D4-PM2-321B-008 | SE38-A006 (Invited)

Constraints and Uncertainty on Global Glacial Isostatic

Adjustment Signal Using a Bayesian Approach

Lambert CARON^{1#+}, Erik IVINS¹, Surendra ADHIKARI¹, Eric LAROUR¹

¹Jet Propulsion Laboratory, California Institute of Technology

SE38-D4-PM2-321B-009 | SE38-A015 (Invited)

Implication of Low-Degree Gravitational Change on Sea Level

Variations

Shuang YI^{1#+}, Kosuke HEKI¹
¹Hokkaido University

SE38-D4-PM2-321B-010 | SE38-A020 (Invited)

Terrestrial Water Storage and Flux Variations over China Based on a Joint Analysis of GRACE, Hydrological Models and

Ground-Based Observations

Wei FENG^{1‡+}, Juergen KUSCHE², Ehsan FOROOTAN³
¹Chinese Academy of Sciences, ²University of Bonn, ³Cardiff University

SE38-D4-PM2-321B-011 | SE38-A010

Theoretical Estimation of Dynamic Mass Redistribution
Induced by Elastic Waves from a Point Dislocation Source in
an Infinite Homogeneous Isotropic Medium
Masaya KIMURA¹⁵⁺, Nobuki KAME¹

SE38-D4-PM2-321B-012 | SE38-A002

¹The University of Tokyo

Simulation Analysis of Double-Pair Grace Satellite Formation for Detecting Earth Gravity Field

Guang-Bin ZHU1#+, Xiao-Tao CHANG1

¹National Administration of Surveying, Mapping and Geoinformation

SE38-D4-PM2-321B-013 | SE38-A001

Co-Seismic Effect of Large Earthquakes on Recent Abrupt Departure of the Earth's Pole Secular Drifting Since 2000 Changyi XU^{1,2#+}, Benjamin Fong CHAO¹

¹Academia Sinica, ²China Earthquake Administration

SE38-D4-PM2-321B-014 | SE38-A021

The Annual Deformation Induced by Temperature Variation in Chinese Mainland

Weijie TAN¹‡+, Xueqing XU¹, Dong DANAN², Junping CHEN¹ ¹Chinese Academy of Sciences, ²East China Normal University

SE41-33 / Environmental and Applied Mineralogy and Ore Deposits

Thu - 07 Jun | MR321A

Time 08:30 - 10:30

Chair(s) Hai Thanh TRAN, Hanoi University of Mining and

Geology

Kotaro YONEZU, Kyushu University

SE41-33-D4-AM1-321A-001 | SE41-33-A036

Preliminary Study on Mafic Magma Contribution to Porphyry Cu-Au Mineralization at the Grasberg Deposit, Indonesia:

Evidence from Co-Ni-Cu Sulfide

Kotaro YONEZU^{1‡+}, Katsuhito TERASHIMA¹, Thomas TINDELL¹, Benny BENSAMAN², Mega Fatimah ROSANA² ¹Kyushu University, ²Padjadjaran University

SE41-33-D4-AM1-321A-002 | SE41-33-A037

Petrology, Geochemistry and U-Pb Dating of Host Rocks in the Sangilo Epithermal Deposit, Baguio Mineral District, Philippines

Jillian Aira GABO-RATIO^{1‡+}, Karl JABAGAT², Marlene Ariam AGUILERA PRADENAS³, Naoto KUGIZAKI³, Nichole Anthony PACLE¹, Jessamin Belle DEMEGILLO², Omar SOBERANO², Valerie Shayne OLFINDO², Betchaida PAYOT¹, Kotaro YONEZU³, Yuan Hsi LEE⁴, Karlo QUEAÑO⁵, Eric ANDAL⁶, Carla DIMALANTA¹, Graciano YUMUL, JR.^{7,8}

¹University of the Philippines Diliman, ²University of the Philippines, ³Kyushu University, ⁴National Chengchi University, ⁵Mines and Geosciences Bureau, ⁶Itogon-Suyoc Resources Inc., ⁷Monte Oro

Resources & Energy, Inc., 8Apex Mining Co. Inc.

SE41-33-D4-AM1-321A-003 | SE41-33-A038

Geochemical Association of Concentration of REE Including Sc and Bedrock in Nickel Laterite Deposit, Central Dinagat Island, Philippines

Tomiyuki YAMADA^{1‡+}, Kotaro YONEZU¹, Rogel SANTOS², Jillian Aira GABO-RATIO³, Arnilo MILAOR⁴
¹Kyushu University, ²MacroAsia Mining Corporation, ³University of

the Philippines Diliman, 4Cagdianao Mining Corporation

SE41-33-D4-AM1-321A-004 | SE41-33-A039

Preliminary Ore Mineralogical Study of Sesame Vein, Sangilo Mine, Baguio Mineral District, Northern Luzon, Philippines Naoto KUGIZAKI^{1;*}, Kotaro YONEZU¹, Jillian Aira GABO-RATIO², Eric ANDAL³

¹Kyushu University, ²University of the Philippines Diliman, ³Itogon-Suyoc Resources Inc.

SE41-33-D4-AM1-321A-005 | SE41-33-A032

Formation Condition of Geochemical Characteristics of Epithermal Gold Mineralization of Mong Yu Area, Shan East, Myanmar

Sai PYAE SONE
15+, Kotaro YONEZU¹, Koichiro WATANABE¹, Kenzo SANEMATSU
2,3 $\,$

¹Kyushu University, ²National Institute of Advanced Industrial Science and Technology, ³University of Tasmania

SE41-33-D4-AM1-321A-006 | SE41-33-A033

High Temperature - Medium Pressure Granulite Grade Metamorphism in Momeik Area, Mogok Metamorphic Belt, Myanmar: Constraints from Petrological Evidences and Phase Equilibria Modelling

Khaing Nyein HTAY^{1#+}

¹Gemological Institute of Myanmar

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Time 16:00 - 18:00

Chair(s) Carlo ARCILLA, University of the Philippines, Diliman

Tsutomu SATO, Hokkaido University

SE41-33-D4-PM2-321A-007 | SE41-33-A018

Utilization of Metastable Geomaterials as One of Intelligent

Applied Mineralogy Learnt from Natural Processes

Tsutomu SATO^{1#+}
¹Hokkaido University

SE41-33-D4-PM2-321A-008 | SE41-33-A030

Metallogenic Significance of Sediment-Hosted/Orogenic Gold

Deposits in Mainland SE Asia

Khin ZAW^{1#+}, Charles MAKOUNDI¹, Hai Thanh TRAN²
¹University of Tasmania, ²Hanoi University of Mining and Geology

SE41-33-D4-PM2-321A-009 | SE41-33-A010

Mineralogical and Geochemical Evolution of Laterization: A Study of the Weathering Mantle of the Zambales Ophiolite Complex

Karmina AQUINO^{1#+}, Carlo ARCILLA¹ *University of the Philippines Diliman*

SE41-33-D4-PM2-321A-010 | SE41-33-A035

The Occurrences of Ophiolite Complex in Ciletuh Region, West Jawa, Indonesia as Evidence of Cretaceous Subduction of Eurasian-Indoaustralian Plates

Mega Fatimah ROSANA^{1‡+}, Rinaldi IKHRAM¹, Adi HARDIYONO¹, Euis TINTIN YUNINGSIH¹ ¹Padjadjaran University

SE41-33-D4-PM2-321A-011 | SE41-33-A016

Comparison Between Cement and Geopolymer Matrices for Solidification of Spent Synthesized Zeolite Adsorbing- Cesium and Strontium

Hnin WINT WINT TWO¹+, Tsutomu SATO¹+, Kirofumi KURUMISAWA¹, Tsubasa OTAKE¹, Kanako TODA¹, Yutaro KOBAYASHI¹, Yu ARAI¹
¹Hokkaido University

SE41-33-D4-PM2-321A-012 | SE41-33-A005

Formation and Phase Transformation Processes of Magnesium Silicate Hydrates

Yuto NISHIKI¹+, Misato SHIMBASHI¹, Tsutomu SATO¹*, Tsubasa OTAKE¹

¹Hokkaido University

SS07 / Cascading hazards

Thu - 07 Jun | MR319B

Time 13:30 - 15:30

Chair(s) Gerald BAWDEN, National Aeronautics and Space

Administration (NASA)

Emma HILL, Nanyang Technological University

SS07-D4-PM1-319B-001 | SS07-A003 (Invited)

The 2015 MW7.8 Gorkha, Nepal, Earthquake: Destruction and Creation

Susan HOUGH1#+

¹United States Geological Survey

SS07-D4-PM1-319B-002 | SS07-A002 (Invited)

Cascading Hazards: Triggering Relations Between Wet

Tropical Cyclones, Landslides, and Earthquakes

Shimon WDOWINSKI^{1‡+}, Zhigang PENG², Ken FERRIER², Ya-Ju HSU³, J. Bruce H. SHYU⁴, Cheng-Horng LIN³
¹Florida International University, ²Georgia Institute of Technology,
³Academia Sinica, ⁴National Taiwan University

SS07-D4-PM1-319B-003 | SS07-A001 (Invited)

Development of an Incorporated Platform to Characterize Hydrology-Driven Landslide Hazards in Northwestern US Zhong $LU^{1\sharp +}$, Jinwoo KIM 1 , Xie HU 1 , Yuankun XU 1 , David GEORGE 2

¹Southern Methodist University, ²United States Geological Survey

SS07-D4-PM1-319B-004 | SS07-A004 (Invited)

Cascading Hazards Along Tropical Orogenic Belts

J. Bruce H. SHYU1#+

¹National Taiwan University

SS07-D4-PM1-319B-005 | SS07-A005 (Invited)

Cascading Hazards: Can Excessive Precipitation Trigger

Volcanic Eruptions?

Falk AMELUNG^{1‡+}, Jamie FARQUHARSON¹
¹University of Miami

SS07-D4-PM1-319B-006 | SS07-A006 (Invited)

Keeping an Eye on What Happens Next

David GREEN1#, David BORGES2+

¹National Aeronautics and Space Administration, ²NASA

SS10 / International Land Model Benchmarking (ilamb) Package Tutorial

Thu - 07 Jun | MR304B

Time 16:00 - 18:00

Chair(s) Forrest HOFFMAN, Oak Ridge National Laboratory

Nathan COLLIER, Oak Ridge National Laboratory

ST02 / Particle Acceleration and Transport at the Sun and in the Heliosphere

Thu - 07 Jun | MR323C

Time 13:30 - 15:30

Chair(s) Linghua WANG, Peking University

ST02-D4-PM1-323C-001 | ST02-A012 (Invited)

Energetic Particles: From Sun to Heliosphere - and Vice Versa

Robert WIMMER-SCHWEINGRUBER¹⁵⁺, Javier RODRIGUEZ-PACHECO², Sebastian BODEN¹, Stephan BÖTTCHER¹, Ignacio CERNUDA², Nina DRESING¹, Wolfgang DROEGE³, Sandra ELDRUM¹, Robert ELFTMANN¹, Francisco ESPINOSA LARA², Raul GOMEZ-HERRERO², Bernd HEBER¹, George HO⁴, Andreas KLASSEN¹, Shrinivasrao KULKARNI¹, Gottfried MANN⁵, César MARTIN¹, Glenn MASON⁴, Lauri PANITZSCH¹, Manuel PRIETO², Sebastian SANCHEZ², Christoph TERASA¹

¹University of Kiel, ²University of Alcala, ³Julius-Maximilians University of Würzburg, ⁴The Johns Hopkins University Applied Physics Laboratory, ⁵Leibniz Institute for Astrophysics Potsdam

ST02-D4-PM1-323C-002 | ST02-A001 (Invited)

Integrated Science Investigation of the Sun on Parker Solar Probe

Mihir DESAI¹⁸⁺, David MCCOMAS², Nathan SCHWADRON³, Alan CUMMINGS⁴, Stefano LIVI¹, Don MITCHELL⁵, Eric CHRISTIAN⁶, Mark WIEDENBECK⁷, Ralph MCNUTT⁵, Richard MEWALDT⁴, E.C. STONE⁴, Matthew HILL⁵, Stamatios KRIMIGIS⁵, Edmond ROELOF⁵, Joseph GIACALONE⁸, William MATTHAEUS⁹, Tycho VON ROSENVINGE⁶

¹Southwest Research Institute, ²Princeton University, ³University of New Hampshire, ⁴California Institute of Technology, ⁵The Johns Hopkins University Applied Physics Laboratory, ⁶NASA Goddard Space Flight Center, ⁷Jet Propulsion Laboratory, California Institute of Technology, ⁸University of Arizona at Tucson, ⁹Bartol Research Institute

ST02-D4-PM1-323C-003 | ST02-A020

Solar Flare Impulsivity and its Relationship with Other

Related Phenomena

Kyoko WATANABE^{1#+}, Satoshi MASUDA²
¹National Defense Academy of Japan, ²Nagoya University

ST02-D4-PM1-323C-004 | ST02-A025

Evidence of Particle Acceleration in the Outflow Regions of

Coronal Magnetic Reconnection

Yang SU $^{1\#}$, Jianchao XUE 2 , Xiaozhou ZHAO 2 , Youping LI 2 , Yu HUANG 2 , Weiqun GAN 2 , Hui LI 2 , Astrid VERONIG 3 , Gordon HOLMAN 4 , Brian DENNIS 4

¹Purple Mountain Observatory, Chinese Academy of Sciences, ²Chinese Academy of Sciences, ³University of Graz, ⁴NASA Goddard Space Flight Center

ST02-D4-PM1-323C-005 | ST02-A023

Dependence of E >100 MeV Protons on the Associated Flares and CMEs

Guiming LE1#+

¹China Meteorological Administration

ST02-D4-PM1-323C-006 | ST02-A002 (Invited)

Comparative Study of Energetic Particle Acceleration During

Solar Flare and Terrestrial Substorm

Shinsuke IMADA^{1#+}
¹Nagoya University

ST02-D4-PM1-323C-007 | ST02-A011

Suprathermal Particles at 1 AU and Their Solar Sources

George HO1#+, Yuan-Kuen KO2

¹The Johns Hopkins University Applied Physics Laboratory, ²Naval Research Laboratory

ST02-D4-PM1-323C-008 | ST02-A014

Solar Wind ~0.1-1 keV Electrons Within and Around the

Corotating Interaction Regions at One AU During 1995-1997

Jiawei TAO¹, Linghua WANG¹⁵⁺, Gang Ll², Robert WIMMER-SCHWEINGRUBER³, Lan JIAN⁴⁵, Jiansen HE¹, Chuanyi TU¹, Hui TIAN¹, Stuart BALE⁶

¹Peking University, ²The University of Alabama in Huntsville, ³University of Kiel, ⁴NASA Goddard Space Flight Center, ⁵University of Maryland, College Park, ⁶University of California, Berkeley

Time 16:00 - 18:00

Chair(s) Kyoko WATANABE, National Defense Academy of Japan

Linghua WANG, Peking University

ST02-D4-PM2-323C-009 | ST02-A006 (Invited)

The Late Cycle 24 Strong SEP Events: Result of Homologous

Multiple Eruptions from a Pseudostreamer?

Janet LUHMANN^{1;+}, M. Leila MAYS², Y. LI¹, Christina LEE¹, Hazel BAIN³, Dusan ODSTRCIL⁴, Richard MEWALDT⁵, Christina COHEN⁵, Davin LARSON¹, Christopher RUSSELL⁶, Antoinette GALVIN⁷

¹University of California, Berkeley, ²Catholic University of America, ³National Oceanic and Atmospheric Administration, ⁴George Mason University, ⁵California Institute of Technology, ⁶University of California, Los Angeles, ⁷University of New Hampshire

ST02-D4-PM2-323C-010 | ST02-A021

Comparing Shock Geometry from MHD Simulation to that

from the Q/A-Scaling Analysis

Gang LI1#+, Lulu ZHAO2, Meng JIN3,4

¹The University of Alabama in Huntsville, ²Florida Institute of Technology, ³Lockheed Martin ATC / SETI Institute, ⁴SETI Institute

ST02-D4-PM2-323C-011 | ST02-A004 (Invited)

Particle Acceleration Associated with Magnetic Islands

Gary ZANK $^{1s+}$, Olga KHABAROVA 2 , Laxman ADHIKARI 1 , Senbei DU 1 , Ling-Ling ZHAO 3 , Jakobus LE ROUX 1 , Peter HUNANA 1

¹The University of Alabama in Huntsville, ²The Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation (IZMIRAN), ³University of Chinese Academy of Sciences

ST02-D4-PM2-323C-012 | ST02-A022 (Invited)

Electron and Proton Acceleration During Magnetic

Reconnection in Solar Flares

Fan GUO¹#+, Xiaocan LI¹, Hui LI¹, Joachim BIRN² ¹Los Alamos National Laboratory, ²Space Science Institute

ST02-D4-PM2-323C-013 | ST02-A024

Data-Driven Simulations of Magnetic Connectivity in Behind-the-Limb Gamma-Ray Flares and Associated Coronal

Mass Ejections

Meng JIN^{1,2±+}, Vahe PETROSIAN³, Wei LIU^{3,4}, Nariaki NITTA⁴, Nicola OMODEI³, Fatima RUBIO DA COSTA⁴, Frederic EFFENBERGER⁵, Gang LI⁶, Melissa PESCE-ROLLINS⁷, Alice ALLAFORT³

¹Lockheed Martin ATC / SETI Institute, ²SETI Institute, ³Stanford University, ⁴Lockheed Martin Solar and Astrophysics Laboratory, ⁵International Space Science Institute, ⁶The University of Alabama in Huntsville, ⁷National Institute of Nuclear Physics

ST02-D4-PM2-323C-014 | ST02-A015

The Electron Acceleration at ICME-Driven Shocks at 1 AU

Liu YANG¹⁺, Linghua WANG¹⁺, Gang LI², Robert WIMMER-SCHWEINGRUBER³, Jiansen HE¹, Chuanyi TU¹
¹Peking University, ²The University of Alabama in Huntsville,
³University of Kiel

ST02-D4-PM2-323C-015 | ST02-A009

Cosmic-Ray Anisotropy Observed with the Tibet Air Shower

Array

Masato TAKITA^{1#+}, Tibet ASGAMMA²
¹The University of Tokyo, ²N/A

ST04 / Mesosphere-Thermosphere-Ionosphere Coupling Processes

Thu - 07 Jun | MR302A

Time 08:30 - 10:30

Chair(s) Libo LIU, Institute of Geology and Geophyiscs

Jiuhou LEI, University of science and technology

ST04-D4-AM1-302A-001 | ST04-A032

Validation of Ionosphere Models: TEC and foF2 Variations

During the 2013 March Storm Event

Ja Soon SHIM¹,2⁵+, Ioanna TSAGOURI³, Larisa GONCHARENKO⁴, Matthias FÖRSTER⁵, Boris PROKHOROV⁶, Ludger SCHERLIESS⁵, John Bosco HABARULEMA®, Masha M. KUZNETSOVA¹

¹NASA Goddard Space Flight Center, ²The Catholic University of America, ³National Observatory of Athens, ⁴Massachusetts Institute of Technology, ⁵GFZ German Research Centre for Geosciences, ⁶University of Potsdam, ⁷Utah State University, ⁸South African National Space Agency

ST04-D4-AM1-302A-002 | ST04-A028 (Invited)

Mesosphere and Lower Thermosphere Wind and Temperature

Changes During the 17 March 2013 St. Patrick Day's Storm

Wenbin WANG¹**, Jingyuan LI², Jianyong LU³, Tao YUAN⁴, Jia YUE⁵, Xiao LIU⁶, Kedeng ZHANG⁷, Alan G. BURNS¹, Zheng LI² ¹National Center for Atmospheric Research, ²Nanjing University of Information Science & Technology, ⁴Utah State University, ⁵University of Maryland, ⁶Henan Normal University, ¬Wuhan University

ST04-D4-AM1-302A-003 | ST04-A017

Was Magnetic Storm the Only Driver of the Long-Duration Enhancements of Daytime Total Electron Content in the

Asian-Australian Sector Between 7 and 11 September, 2017?

Jiuhou LEI^{1#}, Fuqing HUANG¹, Xuetao CHEN¹, Jiahao ZHONG¹, Dexin REN¹, Wenbin WANG², Xinan YUE³
¹University of Science and Technology of China, ²National Center for Atmospheric Research, ³Chinese Academy of Sciences

ST04-D4-AM1-302A-004 | ST04-A015

An Exospheric Temperature Model Based on CHAMP

Observations and TIEGCM Simulations

Haibing RUAN^{1#+}, Jiuhou LEI¹
¹University of Science and Technology of China

ST04-D4-AM1-302A-005 | ST04-A004 (Invited)

Preliminary Results of Advanced Ionospheric Probe Onboard

FORMOSAT-5 Satellite

Chi-Kuang CHAO^{1#+}
¹National Central University

ST04-D4-AM1-302A-006 | ST04-A027

Longitudinal Differences in the Response of Low-Latitude

Ionosphere to Sudden Stratospheric Warmings

Larisa GONCHARENKO 12+, Huixin LIU 2, Shunrong ZHANG 1, Anthea COSTER 1

¹Massachusetts Institute of Technology, ²Kyushu University

ST04-D4-AM1-302A-007 | ST04-A002

Simultaneous FPI and TMA Measurements of the

Lower-Thermospheric Wind in the Vicinity of the

Poleward-Expanding Aurora After Substorm Onset

Shin-Ichiro OYAMA^{1‡+}, Ken KUBOTA², Takatoshi MORINAGA³, Takuo TSUDA⁴, Junichi KURIHARA⁵, Miguel LARSEN⁶, Masa-Yuki YAMAMOTO⁷, Lei CAI⁸

¹Institute for Space-Earth Environmental Research, ²Kubota, Inc., ³Nishimu Electronics Industries Co., Ltd., ⁴University of Electro-Communications, ⁵Hokkaido University, ⁶Clemson University, ⁷Kochi University of Technology, ⁸University of Oulu

Time 11:00 - 12:30

Chair(s) Loren CHANG, National Central University

Tatsuhiro YOKOYAMA, NICT

ST04-D4-AM2-302A-008 | ST04-A006

ENSO Effects on MLT Diurnal Tides: A 21 Year Reanalysis

Data-Driven GAIA Model Simulation

Huixin LIU^{1‡+}, Y. SUN¹, Y. MIYOSHI¹, Hidekatsu JIN² ¹Kyushu University, ²National Institute of Information and Communications Technology

ST04-D4-AM2-302A-009 | ST04-A010

Seasonal and Solar Cycle Variations of the Diurnal Tide in

Thermospheric Neutral Wind Obtained from FPI Observations

at Middle and Low Latitudes

Uma DAS¹ª+, Kazuo SHIOKAWA², Yuichi OTSUKA², Mamoru YAMAMOTO³, David NEUDEGG⁴, C. YUILE⁴, Tharadol KOMOLMIS⁵, Siramas KOMONJINDA⁵, Clara YATINI⁶¹Indian Institute of Information Technology Kalyani, ²Nagoya University, ³Kyoto University, ⁴Australian Bureau of Meteorology, ⁵Chiang Mai University, ⁶Indonesian National Institute of Aeronautics and Space

ST04-D4-AM2-302A-010 | ST04-A022 (Invited)

MLT Dynamics at Mid and High Latitudes Due to Lower

Atmospheric Forcing and Their Relationship to the

Ionosphere/Thermosphere Weather

Jorge L. CHAU^{1*+}, J. Federico CONTE¹, Nick PEDATELLA², Maosheng HE¹, Dimitry POKHOTELOV¹, Jerry CZARNECKI¹, Gunter STOBER¹

¹Leibniz Institute of Atmospheric Physics, ²National Center for Atmospheric Research

ST04-D4-AM2-302A-011 | ST04-A007 (Invited)

Climatology and Possible Trend of Mesospheric Pressure and

Temperature Reveled from Meteor Radar Observations in

China

Libo LIU1#+

¹Chinese Academy of Sciences

ST04-D4-AM2-302A-012 | ST04-A025

Evidence of Tropospheric 90 Day Oscillations in the

Thermosphere

Federico GASPERINI1#+

¹National Center for Atmospheric Research

Time 13:30 - 15:30

Chair(s) Huixin LIU, Kyushu University

Larisa GONCHARENKO, Haystack Observatory, MIT

ST04-D4-PM1-302A-013 | ST04-A026

The Polar Vortex Extension into the Mesosphere

V. Lynn HARVEY^{1‡+}, Larisa GONCHARENKO²
¹University of Colorado Boulder, ²Massachusetts Institute of Technology

ST04-D4-PM1-302A-014 | ST04-A013 (Invited)

Structure and Behavior of Planetary Waves and Mean Flows

Associated with Sudden Stratospheric Warmings

Toshihiko HIROOKA1#+, Koki IWAO2

¹Kyushu University, ²National Institute of Technology, Kumamoto College

ST04-D4-PM1-302A-015 | ST04-A018

Lunar Tidal Modulation of Periodic Meridional Movement of

Equatorial Ionization Anomaly Crest During Sudden

Stratospheric Warming

Xiaohua MO¹, Donghe ZHANG^{2‡+}, Yongqiang HAO², Zuo XIAO² ¹Guangxi University for Nationalities, ²Peking University

ST04-D4-PM1-302A-016 | ST04-A012 (Invited)

Neutral Wind Effects on Equatorial Plasma Bubbles Simualted

by High Resolution Bubble Model

Tatsuhiro YOKOYAMA¹*+, Hidekatsu JIN¹, Hiroyuki SHINAGAWA¹

¹National Institute of Information and Communications Technology

ST04-D4-PM1-302A-017 | ST04-A008

On the Possibility of Tidal Forcing of the Zonal Variation of

Solstice Equatorial Spread F

Loren CHANG^{1#+}, Charles LIN², Yi Chung CHIU¹, Pei-Yun CHIU¹, Yi DUANN¹, Ethan DAI¹, Amal CHANDRAN³
¹National Central University, ²National Cheng Kung University,
³Nanyang Technological University

ST04-D4-PM1-302A-018 | ST04-A016 (Invited)

Long Term Observation of Medium-Scale Traveling

Ionospheric Disturbances Using GPS Receivers in Japan

Yuichi OTSUKA^{1‡+}, Atsuki SHINBORI¹, Takuya TSUGAWA², Michi NISHIOKA²

¹Nagoya University, ²National Institute of Information and Communications Technology

ST04-D4-PM1-302A-019 | ST04-A024

Ion Friction and Geomagnetic Influence on Gravity Waves in the Thermosphere-Ionosphere

Alexander S. MEDVEDEV^{1#+}, Erdal YIĞIT², Paul HARTOGH¹
¹Max Planck Institute for Solar System Research, ²George Mason
University

ST07 / Global Ionosphere, Thermosphere and Mesosphere System Response to Their Drivers

Thu - 07 Jun | MR323C

Time 08:30 - 10:30

Chair(s) Yongliang ZHANG, Johns Hopkins University / APL

Sam YEE, Johns Hopkins University / APL

ST07-D4-AM1-323C-001 | ST07-A003

Geomagnetic Activity Dependences of High-Latitude Dayside Ionospheric Ion Up-Flows

Hongtao CAI^{1‡+}, Kangjun ZHOU¹, Kun HU¹, Shuying MA¹ ¹Wuhan University

ST07-D4-AM1-323C-002 | ST07-A004

Relative Importance of CO2 and Geomagnetic Field in

Ionospheric Trend over Wuhan: 70 Years Ionosonde

Observations and Model Simultations

Xinan YUE1**, Lianhuan HU1, Yong WEI1, Weixing WAN1, Baiqi NING1

¹Chinese Academy of Sciences

ST07-D4-AM1-323C-003 | ST07-A021 (Invited)

Understanding the Ionosphere and Thermosphere

Larry PAXTON^{1‡+}, Hyosub KIL¹, Robert SCHAEFER¹
¹The Johns Hopkins University Applied Physics Laboratory

ST07-D4-AM1-323C-004 | ST07-A019 (Invited)

Global-Scale Observations of the Limb and Disk Mission –

Ultraviolet Imaging of Earth's Space Environment from

Geostationary Orbit

Richard EASTES^{1‡}, William MCCLINTOCK¹, Alan G. BURNS², Stanley SOLOMON², David ANDERSON¹, Laila ANDERSSON¹, Mihail CODRESCU³, Robert DANIELL⁴, Scott ENGLAND⁵, Joseph EVANS⁶, Jerry LUMPE⁶, Arthur RICHMOND², David RUSCH¹, Oswald SIEGMUND⁷, Tom WOODS¹, Carlos MARTINIS⁸, Scott BUDZIEN⁹, Kenneth DYMOND⁹, Frank EPARVIER¹, Jens OBERHEIDE¹⁰, John CORREIRA⁶, Sarah JONES¹¹, Elsayed TALAAT¹²

¹University of Colorado Boulder, ²National Center for Atmospheric Research, ³NOAA Space Weather Prediction Center, ⁴Ionospheric Physics, ⁵Virginia Tech, ⁶Computational Physics, Inc., ⁷University of California at Berkeley, ⁸Boston University, ⁹Naval Research Laboratory, ¹⁰Clemson University, ¹¹NASA Goddard Space Flight Center, ¹²National Aeronautics and Space Administration

ST07-D4-AM1-323C-005 | ST07-A027 (Invited)

Response of the ITM System to Solar and Geomagnetic Forcing

Martin MLYNCZAK^{1#+}, Linda HUNT¹, James M RUSSELL² ¹National Aeronautics and Space Administration, ²Hampton University

ST07-D4-AM1-323C-006 | ST07-A028

Perturbed Interhemispheric Ion Flow in the Topside Ionosphere During the 2017 Solar Eclipse: First Direct In-Situ

ionosphere During the 2017 Solar Echpse. Thist Direct In-Site

Andrew YAU $^{1\sharp *}$, Andrew HOWARTH 1 , Gareth PERRY 1 , Victoria FOSS 1

¹University of Calgary

Observations from E-POP

ST07-D4-AM1-323C-007 | ST07-A005

A Comprehensive Study of Mid-Latitude Long-Lasting Storm Enhanced Density

Chigomezyo NGWIRA^{1,2‡+}, G. CROWLEY³

¹The Catholic University of America, ²NASA Goddard Space Flight
Center, ³Atmospheric & Space Technology Research Associates
(ASTRA)

ST07-D4-AM1-323C-008 | ST07-A029

Improving IRI Performance with Better Drivers and Data

Assimilation

Dieter BILITZA^{1#+}
¹George Mason University

Time 11:00 - 12:30

Chair(s) Jann-Yen LIU, National Central University

Sam YEE, Johns Hopkins University / APL

ST07-D4-AM2-323C-009 | ST07-A025 (Invited)

The Causes of Thermospheric Winds and Composition

Variations During and After the March 2015 St. Patrick's Day

Major Geomagnetic Storm

Wenbin WANG¹⁸⁺, Alan G. BURNS¹, Jing LIU¹, Liying QIAN¹
¹National Center for Atmospheric Research

ST07-D4-AM2-323C-010 | ST07-A010

The Simulated Product of the Ionosphere Connection Explorer (ICON) and its Application

Yen-Jung WU^{1#+}, Thomas IMMEL¹, Colin TRIPLETT¹, Harald FREY¹, Stephen B. MENDE¹, Astrid MAUTE², Scott ENGLAND³, G. CROWLEY⁴

¹University of California, Berkeley, ²National Center for Atmospheric Research, ³Virginia Tech, ⁴Atmospheric & Space Technology Research Associates (ASTRA)

ST07-D4-AM2-323C-011 | ST07-A007 (Invited)

Equatorial Ionospheric Response to Geomagnetic Storms

Chaosong HUANG1#+

¹Air Force Research Laboratory

ST07-D4-AM2-323C-012 | ST07-A031

Long-Term Trends in the Upper Atmosphere and Their

Potential Drivers: An ISR-Based Study

Shunrong ZHANG^{1#+}, Philip ERICKSON¹, Larisa GONCHARENKO¹, John KELLY²

¹Massachusetts Institute of Technology, ²SRI International

ST07-D4-AM2-323C-013 | ST07-A024

Remote Sensing of Global Wind, Temperature and Atomic

Oxygen Density in the Lower Thermosphere by the TeraHz

Limb Sounder (TLS)

Jeng-Hwa YEE $^{1\sharp *}$, Dong WU 2 , Imran MEHDI 3 , Robert DEMAJISTRE 1

¹The Johns Hopkins University Applied Physics Laboratory, ²NASA Goddard Space Flight Center, ³NASA Jet Propulsion Laboratory

ST07-D4-AM2-323C-014 | ST07-A013

Strom-Time Nitric Oxide Enhancement and Thermosphere Recovery

Yongliang ZHANG1#+, Larry PAXTON1

¹The Johns Hopkins University Applied Physics Laboratory

ST09 / Space Weather Radio Science

Thu - 07 Jun | MR317A

Time 11:00 - 12:30

Chair(s) Hsiu-Shan YU, University of California, San Diego

Bernard JACKSON, University of California, San Diego

ST09-D4-AM2-317A-001 | ST09-A010 (Invited)

The Worldwide Interplanetary Scintillation Stations (WIPSS)

Network: Status, Updates, and Space-Weather Case Studies

Mario BISI¹**, Richard FALLOWS², T. Oyuki CHANG M.³, Igor CHASHEI⁴, Sergey TYUL'BASHEV⁴, Ernesto AGUILAR-RODRIGUEZ³, Juan Americo GONZALEZ ESPARZA³, Joris VERBIEST⁵

¹Science & Technology Facilities Council, ²ASTRON - The Netherlands Institute for Radio Astronomy, ³Universidad Nacional Autónoma de México, ⁴Pushchino Radio Astronomy Observatory, ⁵Bielefeld University

ST09-D4-AM2-317A-002 | ST09-A002

Coordinated Interplanetary Scintillation Observations at Japan and Russia for Halo Coronal Mass Ejection Events in

September 2017

Munetoshi TOKUMARU $^{1\sharp *}$, Ken'ichi FUJIKI $^{\!\scriptscriptstyle 1}$, Kazumasa IWAI $^{\!\scriptscriptstyle 1}$, Sergey TYUL'BASHEV $^{\!\scriptscriptstyle 2}$, Igor CHASHEI $^{\!\scriptscriptstyle 2}$

¹Nagoya University, ²Pushchino Radio Astronomy Observatory

ST09-D4-AM2-317A-003 | ST09-A011 (Invited)

Using the Murchison Widefield Array for Probing the

Heliosphere: Status Update

Colin LONSDALE1#+

¹Massachusetts Institute of Technology

ST09-D4-AM2-317A-004 | ST09-A008

Tracing Solar Eruptive Events by Radio Imaging-Spectroscopic

Observations from the Sun to Interplanetary Space

Yihua YAN
1,2#, Wei WANG¹, Fei LIU¹, Linjie CHEN¹, Lihong GENG¹, Zhijun CHEN¹

¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

ST09-D4-AM2-317A-005 | ST09-A005 (Invited)

LOFAR: A Comprehensive Tool for Space Weather

Observation

Richard FALLOWS $^{1\pm +}$, Mario BISI 2 , Biagio FORTE 3 , Maaijke MEVIUS 1

¹ASTRON - The Netherlands Institute for Radio Astronomy, ²Science & Technology Facilities Council, ³University of Bath

ST09-D4-AM2-317A-006 | ST09-A001

Reconstruction of Global Solar Wind Structure from 1975 to 2016 by Using Interplanetary Scintillation and Solar

Magnetogram Observations

Ken'ichi FUJIKI^{1#+}, Munetoshi TOKUMARU¹ ¹Nagoya University

ST09-D4-AM2-317A-007 | ST09-A012

A Systematic Search of the Nearest Stars for Exoplanetary

Radio Emission: Strong Radio Bursts from ROSS 614 AB

Daniel WINTERHALTER^{1#+}, Mary KNAPP², Tim BASTIAN³ ¹NASA Jet Propulsion Laboratory, ²Massachusetts Institute of Technology, ³National Radio Astronomy Observatory

ST12-23 / Ionospheric Response to Extreme Terrestrial and Space Weather Events Including Geomagnetic Storms not Caused by CMEs

Thu - 07 Jun | MR302A

Time 16:00 - 18:00

Chair(s) Mario M. BISI, Science & Technology Facilities Council

ST12-23-D4-PM2-302A-001 | ST12-23-A005 (Invited)

Study of Ionosphere Storm-Time Effects Using Data

Assimilation Model

Charles LIN^{1#+}, Chia-Hung CHEN¹, P. K. RAJESH¹
¹National Cheng Kung University

ST12-23-D4-PM2-302A-002 | ST12-23-A014 (Invited)

The Role of Solar Wind Interaction Regions and Fast Streams in Causing Space Weather at Earth

E. KILPUA¹⁵⁺, Andre BALOGH², Ruedi VON STEIGER³, Ying LIU⁴, Hannu KOSKINEN¹, Tuija PULKKINEN⁵

¹University of Helsinki, ²Imperial College London, ³International Space Science Institute, ⁴Chinese Academy of Sciences, ⁵Aalto University

ST12-23-D4-PM2-302A-003 | ST12-23-A003

F-2 Region Response to the Storms Near St. Patrick's Day in March 2013 and 2015 at the Low and Mid Latitude Stations in the Southern Hemisphere

Sushil KUMAR1#+

¹The University of the South Pacific

ST12-23-D4-PM2-302A-004 | ST12-23-A007

Temporal and Spatial Variations of Ionospheric Irregularities

Around Storm-Enhanced Density on the Basis of GPS Total

Electron Content Data Analysis

Toshiki SUGIYAMA¹, Yuichi OTSUKA¹, Atsuki SHINBORI¹⁵⁺, Takuya TSUGAWA², Michi NISHIOKA²

¹Nagoya University, ²National Institute of Information and Communications Technology ST12-23-D4-PM2-302A-005 | ST12-23-A009

Significantly Large Impact of Disturbance Dynamo on

Equatorial Ionosphere: Case Studies

Kuldeep PANDEY^{1,2‡+}, Dibyendu CHAKRABARTY¹, R. SEKAR¹
¹Physical Research Laboratory, ²Indian Institute of Technology
Gandhinagar

ST12-23-D4-PM2-302A-006 | ST12-23-A011

The 04-10 September 2017 Sun-Earth Connection Events: Solar

Flares, Coronal Mass Ejections/Magnetic Clouds, and

Geomagnetic Storms

Chin-Chun WU^{1#+}, Lynn HUTTING¹, Kan LIOU², Simon PLUNKETT¹, Harry WARREN¹, Brian WOOD¹, Dennis SOCKER¹

¹U.S. Naval Research Laboratory, ²The Johns Hopkins University Applied Physics Laboratory

ST12-23-D4-PM2-302A-007 | ST12-23-A013

Can Geomagnetic Substorms be Triggered by Northward

Magnetic Field of SMFR and MFR?

Kyung Sun PARK $^{{\scriptscriptstyle \parallel}\sharp*}$, Dae-Young LEE $^{\!\scriptscriptstyle \parallel}$, Rok-Soon KIM $^{\!\scriptscriptstyle 2}$, Kyungsuk CHO $^{\!\scriptscriptstyle 2}$

¹Chungbuk National University, ²Korea Astronomy and Space Science Institute

ST-PS15 / Future and Current Space Missions and Instrumentation for Space and Planetary Science

Thu - 07 Jun | MR317A

Time 08:30 - 10:30

Chair(s) Takeshi SAKANOI, Tohoku University

ST-PS15-D4-AM1-317A-001 | ST-PS15-A020

ASHI: An All Sky Heliospheric Imager for Viewing

Thomson-Scattered Light

Bernard JACKSON $^{1\beta+}$, Andrew BUFFINGTON 1 , Hsiu-Shan YU 1 , Paul HICK 1 , Mario BISI 2

¹University of California, San Diego, ²Science & Technology Facilities Council

ST-PS15-D4-AM1-317A-002 | ST-PS15-A011

STEPS: An Experiment to Investigate the Energetic Particle

Environment at the Sun-Earth L1 Point

Shiv Kumar GOYAL¹⁸⁺, Dibyendu CHAKRABARTY¹, Janardhan PADMANABHAN¹, Santosh VADAWALE¹, M. SHANMUGAM¹, Aveek SARKAR¹, Neeraj Kumar TIWARI¹, Arpit PATEL¹, Aadtiya SARDA¹, Tinkal LADIYA¹, Mamta CHAUHAN², Prashant KUMAR¹, Pranav ADHYARU¹, Hitesh ADALJA¹, Manan S SHAH¹, S. B. BANERJEE¹, K. P. SUBRAMANIAN¹, Bhas BAPAT³, Arup Kumar HAIT², Rakesh R. BHAVSAR²

¹Physical Research Laboratory, ²Space Applications Centre, ³Indian Institute of Science Education and Research

ST-PS15-D4-AM1-317A-003 | ST-PS15-A010

The Fast 3D Ion Spectrometer for Solar Wind Analyzer Plasma

Package Onboard of Solar Orbiter ESA Mission

Andrey FEDOROV^{1‡+}, Philippe LOUARN², Christopher OWEN³
¹University of Toulouse, ²Institut de Recherche en Astrophysique et
Planétologie (IRAP), ³University College London

ST-PS15-D4-AM1-317A-004 | ST-PS15-A036

CuSP: The Cubesat Mission for Studying Solar Particles

Mihir DESAI¹⁺⁺, Frederic ALLEGRINI^{1,2}, Eric CHRISTIAN³, Shri KANEKAL³, Keiichi OGASAWARA¹, Robert EBERT¹
¹Southwest Research Institute, ²University of Texas at San Antonio,
³NASA Goddard Space Flight Center

ST-PS15-D4-AM1-317A-005 | ST-PS15-A040

A Space Coronal Magnetometry Mission

Haosheng LIN^{1#+}
¹University of Hawaii

ST-PS15-D4-AM1-317A-006 | ST-PS15-A032 (Invited)

Updates on Diwata-1: The First Philippine Microsatellite

Gay Jane PEREZ^{1,*}, Yukihiro TAKAHASHI², Joel MARCIANO³, Marc Caesar TALAMPAS¹, Alvin RETAMAR³, Mark Edwin TUPAS¹, Enrico PARINGIT¹, Tetsuro ISHIDA², Yuji SAKAMOTO⁴, Kazuya YOSHIDA⁴

¹University of the Philippines Diliman, ²Hokkaido University, ³Advanced Science and Technology Institute, ⁴Tohoku University

ST-PS15-D4-AM1-317A-007 | ST-PS15-A038

CONNEX: The Magnetosphere-Ionosphere Connections

Explorer

Geoffrey REEVES^{1‡+}, Eric DORS¹, Alexander BOYD²
¹Los Alamos National Laboratory, ²New Mexico Consortium

Time 13:30 - 15:30

Chair(s) Andrew YAU, University of Calgary

ST-PS15-D4-PM1-317A-008 | ST-PS15-A018

NASA's Planetary Science Missions Present and Future Plans Doris DAOU^{1‡+}, James GREEN^{1,2}, Lori GLAZE¹ ¹NASA Headquarters, ²

ST-PS15-D4-PM1-317A-009 | ST-PS15-A026

Science and Exploration of Indian Mars and Venus Missions

S.A. HAIDER¹⁵⁺, Anil BHARDWAJ¹, Durga Prasad KARANAM¹, Varun SHEEL¹, Jayesh PABARI¹, M. SHANMUGAM¹, Shiv Kumar GOYAL¹

¹Physical Research Laboratory

ST-PS15-D4-PM1-317A-010 | ST-PS15-A030

Martian Moons Exploration: A Planned JAXA's Mission to the Martian System

Kiyoshi KURAMOTO¹**, Shingo KAMEDA², Yasuhiro KAWAKATU³, Masaki FUJIMOTO³, Hidenori GENDA⁴, Takeshi IMAMURA⁵, Koji MATSUMOTO⁶, Hideaki MIYAMOTO⁵, Tomokatsu MOROTA⁷, Hiroshi NAGAOKA³, Tomoki NAKAMURA⁸, Kazunori OGAWA⁹, Hisashi OTAKE³, Masanobu OZAKI³, Sho SASAKI¹⁰, Hiroki SENSHU¹¹, Shogo TACHIBANA¹, Naoki TERADA⁸, Tomohiro USUI⁴, Koji WADA¹¹, Sei-Ichiro WATANABE⁷

¹Hokkaido University, ²Rikkyo University, ³Japan Aerospace Exploration Agency, ⁴Tokyo Institute of Technology, ⁵The University of Tokyo, ⁶National Astronomical Observatory of Japan, ⁷Nagoya University, ⁸Tohoku University, ⁹Kobe University, ¹⁰Osaka University, ¹¹Chiba Institute of Technology

ST-PS15-D4-PM1-317A-011 | ST-PS15-A039 (Invited)

Radar Sounder for Exploration of Ices Below the Surface of the

Moon and the Mars

Atsushi KUMAMOTO¹⁵⁺, Hideaki MIYAMOTO², Toshiyuki NISHIBORI³, Fuminori TSUCHIYA¹, Takahiro IWATA³, Tomohiro USUI⁴, Hiroyuki KUROKAWA⁴, Rina NOGUCHI⁴, Shintaro AZUMA⁵, Ken ISHIYAMA³, Mitsunori OZAKI⁶, Naoki TERADA¹, Kanako SEKI², Atsushi YAMAZAKI³, Makiko OHTAKE³

¹Tohoku University, ²The University of Tokyo, ³Japan Aerospace Exploration Agency, ⁴Tokyo Institute of Technology, ⁵Kyushu University, ⁶Kanazawa University

ST-PS15-D4-PM1-317A-012 | ST-PS15-A019

VIsta: A Miniaturized PCM-Based Instrument for Volatiles and Dust Characterization in Space and Planetary

Environments by Using TGA Technique

Ernesto PALOMBA^{1#}, Fabrizio DIRRI¹, Andrea LONGOBARDO¹, David BIONDI¹, Angelo BOCCACCINI¹, Anna GALIANO¹, Emiliano ZAMPETTI², Bortolino SAGGIN³, Diego SCACCABAROZZI³, Javier MARTIN-TORRES⁴

¹National Institute for Astrophysics, ²National Research Council, ³Politecnico di Milano, ⁴Luleà University of Technology

ST-PS15-D4-PM1-317A-013 | ST-PS15-A027

Automated Subcritical Water Extraction and Analysis Platform for Martian Regolith: Remote Operation on Rover in the

Atacama Desert

Florian KEHL^{1st}, Eric TAVARES DA COSTA¹, Nathan A. KOVARIK¹, Peter A. WILLIS¹

¹NASA Jet Propulsion Laboratory

ST-PS15-D4-PM1-317A-014 | ST-PS15-A006

NOIRE Study Report: Towards a Low Frequency Radio

Interferometer in Space

Baptiste CECCONI^{1‡+}, Moustapha DEKKALI², Carine BRIAND¹, Boris SEGRET¹, Julien GIRARD³, André LAURENS⁴, Alain LAMY⁴, David VALAT⁴, Michel DELPECH⁴, Mickael BRUNO⁴, Patrick GÉLARD⁴, Martin BUCHER³, Quentin NENON⁵, Jean-Mathias GRIEßMEIER⁶, Albert-Jan BOONSTR⁷, Mark BENTUM^{7,8}

¹Paris Observatory, ²National Center for Scientific Research, ³Paris Diderot University, ⁴National Center for Space Studies, ⁵National Office for Aerospace Studies and Research, ⁶National Center for Scientific Research/ Université d'Orléans, ⁷ASTRON - The Netherlands Institute for Radio Astronomy, ⁸Technische Universiteit Findhoven

ST-PS15-D4-PM1-317A-015 | ST-PS15-A016

Gamma-Ray and Neutron Spectrometer Using Cs2LiYCl6:Ce on the Deep Space Microsatellite

Masayuki NAITO^{1‡+}, Nobuyuki HASEBE¹, Junya ISHII¹, Hiroshi NAGAOKA²

¹Waseda University, ²Japan Aerospace Exploration Agency

Time 16:00 - 18:00

Chair(s) Yoshifumi SAITO, ISAS/JAXA

ST-PS15-D4-PM2-317A-016 | ST-PS15-A003 (Invited)

Lessons Learned from the Rosetta Mission

Bonnie BURATTI^{1‡+}, Matt TAYLOR², Mathieu CHOUKROUN¹ ¹Jet Propulsion Laboratory, California Institute of Technology, ²European Space Agency

ST-PS15-D4-PM2-317A-017 | ST-PS15-A025

In-Situ Analysis of a Jupiter Trojan Asteroid by High Resolution Mass Spectrometry in the Solar Power Sail

OKEANOS Mission

Yoko KEBUKAWA¹⁺*, Tatsuaki OKADA², Jun AOKI³, Yosuke KAWAI³, Shoichiro YOKOTA³, Morio ISHIHARA³, Motoo ITO⁴, Jun MATSUMOTO², Hisayoshi YURIMOTO⁵, Kentaro TERADA³, Michisato TOYODA³, Hikaru YABUTA⁶, Hajime YANO², Ryosuke NAKAMURA⁷, Hervé COTTIN⁸, Noel GRAND⁸, Arnaud BUCH⁹, Cyril SZOPA¹⁰, Takahiro IWATA², Osamu MORI²

¹Yokohama National University, ²Japan Aerospace Exploration Agency, ³Osaka University, ⁴Japan Agency for Marine-Earth Science and Technology, ⁵Hokkaido University, ⁶Hiroshima University, ⁷National Institute of Advanced Industrial Science and Technology, ⁸Université Paris-Est Créteil, ⁹Ecole Centrale de Paris, ¹⁰Laboratory Atmospheres, Environments, Spatial Observations (LATMOS)

ST-PS15-D4-PM2-317A-018 | ST-PS15-A013

A Study on Exploring Uranus and Neptune: Science Objectives and Mission Requirements

Mark HOFSTADTER^{1±+}, Amy SIMON-MILLER², Sushil ATREYA³, Don BANFIELD⁴, Jonathan FORTNEY⁵, Alex HAYES⁴, Matthew HEDMAN⁶, George HOSPODARSKY⁷, Adam MASTERS⁸, Kathleen MANDT⁹, Mark SHOWALTER¹⁰, Krista SODERLUND¹¹, Diego TURRINI¹², Elizabeth TURTLE⁹

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ST-PS15-D4-PM2-317A-019 | ST-PS15-A024

Radiation Science at Earth's Moon Using the Crater Instrument on the LRO Spacecraft

Lawrence TOWNSEND^{1‡+}, Fahad ZAMAN¹, Wouter DE WET², Nathan SCHWADRON², Jody WILSON², Andrew JORDAN², Mark LOOPER³, Cary ZEITLIN⁴, Harlan SPENCE², Fatemeh RAHMANIFARD², Colin JOYCE², William M. FARRELL⁵, Noah PETRO⁵, timothy STUBBS⁵, Anthony CASE⁶

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ST-PS15-D4-PM2-317A-020 | ST-PS15-A035

Millimeter-Wave Chirality Spectrometer

Shanshan YU^{1‡+}, Theodore RECK¹, John PEARSON¹, Robert HODYSS¹, Michael MALASKA¹, Brooks PATE²

¹Jet Propulsion Laboratory, California Institute of Technology,

²University of Virginia

ST-PS15-D4-PM2-317A-021 | ST-PS15-A028

High Sensitivity Solid State Magnetometry Leveraging Silicon Carbide Quantum Centers

Hannes KRAUS1#+

¹Jet Propulsion Laboratory, California Institute of Technology

OS Poster Presentations

Thu - 07 Jun, 13:30 - 15:30 | Ballroom B

OS01-D4-PM1-P-007 | OS01-A003

Explaining the Opposite Salinity Change at Ocean

Subsurface After 2005

Guancheng LI¹⁺, Lijing CHENG^{1‡}, Jiang ZHU¹
¹Chinese Academy of Sciences

OS01-D4-PM1-P-008 | OS01-A010

The Surface Salinity Front in the Equatorial Atlantic Ocean

Laura RUIZ-ETCHEVERRY $^{1\sharp +}$, Nikolai MAXIMENKO 2 , Oleg MELNICHENKO 2

¹University of Hawaii at Manoa, ²University of Hawaii

OS01-D4-PM1-P-009 | OS01-A012

Development of NEMO-TOPAZ: A New Coupled

Ocean-Biogeochemistry Model

Hyun-Chae JUNG $^{1+}$, Byung-Kwon MOON $^{1+}$, Jieun WIE 1 , Hyomee LEE 2 , Hyei-Sun PARK 3 , Ki-Young KIM 4 , Johan LEE 5 , Young-Hwa BYUN 6

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OS02-AS-D4-PM1-P-016 | OS02-AS-A003

Impact of SST Cooling on Tropical Cyclone in AGCM-Slab

Ocean Model

Nobuhito MORI¹*, Daisuke URANO¹+, Tomoya SHIMURA¹ ¹Kyoto University

OS02-AS-D4-PM1-P-017 | OS02-AS-A005

Upper Ocean Response to Typhoon Kalmaegi and Sarika in

the South China Sea

Xinxin YUE $^{1\sharp*}$, Biao ZHANG 2 , Guoqiang LIU 3 , Xiaofeng LI 4 , Yijun HE 2 , Han ZHANG 5

¹Nanjing University of Information Science, ²Nanjing University of Information Science & Technology, ³Bedford Institute of

Oceanography, ⁴National Oceanic and Atmospheric Administration, ⁵State Oceanic Administration

OS02-AS-D4-PM1-P-018 | OS02-AS-A010

Tropical Storm-Forced Turbulent Mixing and Chlorophyll-A

Enhancement in the Southeast Continental Shelf Region of

Hainan Island

Shuwen ZHANG^{1‡+}, Fajin CHEN¹, Qiang LI¹
¹Guangdong Ocean University

OS02-AS-D4-PM1-P-019 | OS02-AS-A011

Can We Derive the Tropical Cyclone Size from its Induced Cold Wake?

Jishi ZHANG¹⁺, Yanluan LIN^{1‡}, Daniel CHAVAS²
¹Tsinghua University, ²Purdue University

OS02-AS-D4-PM1-P-020 | OS02-AS-A014

Sea Surface Temperature Changes Caused by Typhoon Cold Wakes

Yuan-Jane LO1#+

¹National Taiwan Ocean University

OS02-AS-D4-PM1-P-021 | OS02-AS-A016

Impacts of El Niño Phase and SST Shift on Tropical Cyclone

Genesis and Intensity over the Western North Pacific

Liang MEI^{1#+}, Jianjun XU², Xu HUA²

¹Guang Dong Ocean University, ²South China Sea Institute of Marine Meteorology

OS02-AS-D4-PM1-P-022 | OS02-AS-A019

An Increase of Super-Typhoon and Northward Extension of

Their Passages in the Western-North Pacific

You-Hyun BAEK¹⁺, Il-Ju MOON^{1#}

¹Jeju National University

OS02-AS-D4-PM1-P-023 | OS02-AS-A021

Effects of a Warm Ocean Eddy on Typhoon Megi

Caixia SHAO1+, Weimin ZHANG2+, Xuefeng ZHANG1, Xidong WANG3, Hongli FU1

¹National Marine Data and Information Service, ²National University of Defense Technology, ³Hohai University

OS02-AS-D4-PM1-P-024 | OS02-AS-A022

Potential Impact of the Pacific Decadal Oscillation and Sea Surface Temperature in the Tropical Indian Ocean-Western

Pacific on the Variability of Typhoon Landfall on the China

Coast

Sheng CHEN $^{1\sharp *}$, Lei YANG 2 , Chunzai WANG 2 , Dongxiao WANG 3 , Xin WANG 1

¹Chinese Academy of Sciences, ²South China Sea Institute of Oceanology, ³South China Sea Institute of Oceanology, Chinese Academy of Sciences

OS02-AS-D4-PM1-P-025 | OS02-AS-A028

Reinforcing Effect of Warm Ocean Anomalies in the South China Sea on the Long-Lived Tropical-Depression-Induced

Heavy Rainfall Event on Hainan Island

Sai HAO1#+

¹National Marine Environmental Forecasting Center, State Oceanic Administration OS02-AS-D4-PM1-P-026 | OS02-AS-A032

Large Eddy Simulation of the Influence of Varying Winds on the Vertical Eddy Viscosity

Ying QIU^{1#+}
¹School

OS02-AS-D4-PM1-P-027 | OS02-AS-A033

Large Eddy Simulation of the Influence of Ocean Cooling Induced by Tropical Cyclones on Upper Ocean Mixing Dehua $YANG^{1z+}$

¹Zhejiang University

OS02-AS-D4-PM1-P-028 | OS02-AS-A034

New Approach to Retrieve Rain Rate Inside Tropical

Cyclone Using 6.9- & 10.7Ghz Channel Measurements

Qingliu BAO^{1‡+}, Xiaobin YIN¹, Zhou WU², Tongkui LIAO¹ ¹Beijing PIESAT Information Technology Co., Ltd, ²National Satellite Ocean Application Service

OS02-AS-D4-PM1-P-029 | OS02-AS-A041

Effects of Extratropical Cyclones on Surface Mixed Layer in the Western Subtropical North Pacific

Fumiaki KOBASHI^{1‡+}, Haruki DOI¹, Naoto IWASAKA¹
¹Tokyo University of Marine Science and Technology

OS03-D4-PM1-P-011 | OS03-A017

The Initial Errors that Induce a Significant "Spring Predictability Barrier" for Two Types of El Niño Events with GFDL CM2p1 Model

Qianqian QI^{1#+}, Wansuo DUAN¹
¹Chinese Academy of Sciences

OS04-D4-PM1-P-007 | OS04-A006

The Response of Available Gravity Potential Energy to

Global Warming in the Southern Ocean

Ran LIU¹⁺, Guihua WANG^{1#}, Changlin CHEN¹
¹Fudan University

OS04-D4-PM1-P-008 | OS04-A007

Structure of the Subpolar Gyre in the Australian-Antarctic

Basin Derived from Argo

Kaihe YAMAZAKI¹‡+, Shigeru AOKI¹, Taiyo KOBAYASHI², Keishi SHIMADA³, Yujiro KITADE³

¹Hokkaido University, ²Japan Agency for Marine-Earth Science and Technology, ³Tokyo University of Marine Science and Technology

OS06-D4-PM1-P-015 | OS06-A006

Turbulence in a Hypertidal Estuary (Qiantang, China): The Influences of Tidal Straining and Suspended Sediment

Daidu FAN^{1#+}, Junbiao TU¹
¹Tongji University

OS06-D4-PM1-P-016 | OS06-A015

Radiocarbon Compositions in Dissolved Inorganic Carbon

and Particulate Organic Carbon from the Changjiang

(Yangtze) Estuary and the East China Sea

Shing-Lin WANG^{1*+}, Daidu FAN², Jianfeng SU², Yijing WU², Yu-Shih LIN³, Wei-Jen HUANG³, Ching-Hua LO¹
¹National Taiwan University, ²Tongji University, ³National Sun Yat-sen University

OS06-D4-PM1-P-017 | OS06-A017

Future Projection of the North Pacific Ocean State with

Ensemble CMIP5 Forcing for Coastal Applications

Tsuyoshi WAKAMATSU¹, Shiro NISHIKAWA², Yusuke TANAKA², Hiroshi ISHIZAKI², Hiroyuki TSUJINO³, Goro YAMANAKA³, Yoichi ISHIKAWA^{2*}

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OS06-D4-PM1-P-018 | OS06-A020

Internal Tide-Induced Vertical Heat Flux and Lateral Mass

Transport over Coastal Shelf

Zhiwen WANG¹+, Jingping XU²*, Changwei BIAN¹, Chenghao WANG¹, Haiqin DUAN¹, Xiao WU¹

¹Ocean University of China, ²Southern University of Science and Technology

OS06-D4-PM1-P-019 | OS06-A021

Seasonal Variations of Suspended Sediment Flux Through

Bohai Strait - An Observational Study

Haiqin DUAN $^{1+},$ Jingping $XU^{2\pm},$ Xiao $WU^1,$ Chenghao WANG 1, Zhiwen WANG 1

¹Ocean University of China, ²Southern University of Science and Technology

OS06-D4-PM1-P-020 | OS06-A022

A Numerical Study of Sediment Budget and Dynamics

Through the Bohai Strait

Chenghao WANG¹+, Changwei BIAN¹, Jingping XU^{2*} , Houjie WANG¹, Naishuang BI¹, Xiao WU¹, Zhiwen WANG¹, Haiqin DUAN¹, Baoduo WANG¹

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OS06-D4-PM1-P-021 | OS06-A023

Future Coast and Ocean Under Increasing Stormy and

Anthropogenic Scenarios

Jing DUAN1#+

¹Chinese Academy of Sciences

OS08-D4-PM1-P-008 | OS08-A008

Sea Surface Heights in the Pacific and Atlantic: Variability,

Mechanisms, and Predictability

Xiaoyu LONG^{1*}, Matthew WIDLANSKY¹, H. ANNAMALAI¹, Philip THOMPSON¹, Mark MERRIFIELD², Yoshimitsu CHIKAMOTO³, Arun KUMAR⁴

¹University of Hawaii, ²University of California San Diego, ³Utah State University, ⁴National Oceanic and Atmospheric Administration

OS09-D4-PM1-P-027 | OS09-A004

Leeuwin Current Transport and its Loaded Energy off

Lower-West Coast of Western Australia

Qin-Yan LIU $^{1*+}$, Ming FENG 2 , Dongxiao WANG 3 , Weiqiang WANG 1 , Andreas SCHILLER 2 , Ju CHEN 1

¹Chinese Academy of Sciences, ²Commonwealth Scientific and Industrial Research Organisation, ³South China Sea Institute of Oceanology, Chinese Academy of Sciences

OS09-D4-PM1-P-028 | OS09-A016

Why the Major Stream of the Yellow Sea Warm Current Shifts Westward to Isobaths of 50~70 M in the Southern Yellow Sea?

Zhigang YAO^{1‡+}, Xianwen BAO¹, Lingling ZHOU¹ ¹Ocean University of China

OS09-D4-PM1-P-029 | OS09-A020

Fate of Sedimentary Radiocesium in Semi-Enclosed Coastal Area: A Numerical Case Study of Matsukawaura Lagoon, Japan

Hironori HIGASHI^{1‡+}, Koichi ARITA¹, Seiji HAYASHI¹
¹National Institute for Environmental Studies

OS09-D4-PM1-P-030 | OS09-A027

Teleconnections Between the Kuroshio Extension and the East Asian Marginal Seas

Chao MA1#+

¹Ocean University of China

OS09-D4-PM1-P-031 | OS09-A030

Multiple Time-Scale Variability of Cross-Slope Transport Induced by Mesoscale Eddy in the Northern South China Sea

Na LIU1#+, Huijie XUE2, Bingxu GENG3

¹State Key Laboratory of Tropical Oceanography, South China Sea Institute of Oceanology, Chinese Academy of Sciences, ²University of Maine, ³Chinese Academy of Sciences

OS09-D4-PM1-P-032 | OS09-A041

Estimation of Ocean Wave Parameter Based on CCD Camera

Dongseob SONG1#+

¹Kangwon National University

OS09-D4-PM1-P-033 | OS09-A044

Effect of Continental Shelf Waves Originating from the Northern Slope on the Westward Shift of the Yellow Sea

Warm Current

Yong-Jin TAK¹⁺, Yang Ki CHO¹⁺, Sung-Hyun NAM¹
¹Seoul National University

OS09-D4-PM1-P-034 | OS09-A054

Surface Wave Development Under Explosive Cyclone

Conditions and a Comparison with Typhoons

Yuki KITA^{1‡+}, Takuji WASEDA¹, Adrean WEBB²
¹The University of Tokyo, ²Kyoto University

OS09-D4-PM1-P-035 | OS09-A056

Comparison of Slip Distribution Models of the 2011 Tohoku Earthquake Based on Diffracted and Up-Lift Induced

Earthquake based on Diffracted and Op Ent madee

Tsunami Waves in Korea

Sat-Byul KIM $^{\mbox{\tiny 15+}}$, Tae-Seob KANG $^{\mbox{\tiny 1}}$, Junkee RHIE $^{\mbox{\tiny 2}}$, So-Young BAAG $^{\mbox{\tiny 2}}$

¹Pukyong National University, ²Seoul National University

OS09-D4-PM1-P-036 | OS09-A058

Distribution and Physical Controls of Algal Blooming off the

Changjiang River Estuary

Yihe WANG¹⁺, Hui WU^{1‡}
¹East China Normal University

OS12-D4-PM1-P-015 | OS12-A002

The Interannual Variability of the Upwelling in the

Northern South China Sea

Yeqiang SHU^{1‡+}, Dongxiao WANG², Jinglong YAO¹, Ju CHEN¹, Qiang XIE¹, Ming FENG³

¹Chinese Academy of Sciences, ²South China Sea Institute of Oceanology, Chinese Academy of Sciences, ³Commonwealth Scientific and Industrial Research Organisation

OS12-D4-PM1-P-016 | OS12-A004

Using a Multi-Frequency Acoustic Instrument to Investigate Suspended Sediment of Different Grain Sizes Carried by the

Plume of Pearl River

Yi-Hsuan CHIANG^{1#+}, James LIU¹, Linus CHIU¹
¹National Sun Yat-sen University

OS12-D4-PM1-P-017 | OS12-A007

Stratification Structure of the Pearl River Plume in Summer

Seasor

Yanzhen GU^{1#+}, Peiliang LI¹, Changwei BIAN¹
¹Ocean University of China

OS12-D4-PM1-P-018 | OS12-A009

Generation Mechanism of High Swell-Like Waves in

East/Japan Sea

Sang-Hun JEONG $^{1,2\sharp+}$, Jin-Yong CHOI 1 , Ki-Young HEO 1 , Jung-Woon CHOI 1 , Kwang-Soon PARK 1

¹Korea Institute of Ocean Science and Technology, ²Pusan National University

OS12-D4-PM1-P-019 | OS12-A012

Case Study of Meso-Scale and Microstructures in Daya Bay,

South China Sea

Huabin MAO1#+

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OS12-D4-PM1-P-020 | OS12-A013

Genetic Diversity Analysis of Jellyfish Sugiura

Chengshanense in the Yellow River Estuary's Adjacent Sea

Xiang SHI1+, Zhijun DONG1#

¹Chinese Academy of Sciences

OS12-D4-PM1-P-021 | OS12-A014

Diffusion of Buoyant Substances in Wind-Induced Ocean

Surface Layer with Langmuir Circulation

Bong-Gwan KIM¹⁺, Yang Ki CHO^{1‡}, Yign NOH²
¹Seoul National University, ²Yonsei University

OS12-D4-PM1-P-022 | OS12-A018

Numerical Simulations of Nearshore Waves and Circulations

on the Dongsha Island

Te-Yun CHIANG^{1‡+}, Yi-Hao LIN¹, Shih-Feng SU¹
¹Tamkang University

OS12-D4-PM1-P-023 | OS12-A023

The Observation and Simulation Low Salinity Dispersions

by Yangtze River Discharge in the Yellow Sea and the East China Sea

Jin-Yong CHOI¹⁺, Yong-Chim MIN¹, Kwang-Soon PARK^{1‡}

¹Korea Institute of Ocean Science and Technology

OS12-D4-PM1-P-024 | OS12-A025

A New 3-D Physical Model for the Drag Force of Submerged

Aquatic Vegetation (SAV) in a Shallow Coastal Waters

Hirotada MOKI^{1#+}, Koichi TAGUCHI², Yasuyuki NAKAGAWA³, Shigeru MONTANI⁴, Tomohiro KUWAE¹ ¹Port and Airport Research Institute, ²Science and Technology, ³Kyushu University, ⁴Hokkaido University OS12-D4-PM1-P-025 | OS12-A027

A Data Assimilation System for Coastal Wave Modeling in the East Sea

Kwang-Soon PARK^{1‡+}, Sang-Kwon HYUN², Jin-Yong CHOI¹ ¹Korea Institute of Ocean Science and Technology, ²Ocean Research and Strategy Corporation

OS12-D4-PM1-P-026 | OS12-A030

Monitoring Coastal Sea Level Changes Using GNSS-Based

Tide Gauges - A Case Study in Taiwan

Shao-Lun HUNG¹ 1 , Chung-Yen KUO¹, Chi-Ming LEE¹, Jian SUN², C. K. SHUM², Yuchan YI², Tzu-Pang TSENG³, Kwo-Hwa CHEN 4 , Kuo-En CHING¹

¹National Cheng Kung University, ²Ohio State University, ³National Central University, ⁴National Taipei University

OS12-D4-PM1-P-027 | OS12-A032

The Palaeoenvironment Reconstruction of Reef-Mud Conversion Based on Diatom Analysis from the Top and Bottom Muddy Sediments of Buried Oyster Reef, Northwest Bohai Bay

Jing FANG^{1#+}, Hong WANG², Fu WANG²
¹Tianjin Normal University, ²China Geological Survey

OS12-D4-PM1-P-028 | OS12-A033

Biogeochemistry of Chromophoric Dissolved Organic Matter in the Changjiang Estuary and the Adjacent East China Sea Lei GAO¹*, Yongqiang GAO¹ ¹East China Normal University

OS12-D4-PM1-P-029 | OS12-A034

Physical Control on the Biogeochemical Processes of the

Changjiang (Yangtze) River Plume

Zhaoru ZHANG¹*+, Meng ZHOU¹, Yisen ZHONG¹ ¹Shanghai Jiao Tong University

OS12-D4-PM1-P-030 | OS12-A036

Identifying the Sources and Seasonal Variation of Particulate Organic Matters in the Pearl River Estuary and its Adjacent Region

Shaohui YAO^{1‡+}, Chunyu ZHAO², Li ZHANG²
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OS13-D4-PM1-P-015 | OS13-A001

Evaluation of Three Temperature Profiles of a Sublayer Scheme to Simulate SST Diurnal Cycle in a Global Ocean

General Circulation Model

Zhenya SONG1*+, Xiaodan YANG¹, Yu-Heng TSENG², Fangli QIAO¹, Qi SHU¹

¹State Oceanic Administration, ²National Taiwan University

OS13-D4-PM1-P-016 | OS13-A004

Kuroshio Intrusion in Luzon Strait in an Eddy-Resolving

Ocean and Coupled Model

Qian YANG1#+, Hailong LIU1, Pengfei LIN1

¹Chinese Academy of Sciences

OS13-D4-PM1-P-017 | OS13-A009 (Invited)

Seasonal Prediction over Indo-Pacific Ocean with a

High-Resolution Coupled Regional Climate Model

Mingkui LI1#+, Shaoqing ZHANG1

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OS13-D4-PM1-P-018 | OS13-A015

Dynamical Downscaling of Climate Change in the

Northwestern Pacific Ocean

Chan Joo JANG1#+

¹Korea Institute of Ocean Science and Technology

OS13-D4-PM1-P-019 | OS13-A019

Sea Temperature Influenced by Galápagos Islands in Eastern

Tropical Pacific Ocean

Yue CHEN1+, Xiaomeng HUANG1#

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OS13-D4-PM1-P-020 | OS13-A022

Openarray: A User-Friendly, Automatic Parallel and High

Performance Operator Library for Ocean Model

Xing HUANG1#+

¹Tsinghua University

OS13-D4-PM1-P-021 | OS13-A027

Effects of Langmuir Circulation and Tide on Mixed Layer

and Meridional Overturning Circulation

Seungho LEE $^{1,2#+}$, Fumiaki KOBASHI 1 , Hojin LEE 2 , Naoto IWASAKA 1

¹Tokyo University of Marine Science and Technology, ²Korea Maritime and Ocean University

OS14-D4-PM1-P-009 | OS14-A004

The Role of Rossby Waves on Multidecadal Sea Level

Variability in the Tropical Pacific Ocean

Meixiang CHEN1#+

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OS14-D4-PM1-P-010 | OS14-A005

Interannual-To-Decadal Variability and Trends of Sea

Level in the South China Sea

Xuhua CHENG1#+

¹Hohai University

OS14-D4-PM1-P-011 | OS14-A014

Atlantic Multi-Decadal Oscillation Controls the North

Pacific Subtropical Mode Water Variability

Baolan WU1#+, Xiaopei LIN1, Lisan YU2

¹Ocean University of China, ²Woods Hole Oceanographic Institution

OS14-D4-PM1-P-012 | OS14-A015

Corrections and Analyses of Taiwan Tide Gauge Records

Wen-Hau LAN¹⁵⁺, Chung-Yen KUO¹, Huan-Chin KAO¹, Li-Ching LIN², C. K. SHUM³, Kuo-Hsin TSENG⁴, Jung-Chieh CHANG⁵

CHANG

¹National Cheng Kung University, ²Academia Sinica, ³Ohio State University, ⁴National Central University, ⁵National Chung Hsing University

OS14-D4-PM1-P-013 | OS14-A016

Consensuses and Discrepancies of Basin-Scale Ocean Heat

Content Changes in Different Ocean Analyses

Gongjie WANG¹⁺, Lijing CHENG^{2‡}, John ABRAHAM³,

Chongyin LI2, Huadong DU4

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Technology

OS16-D4-PM1-P-006 | OS16-A002

Combined Impacts of SSTA in Tropical Pacific and Indian

Oceans on Area Changes of Summertime Western Pacific Subtropical High

Daili QIAN¹#+, Zhaoyong GUAN¹, Weiya TANG¹

¹Nanjing University of Information Science & Technology

OS16-D4-PM1-P-007 | OS16-A004

One Hundred Parallel Worlds in Seasonal Prediction

Takeshi DOI1#+, Swadhin BEHERA1, Toshio YAMAGATA1

¹Japan Agency for Marine-Earth Science and Technology

OS16-D4-PM1-P-008 | OS16-A007

A Dynamic Study of Simulated Atlantic Seasonal Upwelling

in CMIP5 Models

Li-Chiao WANG1#+, Fei-Fei JIN2,3, Chau-Ron WU1

¹National Taiwan Normal University, ²University of Hawaii,

³Chinese Meteorological Agency

OS16-D4-PM1-P-009 | OS16-A009

Experimental Seasonal Climate Prediction Using CFES:

Preliminary Results

Nobumasa KOMORI¹^{‡†}, Bunmei TAGUCHI², Akira KUWANO-YOSHIDA³, Takeshi DOI¹, Masami NONAKA¹ ¹Japan Agency for Marine-Earth Science and Technology, ²The

University of Tokyo, ³Kyoto University

OS17-D4-PM1-P-010 | OS17-A004

Spectral Interpretation of Mesoscale-to-Submesoscale

Processes in the Northern South China Sea

Haijin CAO1#+, Zhiyou JING2, Tong YAN2 ¹Hohai University, ²Chinese Academy of Sciences

OS17-D4-PM1-P-011 | OS17-A010

Spatio-Temporal Features of Submesoscale Processes in the

Northeast South China Sea

Jihai DONG^{1#+}, Yisen ZHONG²

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²Shanghai Jiao Tong University

OS17-D4-PM1-P-012 | OS17-A011

Impact of Mesoscale Air-Sea Interaction on Wind Work

Done on Oceanic Mesoscale Eddies

Chi XU1#+, Xiaodong SHANG1

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OS17-D4-PM1-P-013 | OS17-A016

The Evolution of Mode-2 Internal Solitary Waves Modulated

by Background Shear Currents

Peiwen ZHANG1#+, Zhenhua XU1, Qun LI2, Baoshu YIN1, Yijun HOU1, Antony LIU3

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³Ocean University of China

OS17-D4-PM1-P-014 | OS17-A017

Mesoscale Eddy Generation Mechanisms in the Central

South China Sea

Jiajia CHEN1#+, Xuhua CHENG1, Xiao CHEN2

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OS18-D4-PM1-P-021 | OS18-A003

Tropical Meridional Overturning Circulation Observed by

Subsurface Moorings in the Western Pacific

Lina SONG1#+

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OS18-D4-PM1-P-022 | OS18-A009

Energy Diagnostic of the Mesoscale Processes Loaded by the

South China Sea Throughflow

Jinglong YAO1#+, Dongxiao WANG2, Qin-Yan LIU1, Fuan

XIAO3

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Oceanology, Chinese Academy of Sciences, 3Guangzhou University

OS18-D4-PM1-P-023 | OS18-A013

Interdecadal Change in Upper Ocean Heat Content Around

the Late 1990s in the South China Sea: Role of Interdecadal

Pacific Oscillation

Fuan XIAO1#+, Lili ZENG2, Qin-Yan LIU2, Wen ZHOU3,

Dongxiao WANG4

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University of Hong Kong, 4South China Sea Institute of Oceanology,

Chinese Academy of Sciences

OS18-D4-PM1-P-024 | OS18-A018

The Mixed Layer Variations off the Western Coast of

Sumatra Associated with the MJO Passage During the

Pre-YMC and YMC

Qoosaku MOTEKI1#+, Masaki KATSUMATA1, Kentaro ANDO1,

Kunio YONEYAMA1, Takuya HASEGAWA1

¹Japan Agency for Marine-Earth Science and Technology

OS18-D4-PM1-P-025 | OS18-A026

Observations of Intraseasonal Variability in the Sunda Strait

Throughflow

Shujiang LI1#+, Zexun WEI1, R. Dwi SUSANTO2, Yaohua ZHU1,

Agus SETIAWAN3, Tengfei XU1, Bin FAN1, Teguh AGUSTIADI3, Mukti TRENGGONO4, Guohong FANG1

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OS18-D4-PM1-P-026 | OS18-A029

A Case to Calculate Transit Time from Western Pacific Ocean

to the South China Sea Based on CFC-12 Observations

Hengxiang DENG1, Peng HUANG2,3, Toste TANHUA4, Tim STÖVEN⁴, Hongwei KE¹, Weimin WANG¹⁺, Kaiwen SHI¹,

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Helmholtz Centre for Ocean Research Kiel

OS18-D4-PM1-P-027 | OS18-A030

Impact of ENSO Events on the Interannual Variability of Sea

Surface Temperature and Sea Surface Height During 1980 -

2016 in the Mindanao Dome, Northwestern Pacific Ocean

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OS18-D4-PM1-P-028 | OS18-A044

Hundred-Year Tendencies of the North Equatorial Current

and North Equatorial Countercurrent in the Western Pacific

Ocean

Yi-Chia HSIN1#+

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OS19-D4-PM1-P-008 | OS19-A008

Polymer Identification of Plastic Marine Debris Throughout

the Hawaiian Archipelago by FT-IR to Determine Sources

Kayla BRIGNAC¹⁵⁺, Melissa JUNG², Cheryl KING³, Sarah-Jeanne ROYER⁴, Jens CURRIE⁵, Megan LAMSON⁶, Lauren BLICKLEY७, Stephanie STACK⁵, Kevin O'BRIEN®, Jim POTEMRA¹, Jennifer LYNCH⁰

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OS20-D4-PM1-P-010 | OS20-A010

Sea-Level Rise and Storm Surge Study Using Integrated Geodetic Datasets and Circulation Modeling in the Hawaiian Islands

Linqiang YANG^{1#+}, Oceana FRANCIS¹
¹University of Hawaii at Manoa

OS21-D4-PM1-P-009 | OS21-A002

Water Mass Mixing Characteristics Analysis from Glider Observations in the South China Sea

Zongshang $SI^{1#+}$, Zhisong FAN^2 , Chongguang $PANG^3$, Zhiliang $I.III^1$

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OS21-D4-PM1-P-010 | OS21-A008

On Four-Dimensional Internal Wave Spectrum in the

Northern South China Sea

Hui SUN¹⁺, Qingxuan YANG^{1‡}, Liming FAN¹, Jianing LI¹ ¹Ocean University of China

OS21-D4-PM1-P-011 | OS21-A014

Lagrangian Diffusivity in Contour-Based Coordinates

Yu-Kun QIAN¹⁺, Shiqiu PENG^{1#}
¹Chinese Academy of Sciences

OS23-D4-PM1-P-013 | OS23-A007

The Possible Mechanism of Subtropical Countercurrent in the Pacific Ocean

Zhichun ZHANG^{1‡+}, Huijie XUE²
¹Chinese Academy of Sciences, ²University of Maine

OS23-D4-PM1-P-014 | OS23-A010

Precession-Paced Thermocline Water Temperature Changes in Response to Upwelling Conditions off Southern Sumatra over the Past 300,000 Years

Xingxing WANG^{1*+}, Zhimin JIAN¹, Andreas LUECKGE², Yue WANG¹, Haowen DANG¹, Mahyar MOHTADI³

¹Tongji University, ²Federal Institute of Geosciences and Natural Resources, ³University of Bremen

OS23-D4-PM1-P-015 | OS23-A014

The Application of Organic Biomarkers in Late Quaternary

Paleoceanography in the Banda Sea

Hung-Lin TSAI1#+

¹National Taiwan Ocean University

OS23-D4-PM1-P-016 | OS23-A016

Sea-Surface Temperature Variability Across the Indo-Pacific

Warm Pool for the Past 30,000 Years

Andreas LUECKGE¹, Markus KIENAST^{2‡+}, Martina HOLLSTEIN³, Stephan STEINKE⁴, Mahyar MOHTADI³
¹Federal Institute of Geosciences and Natural Resources, ²Dalhousie University, ³University of Bremen, ⁴Xiamen University

OS23-D4-PM1-P-017 | OS23-A018

Coral-Inferred Seasonal Monsoon- and Biological-Driven

Fractionation of Offshore Seawater Rare Earth Elements in

Beibu Gulf, Northern South China Sea

Yi LIU1#

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OS23-D4-PM1-P-018 | OS23-A023

1,500 Years of Anchovy and Sardine Population Response to

Coastal Upwelling off Southern California

Gabrielle FARINA $^{1s+}$, Ingrid HENDY 1 , Sam MCCLATCHIE 2 , Yi WANG 1

¹University of Michigan, ²National Oceanic and Atmospheric Administration

OS23-D4-PM1-P-019 | OS23-A024

Evolution of Kuroshio Extension System in the Northwest

Pacific Since the LGM

Inah SEO^{1±+}, Chan Min YOO¹, Kiseong HYEONG¹, Yuri LEE² ¹Korea Institute of Ocean Science and Technology, ²Kyungpook National University

OS23-D4-PM1-P-020 | OS23-A026

Paleoceanographic Variations in Sediment Core

Sangmin HYUN¹#+

¹Korea Institute of Ocean Science and Technology

OS24-D4-PM1-P-023 | OS24-A003

The Effects of Wave Forcing and Reef Morphology on the

Low-Frequency Wave Motions over Fringing Reefs
Yu YAO¹²⁺

¹Changsha University of Science & Technology

OS24-D4-PM1-P-024 | OS24-A005

Wave Power Extraction from a Dual Oscillating Water

Column Device with a Surging Mid-Wall

Zhengzhi DENG^{1#+}, Lixian WANG²

¹Zhejiang University, ²Wuhan University of Technology

OS24-D4-PM1-P-025 | OS24-A006

Multivariate Analysis of Extreme Storm Surges in a

Semi-Enclosed Bay

Weihong HE1#+

¹South China Sea Institute of Oceanology, Chinese Academy of Sciences

OS24-D4-PM1-P-026 | OS24-A009

Analysis of Sea Surface Temperature Variation in South

China Sea Based on High Resolution Satellite Data

Yue XU^{1#+}, Xiping YU¹
¹Tsinghua University

OS24-D4-PM1-P-027 | OS24-A010

Trend Analysis of Tropical Cyclone Genesis

Kaiyue SHAN^{1‡+}, Xiping YU¹
¹Tsinghua University

OS24-D4-PM1-P-028 | OS24-A014

An Experimental Study of Scour Around a Row of

Closely-Spaced Circular Piles: Solitary Waves

Conghao XU¹⁺, Zhenhua HUANG^{1#}
¹University of Hawaii at Manoa

OS24-D4-PM1-P-029 | OS24-A016

Nonlinear Numerical Simulation of Wave Transmission

Through a Fluid-Filled Semi-Circular Membrane and its

Application for Shoreline Protection

Chunrong LIU1+, Zhenhua HUANG2#

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OS24-D4-PM1-P-030 | OS24-A018

Tsunami Attenuation over Coral Reefs in a Context of

Climate Change

Bernard DUDON $^{1z+}$, Gael ARNAUD 1 , Yann KRIEN 2 , Narcisse ZAHIBO 1

¹Université des Antilles, ²University of the French West Indies and Guiana

OS24-D4-PM1-P-031 | OS24-A019

Reexamination of Proudman Resonance by Boussinesq Wave

Model

Tien-Chi LIU $^{1\sharp +}$, Tso-Ren WU 1 , Yu-Lin TSAI 1 , Chun-Wei LIN 1 , Muqun HUANG 1 , Pay-Liam LIN 1

¹National Central University

OS24-D4-PM1-P-032 | OS24-A022

Development and Application of the Reflection Coefficient

Diagram

Hayong KIM¹²⁺, Haseog KIM¹, Insang YU¹, Sangman JEONG¹
¹Kongju National University

OS24-D4-PM1-P-033 | OS24-A023

Temporal and Spatial Variations of Bio-Optical Properties of

the Surface Waters of the East China Sea: An Analysis of the

Impacts by Two Major Environmental Events

Jinchun YUAN1#+

¹Elizabeth City State University

OS24-D4-PM1-P-034 | OS24-A024

Storm-Induced Beach Erosion of Embedded Beach in

Haundae, Korea

Kideok DO1#+, Jeseon YOO2

¹Korea Maritime and Ocean University, ²Korea Institute of Ocean Science Technology

OS24-D4-PM1-P-035 | OS24-A025

Insights into Potential Submarine Landslide Tsunamis in the

South China Sea

Linlin LI^{1#}, Adam SWITZER¹, Gangfeng MA², Fengyan SHI³,

Qiang QIU1, Robert WEISS4

¹Nanyang Technological University, ²Old Dominion University,

³University of Delaware, ⁴Virginia Tech

OS24-D4-PM1-P-036 | OS24-A028

An Experimental Study on Wave Damping by a Model

Mangrove Forest

Che-Wei CHANG¹⁺, Naoki TSURUTA², Kojiro SUZUKI²,

Nobuhito MORI1#

¹Kyoto University, ²Port and Airport Research Institute

OS24-D4-PM1-P-037 | OS24-A031

Characteristics of Wave Overtopping and Overtopping Flow

on a Sloped Seadike Under the Superstandard Tides and

Waves

Qin JIANG^{1#+}, Menghua AN²

¹Hohai University, ²CCCC Third Harbor Consultant Co., Ltd.

OS24-D4-PM1-P-038 | OS24-A032

Numerical Modeling of Wave Generation by Submarine

Granular Slides Using a Three-Phase Flow Approach

Ming-Lan YU1+, Cheng-Hsien LEE1#

¹Tamkang University

OS24-D4-PM1-P-039 | OS24-A033

Tide- Interaction Based Tsunami Inundation Impact

Assessment - A Case Study in Hawaii

Xi FENG1#+, Suwan SHEN2

¹Hohai University, ²University of Hawaii

OS24-D4-PM1-P-040 | OS24-A034

Simulating Tsunami Wave Generation Using a Two-Layer

Non-Hydrostatic Landslide Model

Gangfeng MA $^{1\sharp +}$, Cheng ZHANG 2 , James KIRBY 2 , Stephan GRILLI 3 , Fengyan SHI 2

¹Old Dominion University, ²University of Delaware, ³University of Rhode Island

OS24-D4-PM1-P-041 | OS24-A035

Alternating Gravel and Mud Deposits in Southern Cebu:

Origin and Implications for Coastal Hazards

Regina Martha LUMONGSOD¹**, Noelynna RAMOS¹, Kathrine MAXWELL¹, Raul Benjamin MENDOZA¹, Carla DIMALANTA¹

¹University of the Philippines Diliman

OS24-D4-PM1-P-042 | OS24-A043

Wave-Induced Currents at Haeundae Beach in Busan

Seung-Nam SEO^{1#+}, Young-Kwang CHOI¹
¹Korea Institute of Ocean Science and Technology

OS24-D4-PM1-P-043 | OS24-A048

Risk Assessment of Sea Level Rise and Storm Surge

Compound Disaster in the Coastal Zone of Bohai Sea, China

Lifen XU1, Xuegong XU2#+

¹General Office of Tongren Municipal Government, ²Peking University

OS25-BG-D4-PM1-P-015 | OS25-A006

Community Composition of Photosynthetic Picoeukaryotes in a Subtropical Coastal Ecosystem, with Particular Emphasis on Micromonas

Kuo-Ping CHIANG1#+

¹National Taiwan Ocean University

OS25-BG-D4-PM1-P-016 | OS25-BG-A012

Export of Particulate Organic Carbon and Soot Black Carbon on the Northern South China Sea Slope Based on

Po-210/Pb-210 Disequilibria

Weifeng YANG^{1#+}, Haoyang MA¹, Ziming FANG¹
¹Xiamen University

OS25-BG-D4-PM1-P-017 | OS25-BG-A015

Regulation Mechanism of Phytoplankton Community on

Sinking of Zooplankton Fecal Pellets

Yong QIU¹⁺, Wupeng XIAO¹, Yiwei SHANG¹, Xin LIU¹, Bangqin HUANG^{1#}

¹Xiamen University

OS25-BG-D4-PM1-P-018 | OS25-BG-A017

Controlling Factors and Cross Linkages of Ecosystem Metabolism and Atmospheric CO2 Flux in the Northern South China Sea

Jia-Jang HUNG^{1#+}

¹National Sun Yat-sen University

OS25-BG-D4-PM1-P-019 | OS25-BG-A018

Diel Vertical Distribution of Zooplankton in Yongle Blue Hole, Xisha Islands, South China Sea and its Implication to Carbon Cycling

Hongju CHEN^{1‡+}, Yunyun ZHUANG¹, Guangxing LIU¹ ¹Ocean University of China

OS25-BG-D4-PM1-P-020 | OS25-BG-A022

Seasonal Variations of Picoplankton Abundance at the

SEATS Station in the South China Sea: From Diel Surveys

Tzong-Yueh CHEN^{1#+}, Fuh-Kwo SHIAH²

¹National Taiwan Ocean University, ²Academia Sinica

OS25-BG-D4-PM1-P-021 | OS25-BG-A024

Phosphorus Stress of Phytoplankton in the East China Sea and the Northern South China Sea

Yu MO¹, Lizhen LIN²⁺, Bangqin HUANG²‡ ¹Guangxi University for Nationalities, ²Xiamen University

OS27-D4-PM1-P-013 | OS27-A003

Intrusion of the Kuroshio into the South and East China Seas

Chau-Ron WU $^{{\scriptscriptstyle 1\sharp}*}$, You-Lin WANG $^{\scriptscriptstyle 1}$, Yong-Fu LIN $^{\scriptscriptstyle 1}$, Shenn-Yu CHAO $^{\scriptscriptstyle 2}$

¹National Taiwan Normal University, ²University of Maryland

OS27-D4-PM1-P-014 | OS27-A005

Surface and Subsurface Thermal Conditions on the Multidecadal Timescale: South China Sea vs. Tropical Northwest Pacific Ocean

Tzu-Ling CHIANG^{1‡+}, Yi-Chia HSIN², Chau-Ron WU¹
¹National Taiwan Normal University, ²Academia Sinica

OS27-D4-PM1-P-015 | OS27-A008

Chemical Oceanography and Sediment Properties in the

Exploration Area for Cobalt-Rich Ferromanganese Crusts:

Environmental Baseline Study for Deep-Sea Mining

Kyoko YAMAOKA¹⁵⁺, Atsushi SUZUKI¹, Masahiro SUZUMURA¹, Nobuo TSURUSHIMA¹, Yuichiro TANAKA¹, Akifumi SHIMAMOTO², Yuki OTA¹, Hiroki MATSUI¹, Hideki SUGISHIMA³, Takaaki MATSUI³, Nobuyuki OKAMOTO³

¹National Institute of Advanced Industrial Science and Technology, ²The General Environmental Technos Co., Ltd., ³Japan Oil, Gas and Metals National Corporation (JOGMEC)

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OS27-D4-PM1-P-016 | OS27-A011

Cs-137 Inventory in the Eastern Indian Ocean Water Column

Masatoshi YAMADA1#+

¹Hirosaki University

OS27-D4-PM1-P-017 | OS27-A012

Temporal Variation of Dissolved 137Cs in Seawater

Collected in the Western North Pacific in 2011-2013

Miho FUKUDA^{1‡+}, Tatsuo AONO¹, Shinnosuke YAMAZAKI², Makio HONDA³, Hajime KAWAKAMI³, Toshiro SAINO³
¹National Institute of Radiological Science (NIRS), ²Tokyo Nuclear Services Co. Ltd, ³Japan Agency for Marine-Earth Science and Technology

OS27-D4-PM1-P-018 | OS27-A017

Radiocarbon Content in Dissolved Organic Carbon in the

East China Sea

Taehee NA^{1#+}, Jeomshik HWANG¹
¹Seoul National University

OS27-D4-PM1-P-019 | OS27-A023

Monitoring Water Level Variations Based on CryoSat-2 LRM

and SAR Altimetry Retracked Data

Huan-Chin KAO $^{1\sharp\star}$, Chung-Yen KUO 1 , C. K. SHUM 2 , Yuchan YI 2

¹National Cheng Kung University, ²Ohio State University

OS27-D4-PM1-P-020 | OS27-A024

Retrieve Ocean Surface Roughness from Delay-Doppler Map

Made by Oceanic Reflected GNSS Signal

Wen-Hao YEH $^{1\sharp *}$, Hwa CHIEN², Quang-Huy LU², Cheng -Yung HUANG 1

¹National Space Organization, ²National Central University

OS27-D4-PM1-P-021 | OS27-A027

Li, Mg, and S Purification from Seawater Using an Ion

Chromatograph with a Fraction Collector System for Stable

Isotope Measurements

Toshihiro YOSHIMURA^{1#}, Daisuke ARAOKA², Yusuke TAMENORI³, Junichiro KURODA⁴, Hodaka KAWAHATA⁴, Naohiko OHKOUCHI¹

¹Japan Agency for Marine-Earth Science and Technology, ²National Institute of Advanced Industrial Science and Technology, ³SPring-8, ⁴The University of Tokyo

OS27-D4-PM1-P-022 | OS27-A028

The Long-Term Variability of Wave Height in East Indian

Ocean, South China Sea and Northwest Pacific Ocean

Regions

Shaotian LI¹⁺, Yineng LI^{1‡}, Shiqiu PENG¹
¹Chinese Academy of Sciences

OS27-D4-PM1-P-023 | OS27-A031

Depositional Environment of Fine Grained Sediments in the

Southeastern Yellow Sea, Korea

Gwangsoo LEE1#+

¹Korea Institute of Geoscience and Mineral Resources

OS27-D4-PM1-P-024 | OS27-A032

Application of Wind Coefficient Considering Surface Layer

Thickness for PTM

Jung-Woon CHOI¹⁺, Jin-Yong CHOI¹⁺, Yong-Chim MIN¹, Sang-Hun JEONG^{1,2}

¹Korea Institute of Ocean Science and Technology, ²Pusan National University

OS27-D4-PM1-P-025 | OS27-A034

High-Resolution Analysis of Spatio-Temporal Change of

Late Quaternary Depositional Environment in the Echigo

Plain, Niigata Prefecture, Japan

Yuka ITO¹#+, Tomochika TOKUNAGA¹

¹The University of Tokyo

SE Poster Presentations

Thu - 07 Jun, 13:30 - 15:30 | Ballroom B

SE01-D4-PM1-P-018 | SE01-A007

Anomalous Variation of Magnetic Anisotropy with

Low-Field in Some Volcanic Dikes

Martin CHADIMA^{1,2‡+}, Frantisek HROUDA¹, Josef JEZEK³
¹Advanced Geoscience Instruments Company, ²Czech Academy of Sciences, ³Charles University

SE01-D4-PM1-P-019 | SE01-A013

Kinematics of Mass Transport Deposits Revealed by

Magnetic Fabrics

Ram WEINBERGER
1#+, Tsafrir LEVI¹, G. Ian ALSOP², Shmuel MARCO³

¹Geological Survey of Israel, ²University of Aberdeen, ³Tel Aviv University

SE01-D4-PM1-P-020 | SE01-A014

Termination of Fluvial-Alluvial Sedimentation in the Xining

$Basin, \, NE \,\, Tibet \,\, Plateau, \, and \,\, Successive \,\, Geomorphologic$

Evolution

Weilin ZHANG1#+

 $^1Chinese\ Academy\ of\ Sciences$

SE01-D4-PM1-P-021 | SE01-A015

Characterizing Seismites and Co-Seismic Faults with

Anisotropy of Magnetic Susceptibility, Dead Sea Basin

Tsafrir LEVI $^{{\scriptscriptstyle \parallel}\sharp*}$, Ram WEINBERGER $^{{\scriptscriptstyle \parallel}}$, G. Ian ALSOP $^{{\scriptscriptstyle 2}}$, Shmuel MARCO $^{{\scriptscriptstyle 3}}$

¹Geological Survey of Israel, ²University of Aberdeen, ³Tel Aviv University

SE01-D4-PM1-P-022 | SE01-A025

Contribution of Anisotropy of Magnetic Susceptibility (AMS) to Structures and Evolution Precambrian Rocks of

Southwestern Nigeria

Cyril OKPOLI^{1,2#}, Emilio HERRERO-BERVERA², Michael OLADUNJOYE³

¹Adekunle Ajasin University, ²University of Hawaii at Manoa, ³University of Ibadan

SE01-D4-PM1-P-023 | SE01-A026

Rock Magnetic Characterization of Southwestern Nigeria

Precambrian Shield: Constraints of Remagnetization Cyril OKPOLI^{1,2#+}

¹Adekunle Ajasin University, ²University of Hawaii at Manoa

SE01-D4-PM1-P-024 | SE01-A030

Unusual Magnetic Properties of Sedimentary Pyrrhotite in

Methane-Seepage Sediments: Comparison with

Metamorphic Pyrrhotite and Sedimentary Greigite

Chorng-Shern HORNG1#+

¹Academia Sinica

SE01-D4-PM1-P-025 | SE01-A032

Possible Mutuyama-Brunhes Boundary in Cave Sediment of the Czech Republic

Gunther KLETETSCHKA¹**, Emilio HERRERO-BERVERA², Tereza KAMENIKOVA¹, Jaroslav KADLEC³, Hakan UCAR¹ ¹Charles University, ²University of Hawaii at Manoa, ³Geophysical Institute

SE02-D4-PM1-P-017 | SE02-A003

The Thermochemical Structure of the Lithosphere and Upper

Mantle Beneath South China: Results from

Multi-Observable Probabilistic Inversion

Bin SHAN1#+

¹China University of Geosciences

SE02-D4-PM1-P-018 | SE02-A005

Waveform Inversion Based on the Curvilinear-Grid

Finite-Difference Seismic Wavefield Simulation

Qi LIU^{1#+}, Jiayu KANG¹, Xiaofei CHEN², Wei ZHANG²
¹University of Science and Technology of China, ²Southern
University of Science and Technology

SE02-D4-PM1-P-019 | SE02-A006

High-Resolution Tomographic Models of the Crust and

Uppermost Mantle Beneath Southern Sumatra

Yongsheng LIU $^{\!\!\!1+}$, Muzli MUZLI $^{\!\!\!1,2}$, Iman SUARDI $^{\!\!\!2}$, Xueyuan HUANG $^{\!\!\!1}$, Shengji WEI $^{\!\!\!1}$, Ping TONG $^{\!\!\!1\sharp}$

¹Nanyang Technological University, ²Meteorological, Climatological, and Geophysical Agency

SE02-D4-PM1-P-020 | SE02-A008

A New Method to Extract Fundamental and Higher Mode Surface Wave Dispersion Curves Using USArray Ambient Noise Data

Gaoxiong WU^{1‡+}, Jiannan WANG¹, Xiaofei CHEN²
¹University of Science and Technology of China, ²Southern
University of Science and Technology

SE02-D4-PM1-P-021 | SE02-A010

Rupture Process of the M5.5 Orkney Earthquake Using

Strainmeters at Very Close Distance

Tatsunari YASUTOMI^{1‡}, Jim MORI¹, Hiroshi OGASAWARA², Masumi YAMADA¹, Makoto OKUBO³⁺, Bennie LIEBENBERG⁴
¹Kyoto University, ²Ritsumeikan University, ³Kochi University,
⁴AngloGold Ashanti

SE02-D4-PM1-P-022 | SE02-A012

Tomographic Models of the Philippine Sea Slab Beneath Kyushu, Japan and the 2016 Kumamoto Earthquake (MW 7.1) Area

Yongzhi ZHOU¹⁺, Yuejun WANG¹, Ping TONG^{2±}
¹Sun Yat-sen University, ²Nanyang Technological University

SE02-D4-PM1-P-023 | SE02-A015

Reverse-Time Migration Using the Dominant Frequency

Component of the Spectral Decomposed Wavefield

Jiho HA^{1±+}, Seongpil KIM¹, Young-Ju KIM¹, Nam-Sub WOO¹, Sang-Mok HAN¹, Wookeen CHUNG², Sungryul SHIN²
¹Korea Institute of Geoscience and Mineral Resources, ²Korea Maritime and Ocean University

SE02-D4-PM1-P-024 | SE02-A016

Detailed Velocity and Stress Distributions of Deep Seismic

Zone Under Izu-Bonin in Japan

Guoming JIANG^{1#+}
¹China University of Geosciences

SE02-D4-PM1-P-025 | SE02-A017

Application of Full Waveform Inversion to Local Imaging in South China

Guibin ZHANG¹+, Guoming JIANG¹‡
¹China University of Geosciences

SE02-D4-PM1-P-026 | SE02-A018

 $Surface\ Wave\ Tomography\ of\ Northeastern\ Tibetan\ Plateau$

Using Beamforming Method Based on Seismic Noise

Laiyu LU^{1±+}, Kaiming WANG², Zhifeng DING²
¹Institute of Geophysics, China Earthquake Administration, ²China Earthquake Administration

SE02-D4-PM1-P-027 | SE02-A020

Preliminary Constraints on the Crustal Thickness of Luzon

Island, Philippines by Using P-to-S Wave Receiver Function

Nghia Cong NGUYEN^{1,2±+}, Bor-Shouh HUANG¹, Van-Duong NGUYEN¹, Po-Fei CHEN², Chin-Shang KU¹, Win-Gee HUANG¹, Bautista BARTOLOME C.³, Ishmael NARAG³, Sevilla WINCHELLE IAN³, Melosantos ARNALDO³

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SE02-D4-PM1-P-028 | SE02-A022

Cross-Correlation Analysis of Ambient Noise Recorded by

Accelerometer in the Korean Peninsula

Eunjin PARK^{1‡+}, Sangmin KWAK¹, Seok Goo SONG¹ ¹Korea Institute of Geoscience and Mineral Resources

SE02-D4-PM1-P-029 | SE02-A029

Comparative Study of the Crustal Structure Between North

China Craton and South China Block

Yong Hong DUAN^{1‡+}, Yanna ZHAO¹, Yunhao WEI¹, Jiyan LIN¹ ¹China Earthquake Administration

SE02-D4-PM1-P-030 | SE02-A031

Tomographic Imaging of P and S Wave Velocity Structure

Beneath Northeast China and Surrounding Regions

Jinli HUANG1#+

¹China University of Geosciences

SE02-D4-PM1-P-031 | SE02-A032

About Crustal Velocity Model and Application of Inner

Mongolia Region

Fang LIU1#+

¹China Earthquake Administration

SE02-D4-PM1-P-032 | SE02-A035

Numerical Simulation of Seismic Wave Propagation Across

Lake-Shaped Fluid-Solid Interface Model by Curvilinear

Grid Finite Difference Method

Yao-Chong SUN^{1,2#+}, Nan SUN³, Wei ZHANG¹, Xiaofei CHEN¹
¹Southern University of Science and Technology, ²Wuhan
University, ³University of Science and Technology of China

SE02-D4-PM1-P-033 | SE02-A037

Crustal Structure Research Based on Zhenkang-Luxi

Controlled Source Profile

Suzhen PAN $^{1#+}$, Yong Hong DUAN 1 , Fuyun WANG 1 1 China Earthquake Administration

SE02-D4-PM1-P-034 | SE02-A045

Imaging of the Crustal and Upper Mantle Structures Beneath

the North America Using Receiver-Based Stacking and

Inversion Techniques

Seongryong KIM^{1#+}, Junkee RHIE¹, Sanghyun LEE¹ ¹Seoul National University

SE02-D4-PM1-P-035 | SE02-A046

Seismic Investigation Revealed Characteristics of the Littoral

Fault Zone in the Pearl River Estuary, Northern Continental

Margin of the South China Sea

Jinlong SUN^{1#}, Cheng XIONG¹, Cao JINGHE¹, Shaohong XIA², Huilong XU²

¹Chinese Academy of Sciences, ²South China Sea Institute of Oceanology, Chinese Academy of Sciences

SE02-D4-PM1-P-036 | SE02-A047

A Crustal Velocity Model of the Southern Korean Peninsula

from Local Earthquake Data

Euna PARK $^{1\#+}$, Tae-Seob KANG 1

¹Pukyong National University

SE02-D4-PM1-P-037 | SE02-A049

Ambient Noise Cross-Correlation Analysis of Active Seismic

Experiment Data in the East Sub-Basin of South China Sea

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SE02-D4-PM1-P-038 | SE02-A050

Modeling Regional Waveforms from Explosion Sources with

Realistic Surface Topography

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SE03-D4-PM1-P-012 | SE03-A002

3D Variable Density Model Cooperating with Seismic Data

Constraints to Improve the Reliability of Moho Inversion

Based on Gravity Anomaly in South China Sea

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SE03-D4-PM1-P-013 | SE03-A003

Constraints on Water Content in the Mantle Transition Zone

from Seismic Anisotropy and Mineral Physics Data

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SE03-D4-PM1-P-014 | SE03-A005

Geodynamic Implications of Complex Seismic Anisotropy

Beneath Tienshan

Kelly LIU^{1;+}, Solomon CHERIE¹, Ahmed ELSHEIKH¹, Fansheng KONG¹, Cory REED¹, Bin YANG¹, Stephen GAO¹ ¹Missouri University of Science and Technology

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A New Method to Extract Fundamental and Higher Mode

Dispersion Curves Using Europe and Some Special Areas

Ambient Noise Waveform Data

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SE03-D4-PM1-P-016 | SE03-A010

A Wavelet-Based Gravity Method to Multilayer Densities

and its Applications in the Tibet

Chuang XU1#+, Zhicai LUO1, Jiakuan WAN1

¹Huazhong University of Science and Technology

SE03-D4-PM1-P-017 | SE03-A011

Hydraulic Fracturing Reservoir Interpretation Based on

Microseismic Source Parameters

Zheng LI^{1,8+}, Xu CHANG¹, Zhenxing YAO¹, Yibo WANG¹ ¹Chinese Academy of Sciences

SE03-D4-PM1-P-018 | SE03-A014

P and S Wave Tomography and Anisotropy in Northwest

Pacific Subduction Zones

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SE03-D4-PM1-P-019 | SE03-A016

Crustal Structure Beneath the NE Tibetan Plateau and its

Adjacent Constrained by the Receiver Functions and

Rayleigh Wave Dispersions

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SE03-D4-PM1-P-020 | SE03-A018

2017 Jiuzhaigou Mw6.5 Earthquake - A Sinistral Strike-Slip

Event Promoted by Historical Earthquakes

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SE03-D4-PM1-P-021 | SE03-A019

Earthquake Source Parameter of the Ninger Ms6.4

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Crustal Seismic Structure of Southwest Japan Constrained by

Noise Interferometry

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SE03-D4-PM1-P-023 | SE03-A023

Near Real-Time Monitoring System of the Seismic Velocity

Changes in Taiwan

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SE03-D4-PM1-P-024 | SE03-A025

Crustal Anisotropy of Cascadia Subduction Zone Revealed

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Tzu-Ying HUANG^{1#+}, Ban-Yuan KUO¹, Ying-Nien CHEN²
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SE03-D4-PM1-P-025 | SE03-A026

Building Empirical Impulse Response Function (IRF)

Database in the Southeastern Region of the Korean

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Sangmin KWAK^{1‡+}, Seok Goo SONG¹
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SE03-D4-PM1-P-026 | SE03-A027

Differential Development on Frontal Thrust Belt from

Central to Southern Taiwan: Revealed by Seismogenic Faults

Yue-Gau CHEN^{1‡+}, Yu-Ting KUO¹, Chien-Hsin CHANG², Tz-Shin LAI², Hsin-Hua HUANG³, Yih-Min WU¹
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Imaging the Lithosphere Structure Beneath Intraplate

Volcanoes in Jeju Island, South Korea Using Teleseismic

Traveltime Tomography

Jung-Hun SONG^{1#+}, Junkee RHIE¹, Seongryong KIM¹, Sanghyun LEE¹
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SE03-D4-PM1-P-028 | SE03-A034

Strong S-Wave Attenuation in the Mantle Wedge Beneath

Northeastern Japan Retrieved by High-Frequency Later

Phases of Intraslab Earthquakes

Takahiro SHIINA^{1#+}, Kie KATSUMATA², Kiyoshi YOMOGIDA²

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Distribution of Localized Fluid Inferred from S Wave

Reflectors Beneath the Earthquake Swarm in Yonezawa-Aizu

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Manami SUZUKI^{1‡+}, Akiko HASEMI², Tomomi OKADA¹, Toru MATSUZAWA¹, Norihiko UMINO¹, Noriko TSUMURA³, Tadashi YAMASHINA⁴, Member GROUP⁵

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SE03-D4-PM1-P-030 | SE03-A039

3D Basin Structure of the Santa Clara Valley Constrained by

Ambient Noise Tomography

¹Seoul National University

SE03-D4-PM1-P-031 | SE03-A041

Upper Crustal Isotropic and Anisotropic Shear-Wave

Velocity Structures Beneath Jeju Island from Ambient Noise

Tomography

Sang-Jun LEE1**, Junkee RHIE1, Seongryong KIM1, Tae-Seob KANG2, Young-Hee KIM1

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SE03-D4-PM1-P-032 | SE03-A044

Offshore Seismicity in the Southeastern Part of the Korean

Peninsula: Regional Distribution of Microearthquakes and

its Seismotectonic Implication

Hyejin PARK^{1#+}, Tae-Seob KANG¹
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SE03-D4-PM1-P-033 | SE03-A045

Stress Drop Estimates from Coda Wave Measurements of the

2016 Gyeongju Earthquake Sequence

Miji KIM^{1#+}, Tae-Seob KANG¹
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SE03-D4-PM1-P-034 | SE03-A050

Characterization of a Potential Collapse Structure by 3D

Seismic Imaging

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SE03-D4-PM1-P-035 | SE03-A051

Imaging of Subsurface Voids with Active-Seismic and

Anthropogenic Sources

Roland GRITTO^{1‡*}, Valeri KORNEEV¹, Magomed MAGOMED MAGOMEDOV², Michael ZUEV², Ali Elobaid ELNAIEM³, Fateh Alrahman MOHAMED³, Fadhil SADOONI³

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SE04-D4-PM1-P-016 | SE04-A001

Origin and Seismogenic Fault of the Wenchuan-Yingxiu Ms

8.0 Earthquake

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SE04-D4-PM1-P-017 | SE04-A003

Seismic Anisotropy of Upper Mantle in the NE Margin of the

Tibetan Plateau and Related Crust-Mantle Coupling Pattern

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SE04-D4-PM1-P-018 | SE04-A013

Western Pacific Sub-Slab Anisotropy: Izu-Bonin and

Mariana Regions

Li-Chen $\mathrm{HSU^{1}^{+}}$, Cheng-Chien $\mathrm{PENG^1}$, Ban-Yuan $\mathrm{KUO^2}$, Yuancheng $\mathrm{GUNG^1}$

¹National Taiwan University, ²Academia Sinica

SE04-D4-PM1-P-019 | SE04-A018

Mantle Plume Pulses and Multiple Eruptions in Deccan Trap

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SE04-D4-PM1-P-020 | SE04-A019

The Pressure Torque Exerted by Core Motions on an

Irregularly Shaped Core-Mantle Boundary

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SE05-D4-PM1-P-010 | SE05-A001

Mantle Potential Temperature Estimates and Primary Magma

Compositions of the Low-Ti Emeishan Flood Basalt

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SE05-D4-PM1-P-011 | SE05-A007

Alkali Olivine Basalts as Alternate Conduits for Diamond

Transport from Deep Mantle

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SE05-D4-PM1-P-012 | SE05-A008

Petrogenesis of Xitian Granites from Eastern Hunan

Province, Se China: Constrains from U-Pb Zircon Ages and

Geochemistry

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SE05-D4-PM1-P-013 | SE05-A009

Polymetallic Droplets in a Quartz Diorite Porphyry from the

Gangcha-Kemo Gold Deposit, China: Implications for

Petrogenesis and Prospecting

Junfeng SHEN¹⁵⁺, Haiming LIU², Zhaohua LUO¹, Xiao NIE¹, Zidong PENG³, Jinchun LI⁴, Liwei XU¹, Shuhao WANG¹,

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SE05-D4-PM1-P-014 | SE05-A010

Osmium Evidence for Synchronicity Between an Increased

Magmatic Activity and the Mid-Miocene Climatic Optimum

Kosuke GOTO^{1‡+}, Maria Luisa TEJADA², Gregory RAVIZZA³, Takashi ITO⁴, Junichiro KURODA⁵, Katsuhiko SUZUKI²
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SE05-D4-PM1-P-015 | SE05-A017

The Geochronology and Mantle Potential Temperature of Mafic Lavas and Dyke Sin Emeishan Large Igneous Province, SW China: Constraints on the Baddeleyite Sims U-Pb Ages and Geochemical Characteristic of Mafic Rocks in Funing Area

Baohua WANG¹⁺, Xijun LIU^{1‡}, Yu SHI¹, Zhenglin LI¹, Zhiguo ZHANG¹

¹Guilin University of Technology

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Petrogenesis of Late Permian Ferroan Granitic Rocks of the Emeishan Large Igneous Province in the Phan Si Pan Uplift and Tu Le Basin (NW Vietnam)

Thuy PHAM^{1,2#+}, Greg SHELLNUTT¹, Tuan Tran ANH²
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Constraining the Chronology and Petrogenesis of a Magmatic Complex with a Single Lava Flow: The Middle Tertiary Atascosa Lookout Lava Flow, Atascosa Mountains, Southern Arizona, USA

Christine BURRILL^{1‡+}, Sheila SEAMAN¹
¹University of Massachusetts Amherst

SE06-30-39-D4-PM1-P-013 | SE06-30-39-A001

Three-Dimensional Deformation Characteristics in

Southwestern Segment of Longmenshan Fault

Jing ZHAO1#+

¹China Earthquake Networks Center

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Thermal Infrared Changing Patterns Associated with

Moderate-Strong Earthquakes in Tibet

Xian LU^{1±+}, Xiaodong ZHANG², Qingyan MENG³, Tao XIE¹
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Forecasting, China Earthquake Administration, ³Chinese Academy of
Sciences

SE06-30-39-D4-PM1-P-015 | SE06-30-39-A008

Geochemical Characterizations of the Observations Well of

Anninghe Fault and Longmenshan Fault

Tian LEI¹⁵⁺, Zhihua ZHOU¹, Yu HUAIZHONG¹ ¹China Earthquake Networks Center

SE06-30-39-D4-PM1-P-016 | SE06-30-39-A009

A Study on Seismic Quiescence Phenomena Prior Great

Earthquakes in the North-South Seismic Belt

Yang ZANG^{1‡+}, Lingyuan MENG¹, Yanyan HAN¹ ¹China Earthquake Networks Center

SE06-30-39-D4-PM1-P-017 | SE06-30-39-A011

Focal Depths and Mechanisms of Earthquakes in the South

Mariana Trench Region from Local Array Data

Cheng CHENG¹⁺, Tianyao HAO^{1‡}
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SE06-30-39-D4-PM1-P-018 | SE06-30-39-A014

Study on the Relationship Between Argillaceous Content and Distance to Main Faulted Belt and Fractures

Development in the Middle and Lower Ordovician

Carbonate Rocks of Shunbei Area, Tarim Basin

Bowen ZHOU^{1#+}, Honghan CHEN¹
¹China University of Geosciences

SE06-30-39-D4-PM1-P-019 | SE06-30-39-A018 (Invited)

Precise Age Determination on a Historical Gigantic Earthquake and the Resultant Catastrophic Rock Avalanche in the Southern Japan Alps, Based on Dendrochronological

Analysis Using Oxygen Isotope Composition

Ryuji YAMADA^{1‡+}, Yoshihiko KARIYA², Takashi KIMURA¹, Masaki SANO³, Zhen LI⁴, Takeshi NAKATSUKA⁴
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SE06-30-39-D4-PM1-P-020 | SE06-30-39-A019 (Invited)

Occurrence, Evidences and Age of Brittle Faulting and the

Largest-Scale Bonggil Pseudotachylyte, Gyeongju, Se Korea Da-Hyun KANG¹⁺, Hee-Cheol KANG¹⁺, Youngbeom CHEON¹, Moon SON¹

¹Pusan National University

SE06-30-39-D4-PM1-P-021 | SE06-30-39-A023

Offshore Fault Geometrics in the Pearl River Estuary,

Southeastern China: Evidence from Seismic Reflection Data

Huilong XU1**, Cao JINGHE², Shaohong XIA¹, Jinlong SUN², Zhao FANG², Wan KUIYUAN²

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SE06-30-39-D4-PM1-P-022 | SE06-30-39-A029

Insight into the 2017 Ms7.0 Jiuzhaigou, Sichuan Earthquake for a Partial Rupture on the Northern Huya Fault in Eastern

Tibet

Gang LIU^{1#+}, Wei XIONG¹
¹China Earthquake Administration

SE06-30-39-D4-PM1-P-023 | SE06-30-39-A031

The November 15, 2017, Pohang Earthquake Sequences:

Hypocenter Distribution and Focal Mechanism Analysis

Jeong-Ung WOO1*+, Jung-Hun SONG¹, Seongryong KIM¹, Junkee RHIE¹, Tae-Seob KANG²

¹Seoul National University, ²Pukyong National University

SE08-D4-PM1-P-009 | SE08-A002

Analysis on Anomaly Characteristics of Underground Fluid

Before Xinjiang Jinghe Ms6.6 Earthquake in 2017

Jun ZHONG^{1#+}, Bo WANG¹, Zhihua ZHOU¹, Lei TIAN¹
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SE08-D4-PM1-P-010 | SE08-A005

Studies on Dehydration Kinetics of Talc with Different Iron

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SE08-D4-PM1-P-011 | SE08-A010

 $Earth quake\ Triggers\ Over-Pressurized\ Mid-to-Lower\ Crustal$

Fluid Migration in SW Taiwan

Yu-Fang HSU^{1#+}, Hsin-Hua HUANG², Mong-Han HUANG³, Ray Y. CHUANG¹, Kuan-Fu FENG^{1,2}

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Influence of Lithofacies on Shale Reservoir and Oil-Gas

Bearing Capacity: A Case from Zhanhua Sag

Siyuan SU^{1‡+}, Xuanlong SHAN¹, Zhenxue JIANG²
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SE08-D4-PM1-P-013 | SE08-A012

The 2006 Ml4.0 Dangan Island Earthquake Offshore Hong Kong: Effect of Intersecting Faults and High-Speed Intruded Bodies

Shaohong XIA $^{1#+}$, Jinlong SUN 2 , Huilong XU 1 , Wan KUIYUAN 2 , Pengxiang ZHOU 2

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Seismicity and B-Values Spatial Features in the Coastal Area of Northern South China Sea

Sun LONGTAO 1** , Pengxiang ZHOU 1 , Shaohong XIA 2 , Jinlong SUN 1 , Cao JINGHE 1

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SE08-D4-PM1-P-015 | SE08-A017

Hydraulic Changes of Head and Permeability Related to Active Fault: A Case Study of the Chihshang Fault in Eastern

Chung-Hsiang $MU^{1\sharp *}$, Jian-Cheng LEE¹, Jia-Jyun DONG², Yves GUGLIELMI³

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Relationship Between Frictional Heating and Water Adsorption in Simulated Fault Gouge Sheared at Elevated Slip Rates

Kazuo MIZOGUCHI^{1±+}, Takehiro HIROSE²
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Source Fault Estimate of the 1586 Tensho Earthquake Based on Liquefaction

Norika YAMAMURA^{1‡+}, Yasuyuki KANO¹
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SE09-D4-PM1-P-007 | SE09-A002

A Preliminary Study on the Soft-Sediment Deformation Structures in the Late Quaternary Lacustrine Sediments at Tashkorgan, Northeastern Pamir, China

Lianji LIANG¹⁺, Fuchu DAI^{1‡}, Hanchao JANG², Ning ZHONG² ¹Beijing University of Technology, ²Chinese Academy of Sciences

SE09-D4-PM1-P-008 | SE09-A004

Seismicity Rate Change in Japan Following the 2011

Tohoku-Oki Earthquake

Takeo ISHIBE^{1*+}, Masatoshi MIYAZAWA², Yosihiko OGATA³, Hiroshi TSURUOKA⁴, Kenji SATAKE⁴

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The Potential of Thermoluminescence Techniques in Dating

Fault Slickenside Formations

Maria KAZANTZAKI¹⁸⁺, Evangelos TSAKALOS², Eleni FILIPPAKI¹, Yannis BASSIAKOS¹

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SE10-D4-PM1-P-013 | SE10-A012

High-Pressure X-Ray Studies of Scottyite

Pei-Lun LEE^{1‡+}, Yongjae LEE², Eugene HUANG³, Hexiong YANG⁴

¹National Chiayi University, ²Yonsei University, ³Center for High Pressure Science & Technology Advanced Research, ⁴University of Arizona

SE10-D4-PM1-P-014 | SE10-A014

Seismic Wavefield Properties in Cracked Solids in the

Lowermost Mantle

Kenji KAWAI^{1#+}

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SE11-13-D4-PM1-P-014 | SE11-13-A003

Frictional Properties of Accretionary Sediments/Rocks and Their Implications for The Shallow Transition of Aseismic to Seismic Faulting at the Nankai Trough Subduction Zone Kyuichi KANAGAWA¹⁸⁺, Kosuke ABE¹, Michiyo SAWAI¹

Chiba University

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Structural Characteristics of the Subducting Kyushu-Palau Ridge Around the Hyuga-Nada Region in Nankai Trough

Revealed by Seismic Reflection Imaging

Mikiya YAMASHITA^{1*+}, Ayako NAKANISHI¹, Ryuta ARAI¹, Gregory MOORE², Shuichi KODAIRA¹, Seiichi MIURA¹, Hannah TILLEY³, Yoshiyuki KANEDA⁴
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SE11-13-D4-PM1-P-016 | SE11-13-A013

Failed Rifts in the South China Sea Basins and Their Implications on the Breakup of Continental Margin Ya Qing LI¹⁵⁺, Chun-Feng LI¹ ¹Zhejiang University

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Spatiotemporal Pattern of Seismicity and Seismotectonics of the Jiangsu Province and Southern Yellow Sea, East China Shaowen LIU^{1‡+}, Xudong LI¹, Liangshu WANG¹ ¹Nanjing University

SE11-13-D4-PM1-P-018 | SE11-13-A016

Searching for the Low-Velocity Structures in the

Northwestern Margin of the South China Sea Using

Teleseismic Recordings of the OBS Array

Haibo HUANG^{1*+}, Xuelin QIU¹, Hou XIONG²
¹Chinese Academy of Sciences, ²China Earthquake Administration

SE11-13-D4-PM1-P-019 | SE11-13-A018

P-Wave Velocity Structures of the Crust Across the Southern Taiwan Strait Analyzed by Data from Ocean-Bottom Seismometers

Jing WANG¹**, Tan K. WANG¹, Yu Hsuan CHENG¹, Yi Feng ZHANG², Zhi Zhao XIE²

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SE11-13-D4-PM1-P-020 | SE11-13-A022

Seafloor Displacement After the 2011 Tohoku-Oki

Earthquake in the Northern Japan Trench, Revisited

Toshiya FUJIWARA^{1#}, Toshiya KANAMATSU¹, Shuichi KODAIRA¹, Akihiko MURATA¹, Kazuho YOSHIDA², Ryo KIMURA²

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SE11-13-D4-PM1-P-021 | SE11-13-A023

New Insights into the Morphology and Origin of Seafloor Undulations in the Eastern Area of Shenhu Submarine Canyon System, Northern South China Sea

Ming SU^{1#+}

¹Sun Yat-sen University

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Pop-Up Structures Below Forearc Basins North of the Ryukyu Trench Imaged from OBS/MCS Data Off Northeast Taiwan

Jia-Ming DENG^1#+, Wan Ting HU2, Tan K. WANG2, Louis S. TENG3

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SE12-17-D4-PM1-P-009 | SE12-17-A003

Seismotectonics of the 2017 Ms7.0 Jiuzhaigou Earthquake Wen YANG^{1,2‡+}, Jia CHENG², Xuemei ZHANG¹, Yanyan HAN¹ ¹China Earthquake Networks Center, ²China Earthquake Administration SE12-17-D4-PM1-P-010 | SE12-17-A005

Origin of the Ca. 50 Ma Linzizong Shoshonitic Volcanic

Rocks in the Eastern Gangdese Arc, Southern Tibet

Anlin LIU^{1#+}, Qing WANG¹, Di-Cheng ZHU¹
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SE12-17-D4-PM1-P-011 | SE12-17-A006

Survival of the Lhasa Terrane During its Collision with Asia

Due to Crust-Mantle Coupling Revealed by Ca. 114 Ma

Intrusive Rocks in Western Tibet

Qing WANG^{1‡+}, Di-Cheng ZHU¹, Peter A. CAWOOD²
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SE12-17-D4-PM1-P-012 | SE12-17-A008

Early Carboniferous Intra-Oceanic Arc in Qiangtang, Tibet: Implications for Felsic Magma Generation and Oceanic Arc Accretion

Wei DAN^{1#+}, Qiang WANG¹, Gong-Jian TANG¹, Xiu-Zheng ZHANG²

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SE12-17-D4-PM1-P-013 | SE12-17-A015

Generation of Syn-Collision S-Type Granite in Ancient

Orogens: A Case Study from the Middle Triassic Tanggula

Batholith in Northern Tibet

Shaowei SONG¹⁺, Di-Cheng ZHU^{1‡}, Qing WANG¹, Shi-Min LI¹, Peter A. CAWOOD², Zhidan ZHAO¹

¹China University of Geosciences, ²Monash University

SE12-17-D4-PM1-P-014 | SE12-17-A017

Evolution of Late-Stage Magmatism in the Comei Large

Igneous Province, Southeast Tibet

Ying XIA¹⁺, Di-Cheng ZHU^{1‡}, Qing WANG¹, Richard ERNST²
¹China University of Geosciences, ²Carleton University

SE12-17-D4-PM1-P-015 | SE12-17-A018

Coupling and Decoupling Hf-Nd Isotopic Compositions

Documented by the Menglian Batholith in the Tengchong

Terrane, Sw Yunnan: Implications for the Generation of

Giant Granitic Batholiths in Collision Zones

Jincheng XIE¹⁺, Di-Cheng ZHU^{1‡}, Qing WANG¹
¹China University of Geosciences

SE12-17-D4-PM1-P-016 | SE12-17-A019

Along-Arc Geochemical Variations in Quaternary

Magmatism from Sumatra: Implications for Tectonic and

Magmatic Evolution of the Western Sunda Arc

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Petrology and Geochemistry of Ferrosyenite from

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Miroslav BIELIK^{1‡+}, Barbora ŠIMONOVÁ¹, Jana DÉREROVÁ² ¹Comenius University, ²Slovak Academy of Sciences

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The Isotopic Characteristics of Tethyan and Paleo-Asian

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Yi-Jin TSAI^{1#+}, Hsin-Fu YEH¹
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Ching-Yu CHENG¹+, Hao KUO-CHEN¹+, Zhuo-Kang GUAN¹, Hsuan-Yu KUO¹, Wei-Fang SUN²

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Makoto OKUBO^{1*+}, Yusaku OHTA², Satoshi ITABA³
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Metamorphic P–T Evolution and U–Pb Dating of the

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Crustal and Uppermost Mantle Structure of the Alpine

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Liang ZHAO¹*, Huaiyu YUAN², Anne PAUL³, Yang LU³, Thomas BODIN⁴

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The Metamorphic History of the Paleoproterozoic Salma

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Finite-Frequency P Wave Tomography of the Upper Mantle

Beneath Capricorn Orogen and Adjacent Areas

Xiaobing XU^{1#+}, Liang ZHAO¹, Huaiyu YUAN², Simon JOHNSON³, Mike DENTITH⁴, Ruth Elaine MURDIE³, Klaus GESSNER³, Fawna KORHONEN³, Perla VARAS⁴

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Crustal Velocity Structure of the Paloproterozoic Capricorn

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Transdimensional Inversion of Ambient Noise Dispersion and Receiver Functions - Application to East China

Tingzi LI1**, Kun WANG², Xiaobing XU¹, Liang ZHAO¹, Huaiyu YUAN³, Thomas BODIN⁴

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SE20-D4-PM1-P-020 | SE20-A003

In-Situ Oxygen and Sulfur Isotopes of the Katbasu Gold Deposit from South Tianshan, Northwest China:

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Leilei DONG¹⁺, Bo WAN^{1‡}, Chen DENG¹, Jilei LI¹, Keda CAI²
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The Thermal Evolution and its Implications of Chinese Tianshan: Insights from (U-Th)/He Thermochronometry

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Differential Structural Evolution and Petroleum
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Xiaoming CHEN^{1#+}, Xiaozhi WU²
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The Relationship Between the Hydrocarbon and the Evolution Characteristic of the Pre-Jurassic Structure in Tuha Basin

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Distinctive Pb Isotopic Mantle Evolution Beneath the

Tethyan Tectonic Domain and Central Asian Orogenic Belt

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SE21-D4-PM1-P-014 | SE21-A001

Surface Creep and Slip-Behavior Segmentation Along the Northwestern Xianshuihe Fault Zone of Southwestern China Determined from Decades of Fault-Crossing Short-Baseline and Short-Level Surveys

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Source Fault and Slip Distribution of the 2017 Mw 6.5

Jiuzhaigou, China, Earthquake and its Tectonic Implications

Yingfeng ZHANG¹, Guohong ZHANG¹*, Eric HETLAND², Xinjian SHAN¹, Huiping ZHANG¹, Dezheng ZHAO¹, Wenyu GONG¹, Chunyan QU¹

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SE21-D4-PM1-P-017 | SE21-A012

Post-Seismic Deformation Mechanism of the Mw 9.0 Tohoku-Oki Earthquake Detected by GPS and GRACE Observations

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Administration, ²Guangdong Earthquake Agency, ³China
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Vertical Deformation Analysis in Tibetan Plateau by Using GRACE and GNSS Data

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A New Method of Terrace Analysis to Determine Precise

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Coseismic Deformation Fields and Fault Slip Models for the

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Chunyan QU $^{\mbox{\tiny I}\sharp *}$, Xinjian SHAN $^{\mbox{\tiny I}}$, Guohong ZHANG $^{\mbox{\tiny I}}$, Xiaogang SONG $^{\mbox{\tiny I}}$

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Fault Model of the 2017 Jiuzhaigou Mw6.5 Earthquake
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Neotectonic Crustal Deformation and Current Stress Field in the Korean Peninsula and Their Tectonic Implication : A Review

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Toward a Near Real-Time Emergency Response Using Dense

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Peih-Lin LEU^{1#}, Dayi CHEN¹, Nai-Chi HSIAO¹, Tzay-Chyn SHIN¹, I-Ming TAI¹, Chi-Ting WENG¹, Mei-Yi HO¹
¹Central Weather Bureau

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Probability on Seismic Hazard Assessment of Taiwan:

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Kuo-Fong MA^{1#}, Ya-Ting LEE¹, Shao-Kai WU¹⁺
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Takashi IIDAKA¹**, Toshihiro IGARASHI¹, Kazushige OBARA¹, Aitaro KATO¹, Shin'ichi SAKAI¹, Tetsuya TAKEDA² ¹The University of Tokyo, ²National Research Institute for Earth Science and Disaster Prevention

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Strong Motion Database and GMPE in Sumatra

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Neotectonics of the Bogo Fault in Cebu, Philippines:

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Preliminary Results of Stress Drop for Oceanic Crust and

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Composite Megathrust Rupture from Deep Interplate to

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SE22-35-D4-PM1-P-051 | SE22-35-A057

Lateral Variations in Anisotropy Along the 2004 Niigata

Earthquake Source Fault Inferred from Local Shear Wave Splitting

Lingmin CAO¹⁵+, Honn KAO², Kelin WANG³, Chuanxu CHEN¹, Jim MORI⁴, Shiro OHMI⁴, Yuan GAO⁵

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A Study on Site Effects in the Kathmandu Valley Nepal for

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Liquefaction Damage of the 2016 Kumamoto Earthquake

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Ocean Bottom Electro-Magnetometer (OBEM) Development

and Calibration in Taiwan

Ching-Ren LIN¹; Chih-Wen CHIANG², Ban-Yuan KUO¹, Yu-Hung HSIAO³, Chau-Chang WANG⁴, Jia-Pu JANG³, Hsu-Kuang CHANG³, Feng-Sheng LIN¹, Kun-Hui CHANG¹, Kuei-Yi HUANG²

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New Equipment of Onshore and Offshore Magnetotelluric Systems in Taiwan

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Using Magnetotelluric Method in Changhua Coastal

Industrial Park, Taiwan

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Magnetotelluric Imaging Beneath the Gongga Mountain and

Vicinity Around Southeastern Tibetan Plateau

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SE23-D4-PM1-P-014 | SE23-A014

Lithosphere-Scale Suture Between the Yangtze and

Cathaysia Blocks in South China: Constrained from the 3-D

Magnetotelluric Array Data

Sheng JIN^{1,+}, Yaotian YIN¹, Wenbo WEI¹, Gaofeng YE¹, Letian ZHANG¹, Hongda LIANG¹, Hao DONG¹

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SE23-D4-PM1-P-015 | SE23-A017

Noise Reduction of MT Data with Multi-Channel Singular

Spectral Analysis (MSSA)

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SE23-D4-PM1-P-016 | SE23-A019

Blind Source Separation of ULF Electromagnetic Signals by

Using Independent Component Analysis

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SE23-D4-PM1-P-017 | SE23-A021

Three-Dimensional Electrical Conductivity Images of Old

Oceanic Mantle in the Northwestern Pacific

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University of Tokyo

SE23-D4-PM1-P-018 | SE23-A022

An Observation-Based Analysis of High-Resolution

Geomagnetic Field Data Using HTS-SQUID Magnetometer

Yuto OISHI^{1‡+}, Yuta KATORI¹, Tsunehiro HATO², Akira TSUKAMOTO², Keiichi TANABE², Shinji ISOGAMI³, Chikara FURUKAWA⁴, Nobuhito ONISHI⁴, Kan OKUBO¹

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SE23-D4-PM1-P-019 | SE23-A023

Three-Dimensional Resistivity Modeling Incorporating

Topography for Appropriate Mesh Designs in Land and

Marine Magnetotelluric Inversions

Hiroshi ICHIHARA^{1±+}, Noriko TADA², Toru MOGI³
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SE24-29-D4-PM1-P-017 | SE24-29-A001

The Potential Geological Disaster in Tengchong Volcanic Field, SW China

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SE24-29-D4-PM1-P-018 | SE24-29-A005

Spatiotemporal Variations of Geochemical Characteristics of

Volcanic Rocks from Aso Volcano, SW Japan-Different

Magma Systems Within a Caldera

Taro SHINMURA^{1#+}, Yoji ARAKAWA²

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SE24-29-D4-PM1-P-019 | SE24-29-A006

Degassing System of the Rhyolite Lava Using Fracture

Networks Formed by the Lava Fracturing

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SE24-29-D4-PM1-P-020 | SE24-29-A010

Magnetic Petrological Record of Magma Mixing for the

Tenmei Eruption of Asama - Maekake Volcano, Japan

Tatsuo KANAMARU¹#+, Kuniyuki FURUKAWA²

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SE24-29-D4-PM1-P-021 | SE24-29-A013 (Invited)

Hot Spring Water and Volcanic Gases to Evaluate the

Volcanic Activity of the Mt. Baekdu, Korea

Sung-Hyo YUN1,2#+, Cheolwoo CHANG1

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SE24-29-D4-PM1-P-022 | SE24-29-A014

Prediction of Lahar Flow Inundation Areas Using Laharz_py

Program: Application for the Mt. Baekdu Volcano, Korea

Sung-Hyo YUN1,2#+, Cheolwoo CHANG1

¹Pusan National University, ²The Jeju Volcanological Institute

SE24-29-D4-PM1-P-023 | SE24-29-A015

Petrogenesis and Crystallisation Conditions of the

Intracrateric Dome of Cerro Bravo Volcano, Colombia

Camilo PINZÓN¹, Felipe ECHEVERRY¹, Dayana SCHONWALDER², Hugo MURCIA¹♯+

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SE24-29-D4-PM1-P-024 | SE24-29-A016

Magnetic Petrological Characteristics of Eruptive Products from Phreatic Eruptions, Ontake and Yakedake Volcanoes,

Japan

Takeshi SAITO^{1#+}, Daichi TAKIGUCHI¹, Kyoko S KATAOKA² ¹Shinshu University, ²Niigata University

SE24-29-D4-PM1-P-025 | SE24-29-A018

Continuous Monitoring of Diffuse CO2 Degassing for the

Volcanic Surveillance of Taal Volcano, Philippines

Nemesio PEREZ^{1‡+}, Padron ELEAZAR^{2,3}, German PADILLA², Cecilia AMONTE³, Pedro HERNANDEZ^{2,3}, Gladys MELIAN^{2,3}, José BARRANCOS³, Carlo ARCILLA⁴, Alfredo Mahar LAGMAY^{4,5}, Fátima RODRÍGUEZ³, Mar ALONSO³, Criselda CRISELDA⁴, Gerald QUINA⁴, Mario AURELIO⁶

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SE24-29-D4-PM1-P-026 | SE24-29-A023

Geochemistry and Petrogenesis of Andesitic Dikes in Gasgas

and Pinas River, Solsona, Ilocos Norte, Philippines

Hazards (UP-NOAH), 6University of the Philippines

Timothy Glenn IRINGAN $^{1\sharp*}$, Denise Faye JANER 1 , Jacquelyn DE ASIS 1 , James Cesar REFRAN 1 , Cris Reven GIBAGA 2 , Carlo ARCILLA 1

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SE24-29-D4-PM1-P-027 | SE24-29-A029

Dynamic Changes in Resistivity Image and its Potential

Applications to Volcanic and Earthquake Monitoring

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SE24-29-D4-PM1-P-028 | SE24-29-A030

Initial Phase of Vulcanian Eruption at Showa Crater, Sakurajima Volcano, Japan: Insight from the Visual Movie

Dan MURAMATSU^{1‡+}, Koki AIZAWA¹, Akihiko YOKOO², Masato IGUCHI², Takeshi TAMEGURI²
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SE24-29-D4-PM1-P-029 | SE24-29-A033

Structure of the Northeast Hainan Volcano System: Insights

from Magnetotelluric Imaging

and Infrasound Data

Xiangyu SUN¹+, Yan ZHAN¹ 1 , Guoze ZHAO¹, Zhao LINGQIANG¹, Xiang XIAOJUAN², Hu YAXUAN¹, Hu JIUCHANG²

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SE24-29-D4-PM1-P-030 | SE24-29-A038

Calibration of a Geobarometer for Rhyolitic Systems Based on the Composition of Cotectic Melts

Sören WILKE¹, Filippo RIDOLFI¹+, Renat ALMEEV¹, Francois HOLTZ¹*, David A. NEAVE¹

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SE24-29-D4-PM1-P-031 | SE24-29-A040

Monitoring of Volcanic Activity by Sub-mm Geodetic

Analyses

Satoshi MIURA^{1#}, Mare YAMAMOTO¹, Masahiro ICHIKI¹, Tomotsugu DEMACHI¹, Kenji TACHIBANA¹ ¹*Tohoku University*

SE24-29-D4-PM1-P-032 | SE24-29-A041

Distal Volcano-Tectonic Seismicity Around Agung Volcano, Bali, Indonesia, in September-October 2017 from BMKG

Local Network: Preliminary Results

Andri Dian NUGRAHA^{1*+}, Sri WIDIYANTORO¹, Nanang T PUSPITO¹, Ridwan KUSNANDAR², Pepen SUPENDI²
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SE24-29-D4-PM1-P-033 | SE24-29-A042

Qp and Qs Structure Around Merapi Volcano, Central Java,

Indonesia from Domerapi Project: Preliminary Results

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SE24-29-D4-PM1-P-034 | SE24-29-A044

Preliminary Result of Seismic Velocity and Attenuation Structure Around Krakatau Volcano, Indonesia Using

BMKG Regional Network

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SE25-40-D4-PM1-P-019 | SE25-40-A001

Paleomagnetic Studies of the Metallogenic Age of the Mesothermal Gold Deposits Along the Ailaoshan-Red River

Shear Zone, Southeastern Edge of the Tibetan Plateau

Liang GAO¹⁺, Qingfei WANG^{1‡}, Jun DENG¹, Shihong ZHANG¹, Zhenyu YANG²

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SE25-40-D4-PM1-P-020 | SE25-40-A003

Lithospheric Extrusion and Slab Subduction Beneath the Indochina Peninsula

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SE25-40-D4-PM1-P-021 | SE25-40-A005

The Metamorphism and its Tectonic Implications of Pelitic Granulites in the Badu Complex of Southwestern Zhejiang, South China

Zheng CHANGQING^{1#+}, Xuechun XU¹ ¹Jilin University

SE25-40-D4-PM1-P-022 | SE25-40-A006

Paleomagnetic Results from the Paleocene Redbeds in the Northern Tethyan Himalaya: Insights into the Neotethyan

Paleogeography and the India-Asia Collision

Tianshui YANG^{1‡+}, Jingjie JING¹, Weiwei BIAN¹, Yiming MA², Feng GAO¹, Wenxiao PENG¹, Jikai DING¹, Shihong ZHANG¹, Huaichun WU¹, Haiyan LI¹, Zhenyu YANG³

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SE25-40-D4-PM1-P-023 | SE25-40-A008

Middle Miocene Clockwise Tectonic Rotation of SE Vietnam

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SE25-40-D4-PM1-P-024 | SE25-40-A011

Present-Day 3D Crustal Movements of Tibet from GNSS

Measurements

Shaomin YANG1#+

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SE25-40-D4-PM1-P-025 | SE25-40-A013

Formation Mechanism and Gas Accumulation at High Steep

Structural Zones in Eastern Sichuan Basin

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SE25-40-D4-PM1-P-026 | SE25-40-A015

Collision Tectonics of the Luk Ulo Melange Complex,

Central Java, Indonesia: A Hint of Cenozoic Collision of the SE Asia Margin

Agus Handoyo HARSOLUMAKSO¹º+, Alfend RUDYAWAN¹, Sony KARTANEGARA¹, Muhammad Edo MARSHAL¹, Eko PUSWANTO²

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SE25-40-D4-PM1-P-027 | SE25-40-A024

Formation Mechanism of Deepwater and Ultra-Deepwater Basins in the Northern Continental Margin of the South China Sea

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SE25-40-D4-PM1-P-028 | SE25-40-A027

Petrographic and Geochemical Characterization of the Sandstones of Caramoan Peninsula, Camarines Sur,

Philippines: Insights to the Provenance and Tectonic Setting

Dainty Clarice RABANG¹⁵⁺, Ruth Esther DELINA¹, Jeremy James JIMENEZ¹

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SE25-40-D4-PM1-P-029 | SE25-40-A028

The Tectonic Origin of Serpentinites from Ilocos Norte,

Philippines and its Geodynamic Implications

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SE25-40-D4-PM1-P-030 | SE25-40-A029

Petrology and Geochemical Analysis of Bangui Volcanics and Bojeador Volcanics of Ilocos Norte, Philippines

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Petrology and Geochemistry of Volcanic Section of the Palawan Ophiolite: Implication to the Geodynamic History of Palawan Island, Philippines

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SE25-40-D4-PM1-P-032 | SE25-40-A031

Young Volcanism in Cuyo Islands, Palawan, Philippines:

Example of an Intra-Plate Magmatism in the Palawan

Continental Block

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SE25-40-D4-PM1-P-033 | SE25-40-A037

P-Wave Velocity Mantle Structure Beneath Indochina Block: Implications for the Collision Between Indochina and South China Blocks

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SE25-40-D4-PM1-P-034 | SE25-40-A041

Neo-Tethyan Subduction-Triggered Crustal Weakening in

Yunnan Province

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SE25-40-D4-PM1-P-035 | SE25-40-A047

Generalized H- κ Method by Harmonic Corrections on Ps and Crustal Multiples in Receiver Functions

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University, ⁵Saint Louis University, ⁶China University of
Geosciences

SE26-D4-PM1-P-010 | SE26-A002

Climatically-Driven Formation of the Tangxian Planation

Surface in North China: An Example from Northwestern

Zhongtiao Shan of the Shanxi Graben System

Jianguo XIONG¹⁵⁺, Youli LI², Wenjun ZHENG¹, Zhang PEI-ZHEN³, Yuezhi ZHONG⁴, Zhigang LI¹, Zheng GONG¹, Tao LI¹

¹Sun Yat-sen University, ²Peking University, ³China Earthquake Administration, ⁴ETH Zurich

SE26-D4-PM1-P-011 | SE26-A006

Paleo-Earthquake Study on the Pingdingshan- Annanba Segment of the Altyn Tagh Fault Based on Remotely-Sensed Offset Clusters

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SE26-D4-PM1-P-012 | SE26-A007

Uplift and Denudation in Continental Area of China Linked to Climatic Effects: Evidence from Apatite and Zircon Fission Track Data

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SE26-D4-PM1-P-013 | SE26-A011

The Late-Pleistocene Activity of the Southern Margin Fault of the Yuxian-Guangling Basin in the Basin and Range Rifting Area, North China

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SE26-D4-PM1-P-014 | SE26-A012

Assessing the Ability of Pleiades Stereo Imagery to

Determine Height Changes in Earthquakes

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SE26-D4-PM1-P-015 | SE26-A018

Textual Research of 1568 M7 Gaoling Earthquake in Shaanxi and Analysis of its Seismogenic Structure

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SE27-D4-PM1-P-011 | SE27-A002

Long-Lasting Effect of Large Earthquake on Interval

Modulation of Adjacent Slow Slip Event

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SE27-D4-PM1-P-012 | SE27-A003

Quantitative Relationship Between Slow Slip Propagation

Speed and Frictional Properties

Keisuke ARIYOSHI $^{1\pm}$, Roland BURGMANN 2 , Jean-Paul AMPUERO 3 , Toru MATSUZAWA 4 , Akira HASEGAWA 4 , Ryota HINO 4 , Takane HORI 1

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SE27-D4-PM1-P-013 | SE27-A009

Activity of Shallow Tremor in the Hyuga-Nada Region After

the 2016 Kumamoto Earthquake by Ocean Bottom

Seismological Observation

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SE27-D4-PM1-P-014 | SE27-A010

Temporal Change in the Interplate Locking State at Southwestern Japan Inferred from the Analyses of Spatial Gradients of the Surface Displacement Rate Field

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SE27-D4-PM1-P-015 | SE27-A012

Contrasting Patterns of Fluid Flow Along the Base of the Mantle Wedge from 30–20 km Depths: Examples from the Sanbagawa Belt, Japan

Mari YOKOTA^{1#+}, Simon WALLIS², Yui KOUKETSU¹ ¹Nagoya University, ²The University of Tokyo

SE27-D4-PM1-P-016 | SE27-A016

Spatio-Temporal Evolution of Long-Term and Short-Term Slow Slip Events in the Tokai Region, Central Japan Estimated from a Very Dense GNSS Network, During 1996-2016

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SE27-D4-PM1-P-017 | SE27-A017

Seismic Moments of Small Earthquakes Recorded by the Hi-Net: A Case Study in the Tanzawa Region, Central Japan

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SE27-D4-PM1-P-018 | SE27-A020

Spatiotemporal Variation of Shallow Low-Frequency Tremor and Very-Low-Frequency Earthquake Activity in the Western

Part of Nankai Trough Revealed by Long-Term Ocean

Bottom Seismological Observation

Yusuke YAMASHITA¹;*, Masanao SHINOHARA², Tomoaki YAMADA², Saki WATANABE³, Kazuo NAKAHIGASHI⁴, Hajime SHIOBARA², Kimihiro MOCHIZUKI², Takuto MAEDA², Kazushige OBARA²

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SE27-D4-PM1-P-019 | SE27-A023

Study on the Gravity Variation Before Typical Strong

Earthquakes and its Seismogenic Model

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SE27-D4-PM1-P-020 | SE27-A024

Strength of Tremor Patches Along Deep Transition Zone of a

Megathrust

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SE28-D4-PM1-P-001 | SE28-A002

Spatiotemporal Relationship of Background and Triggered

Earthquake

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SE28-D4-PM1-P-002 | SE28-A005

Detrital Zircon U-Pb Ages of the Iljik, Jeomgok and Sagok

Formations, Cheongsong Global Geopark, Korea

Yong-Un CHAE¹⁺, Taejin CHOI², In Sung PAIK³, Jong-Sun KIM¹, Hyun Joo KIM³, Seungwon SHIN¹, Hyoun Soo LIM^{1‡}
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National University

SE28-D4-PM1-P-003 | SE28-A010

Measurement of Seismometer Orientation Using the

Tangential P-Wave Receiver Function Based on Harmonic

Decomposition

Hobin LIM $^{1\pm}$, Young-Hee KIM 1 , Teh-Ru Alex SONG 2 , Xuzhang SHEN 3

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SE28-D4-PM1-P-004 | SE28-A011

Age Constraints of Giant Pterosaur Track (Haenamichnus)

Sites in Korea

Sujin HA¹, Cheong-Bin KIM², Kyung Soo KIM³, Yong-Un CHAE¹, Dal-Yong KONG⁴, Tae Hyeong KIM⁴, Hyoun Soo LIM^{1‡+}

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SE28-D4-PM1-P-005 | SE28-A012

Experiments of Geopotential Difference Determination

Between Two Stations Based on Two-Way Satellite Time and

Frequency Transfer

Wen-Bin SHEN $^{1*+}$, Xiao SUN 1 , Kuangchao WU 1 , Ziyu SHEN 1 Wuhan University

SE28-D4-PM1-P-006 | SE28-A013

Geopotential Determination Based Upon the Satellite

Frequency Signal Transmission via the China Space Station

Mission

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SE28-D4-PM1-P-007 | SE28-A018

Submarine Terrace in Dokdo; Evidence of the Sea Level

Change of the East Sea in the Quaternary

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SE28-D4-PM1-P-008 | SE28-A021

Determination of a Local Magnitude Scale Using Earthquake

Data Recorded by the Borehole Seismic Network in Taiwan

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SE28-D4-PM1-P-009 | SE28-A022

Reconstruction of Seismic Wavefields from Ununiformly

Distributed Seismic Stations Based on Compressive Sensing

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SE28-D4-PM1-P-010 | SE28-A024

Rapid Earthquake Detection Through GPU-Based Template Matching

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SE28-D4-PM1-P-011 | SE28-A027

Estimation of Slip History in the Episodic Slow Slip Area

from Small Repeating Sequences and Their Surrounding

Seismic Activities

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SE28-D4-PM1-P-012 | SE28-A029

Spatio-Temporal EOF Analysis of Common-Mode Error on

the Dense, Continuous GPS Data of Taiwan

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SE28-D4-PM1-P-013 | SE28-A031

On the Origination of Double-Frequency Microseisms

Recorded in East Coast of United States: Role and

Significance of the Continental Slope

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Administration

SE28-D4-PM1-P-014 | SE28-A032

The Seismic Source Characteristics in the Alaska Subduction

Zone

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SE28-D4-PM1-P-015 | SE28-A039

Determination of Regional Mean Sea Surface Around

Taiwan Using Satellite Altimetry and Tide Gauge Data

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SE28-D4-PM1-P-016 | SE28-A049

Co- and Postseismic Changes in Inland Seismicity and its Relationship with Transient Stress by the 2011 Tohoku-Oki

Earth quake

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SE28-D4-PM1-P-017 | SE28-A055

Lithospheric Structure of West Antarctic Rift Zone

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SE28-D4-PM1-P-018 | SE28-A059

Horizon, a New Portable Observatory Grade Broadband

Seismometer for Use in Direct Bury and Vault Applications

Tim PARKER^{1#}, Geoffrey BAINBRIDGE¹, Stephen KILTY¹⁺, Jiandong WANG¹, Andrew MOORES¹

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SE28-D4-PM1-P-019 | SE28-A061

Evaluation on Field Application of Cavity Filling Method

Using Expansive Material for Prevent Ground Subsidence

Dae-Young LEE^{1‡+}, Dong-Min KIM¹, Young-Seon YOO²
¹Korea Institute of Civil Engineering and Building Technology,

 $^2 Chemius\ Korea\ Ltd.$

SE28-D4-PM1-P-020 | SE28-A062

Crustal Structure and Interrelationship of Aseismic Laxmi

and Laccadive Ridges in the Eastern Arabian Sea

Akhil MISHRA1#+, A.K. CHAUBEY1

¹National Institute of Oceanography

SE28-D4-PM1-P-021 | SE28-A065

Integrating the Generic Mapping Tools with the Scientific

Python Ecosystem

Leonardo UIEDA1#+, Paul WESSEL1

¹University of Hawaii at Manoa

SE31-07-D4-PM1-P-028 | SE31-07-A009

Recent Activity of Jinsha River Fault Zone in Eastern

Qinghai-Tibetan Plateau and Relationship with

Development of Landslides and Debris Flows

Zufeng CHANG1#+

¹Yunnan Earthquake Agency

SE31-07-D4-PM1-P-029 | SE31-07-A010

Seismic Hazard Modeling of the Sichuan-Yunnan Region

Jia CHENG^{1#}, Yufang RONG², Harold MAGISTRALE², Guihua CHEN³, Xiwei XU³

¹China Earthquake Networks Center, ²FM Global, ³China Earthquake Administration

SE31-07-D4-PM1-P-030 | SE31-07-A014

Holocene Normal Faulting Rate Along the Dong Co Fault,

Central Tibet

Kang LI^{1#+}, Xiwei XU², Eric KIRBY³, Chen GUIHUA²
¹Institute of Geology, China Earthquake Administration, ²China Earthquake Administration, ³Oregon State University

SE31-07-D4-PM1-P-031 | SE31-07-A017

Paleo-Earthquake Analysis from the Morphologic Features of

Unconsolidated-Sediment Fault Scarp: An Example from

Dushanzi Thrust Fault in the Northern Tianshan, China

Zhanyu WEI1#+

¹China Earthquake Administration

SE31-07-D4-PM1-P-032 | SE31-07-A026

3D FEM Simulation of Geodynamical Mechanism of

Present-Day Lithosphere Deformation of the

Sichuan-Yunnan Region

Yu ZHOU1#+

¹Institute of Seismology, Wuhan, China Earthquake Administration

SE31-07-D4-PM1-P-033 | SE31-07-A031

Miocene Denudation History of Himalaya Deduced from IODP Exp. 354 Bengal Fan

Kohki YOSHIDA^{1‡+}, Jarrett CRUZ², Ai OSAKI¹, M.C. MANOJ³, Nozomi HATANO¹, Christian FRANCE-LANORD⁴
¹Shinshu University, ²Florida State University, ³National Centre for Antarctic and Ocean Research, ⁴Université de Lorraine

SE32-D4-PM1-P-009 | SE32-A001

Onset of Subduction of the Paleo-Pacific Plate Beneath the

Eurasia: Evidence from Mesozoic Igneous Rocks and

Accretionary Complexes in NE Asia

Wenliang XU^{1‡+}, Feng WANG¹, Jie TANG¹, Fuping PEI¹ ¹Jilin University

SE32-D4-PM1-P-010 | SE32-A003

Early Mesozoic Southward Subduction History of the Mongol-Okhotsk Oceanic Plate: Evidence from Early Mesozoic Igneous Rocks in the Erguna Massif, NE China Jie TANG¹⁵⁺, Wenliang XU¹

¹Jilin University

SE32-D4-PM1-P-011 | SE32-A004

Asymmetric Distribution of Seamounts in the Oceanic Basin of the South China Sea: A New Seamount Extraction Method Based on the Top Hat Transform

Yanghui ZHAO¹*+, Weiwei DING¹, Shaoru YIN¹ State Oceanic Administration

SE32-D4-PM1-P-012 | SE32-A005

Heterogeneous Strain Regime Around the Ogasawara

Plateau

Wei GONG¹, Xiaodian JIANG^{1‡+}
¹Ocean University of China</sup>

SE32-D4-PM1-P-013 | SE32-A007

Thinned Continental Crust Intruded by Volcanic Ridges at the Northeastern South China Sea Imaged by a Wide-Angle Refraction Data and its Extension into the Unfolded Manila Slab

Minghui ZHAO¹**, Siqing LIU¹, Jean-Claude SIBUET², Xuelin QIU¹, Jonny WU³, Chuanxu CHEN¹, Lingmin CAO¹ ¹Chinese Academy of Sciences, ²Ifremer Centre de Brest, ³University of Houston

SE32-D4-PM1-P-014 | SE32-A008

The Structural Characteristics of Oceanic Plate in the Central Pacific Revealed by Multi-Channel Seismic Reflection

Survey

Mikiya YAMASHITA^{1‡+}, Kyaw MOE¹, Kiyoshi SUYEHIRO¹, Shuichi KODAIRA¹, Akane OHIRA¹, Seiichi MIURA¹, Nipaporn NAKRONG², Gregory MOORE²

¹Japan Agency for Marine-Earth Science and Technology,

²University of Hawaii at Manoa

SE32-D4-PM1-P-015 | SE32-A012

Can Robotic Seafloor Geodesy Help Crack the Mysterious

Slow Quakes at the Guerrero Seismic Gap?

Sharadha SATHIAKUMAR¹^{‡+}, Dongju PENG¹, Vala HJÖRLEIFSDÓTTIR², Victor CRUZ², Yoshihiro ITO³, Masanao SHINOHARA⁴, Sylvain BARBOT¹

¹Nanyang Technological University, ²Universidad Nacional Autónoma de México, ³Kyoto University, ⁴The University of Tokyo

SE32-D4-PM1-P-016 | SE32-A013

Slab Seismicity, Metamorphism and Deformation Associated with a Transition from Oceanic to Continental Subduction in

Western Greece

Felix HALPAAP¹, Stéphane RONDENAY^{1‡+}, Lars OTTEMÖLLER¹ ¹University of Bergen

SE32-D4-PM1-P-017 | SE32-A017

Magnetic, Acoustic and Seismic Data Unveil the Tag

Segment Tectonic Evolution (26°N, Mid-Atlantic Ridge)

Florent SZITKAR^{1‡+}, Sven PETERSEN², Bramley MURTON³
¹Japan Agency for Marine-Earth Science and Technology,
²GEOMAR Helmholtz Centre for Ocean Research Kiel, ³National Oceanography Centre

SE32-D4-PM1-P-018 | SE32-A018

Linking Intermediate Depth Seismicity to Plate-Bending Related Faulting

Meghan MILLER¹⁵⁺, Iris VAN ZELST², Kevin KWONG³, Xinyue TONG⁴, Melody EIMER⁵, Yi HU⁶, Yuval BONEH⁷, Emily SCHOTTENFELS⁸, Louis MORESI⁹, Jessica WARREN¹⁰, Douglas WIENS⁵

¹Australian National University, ²ETH Zurich, ³Southern Methodist University, ⁴University of Texas at Austin, ⁵Washington University, ⁶University of Hawaii, ⁷Brown University, ⁸Boston University, ⁹The University of Melbourne, ¹⁰University of Delaware

SE32-D4-PM1-P-019 | SE32-A022

Prelithification Shear Deformation of Melange in the Upper

Cretaceous Shimanto Belt, Japan

Norito TAKESUE^{1#+}, Shigeyuki SUZUKI¹
¹Okayama University

SE36-D4-PM1-P-016 | SE36-A001

Evolution of Fault Slip Modes During Long-Term Fault

Shear Deformation

Alexey OSTAPCHUK $^{1\sharp +}$, Ella GORBUNOVA 2 , Victor NOVIKOV 2

¹Institute of Geosphere Dynamics of Russian Academy of Sciences,

²Russian Academy of Sciences

SE36-D4-PM1-P-017 | SE36-A002

Seismo-Acoustic Portrait of Different Fault Slip Events

Alexey OSTAPCHUK1#+, David GRIGORYAN2

¹Institute of Geosphere Dynamics of Russian Academy of Sciences,

²Moscow Institute of Physics and Technology

SE36-D4-PM1-P-018 | SE36-A012

Transient Deformation Following the 2016 Kumamoto

Earthquake: Towards Building a Rheological Model of

Kyushu

James Daniel Paul MOORE¹⁸⁺, Eric LINDSEY¹, Hang YU¹, Justin DAUWELS¹, Satoshi MATSUMOTO², Bunichiro SHIBAZAKI³

¹Nanyang Technological University, ²Kyushu University,

³International Institute of Seismology and Earthquake Engineering

SE36-D4-PM1-P-019 | SE36-A022

Mechanism of Subsidence on the Northeast Japan Fore-Arc

in Later Period of Gigantic Earthquake Cycle

Ryohei SASAJIMA $^{1+}$, Bunichiro SHIBAZAKI $^{1+}$, Hikaru IWAMORI 2 , Takuya NISHIMURA 3

¹International Institute of Seismology and Earthquake Engineering, ²Japan Agency for Marine-Earth Science and Technology, ³Kyoto University

SE36-D4-PM1-P-020 | SE36-A023

A Global Survey of Spreading Ridges: Gravitational

Admittance, Flexure and Convective Support

Elisabeth MULLER 1 , James Daniel Paul MOORE $^{2s+}$, Tony WATTS 1

¹University of Oxford, ²Nanyang Technological University

SE38-D4-PM1-P-015 | SE38-A005

Spatio-Temporal Mass Change Inverted from Space-Borne

Gravimetric Data Using a Dynamic Filtering Method

Xin ZHOU1#+

¹China Earthquake Administration

SE38-D4-PM1-P-016 | SE38-A018

Impact of Different Kinematic Empirical Parameters

Processing Strategies on Temporal Gravity Field Model

Determination

Hao ZHOU1#+, Zhicai LUO1

¹Huazhong University of Science and Technology

SE38-D4-PM1-P-017 | SE38-A019

The Causes of Land Water Storage Change and its

Contribution to Sea Level Variation in the Yangtze River

Basin

Nengfang CHAO¹**, Taoyong JIN², Zhicai LUO¹¹Huazhong University of Science and Technology, ²Wuhan University

SE38-D4-PM1-P-018 | SE38-A023

Using Kalman Filter to Separate the Geophysical Signals

from GRACE Gravity Data

Xiaolong WANG1#+, Zhicai LUO2

¹Wuhan University, ²Huazhong University of Science and Technology

SE41-33-D4-PM1-P-013 | SE41-33-A003

Abiotic Mn(II) Oxidation Processes Forming Various Mn

(Oxyhydr)Oxides

Seonyi NAMGUNG¹, Giehyeon LEE^{1#+}
¹Yonsei University

SE41-33-D4-PM1-P-014 | SE41-33-A006

Conversion of Fructose into 5-Hydroxymethylfurfural with

Carbonaceous Microspheres Used Geochemical Method

Xiaofeng LI $^{1\sharp *}$, Xiaoshu WEI 1 , Xiaomin XIE 1 , Yi WANG 1 , Yuqian FENG 1

¹China Agricultural University

SE41-33-D4-PM1-P-015 | SE41-33-A008

Geochemical and Hydrodynamic Controls on the

Mineralogical Assemblages Forming at Hyperalkaline Hot

Springs in Narra, Palawan, Philippines

Jhonard John GARCIA
12+, Carlo ARCILLA¹, Carlos Primo DAVID²

¹University of the Philippines Diliman, ²University of the Philippines

SE41-33-D4-PM1-P-016 | SE41-33-A009

Geochemical Analysis of the Zambales Nickel Laterite

Deposit, Philippines

Princess Sharlynne COSALAN $^{1\sharp +},$ Karmina AQUINO 1, Carlo ARCILLA 1

¹University of the Philippines Diliman

SE41-33-D4-PM1-P-017 | SE41-33-A011

Comparison Between Cement and Geopolymer Matrices as

Wasteform for Synthesized Titanate Adsorbed Strontium

Natatsawas SOONTHORNWIPHAT¹⁺, Tsutomu SATO^{1‡}, Tsubasa OTAKE¹, Hnin WINT WINT TWO¹, Kanako TODA¹, Yutaro KOBAYASHI¹, Kazuma KURODA¹

¹Hokkaido University

SE41-33-D4-PM1-P-018 | SE41-33-A012

Fate of Chromium in an Ultramafic Watershed: Insights from

Reaction Path Modelling

Ruth Esther DELINA^{1#+}, Carlo ARCILLA¹
¹University of the Philippines Diliman

SE41-33-D4-PM1-P-019 | SE41-33-A017

Mineralogical and Micro-Textural Characteristics of the

Middle Ordovician Carbonate Rocks in South Korea

Chaewon PARK¹+, Ha KIM¹, Changyun PARK¹, Yungoo SONG¹ \sharp

¹Yonsei University

SE41-33-D4-PM1-P-020 | SE41-33-A019

Bioleaching of Low Grade Tellurium Sulfide Mineral

Eunji MYUNG¹⁺, Hyunsoo KIM¹, Cheon-Young PARK^{1‡} ¹Chosun University

SE41-33-D4-PM1-P-021 | SE41-33-A021

Microwave Treatment for the Selective Removal of

Hazardous Elements in Lead-Zinc Ore

Hyunsoo KIM¹⁺, Hyunsung ON¹, Togtokhmaa BURENTOGTOKH¹, Bong-Ju KIM^{2±}
¹Chosun University, ²Korea University

SE41-33-D4-PM1-P-022 | SE41-33-A023

Effect of Microwave Heating on Magnetic Separation of

Arsenopyrite

Hyunsung ON¹⁺, Eunji MYUNG¹, Cheon-Young PARK^{1‡}
¹Chosun University

SE41-33-D4-PM1-P-023 | SE41-33-A024

Trajectory Analysis of Copper and Glass Particles for

Separation of ASR in Electrostatic Separator Unit

Ki-Seon AN $^{\mbox{\tiny 1+}},$ Beom-Uk KIM $^{\mbox{\tiny 1}},$ Oh-Hyung HAN $^{\mbox{\tiny 1}},$ Chul-Hyun PARK $^{\mbox{\tiny 1+}}$

¹Chosun University

SE41-33-D4-PM1-P-024 | SE41-33-A025

Effect of Sparger and Frother Types on Bubble Size in a

Laboratory Flotation Column

Ki-Seon AN $^{1+}$, Si On LIM 1 , Oh-Hyung HAN 1 , Chul-Hyun PARK $^{1\pm}$

¹Chosun University

SE41-33-D4-PM1-P-025 | SE41-33-A026

Characterization of Hardened Concrete in the Philippines

Using Optical Microscopy

Jeremy James JIMENEZ^{1‡+}, Carlo ARCILLA¹, Nancy AGUDA¹
¹University of the Philippines Diliman

SE41-33-D4-PM1-P-026 | SE41-33-A027

Determination and Quantification of Scandium and Rare

Earth Elements in Philippine Nickel Laterite Deposits

Angelo PANLAQUI $^{\mbox{\tiny 1}}$, Carlo ARCILLA $^{\mbox{\tiny 1}}$, Nancy AGUDA $^{\mbox{\tiny 1}}$, Rio Jasper RUELO $^{\mbox{\tiny 1}}$

¹University of the Philippines Diliman

SE41-33-D4-PM1-P-027 | SE41-33-A028

Assessment of Rock Units in Ilocos Norte, Philippines as

Potential Aggregate Source Using Petrographical,

Mineralogical and Chemical Analyses

Aran Khristian MENDOZA $^{1\sharp*}$, Mari Shylla JOAQUIN 1 , Margaret MATACOT 1 , Miya Shairah PAMUTAN 1 , Carlo ARCILLA 1

¹University of the Philippines Diliman

SE41-33-D4-PM1-P-028 | SE41-33-A029

Geoelectrochemical Halo-Forming and Prospecting

Xianrong LUO^{1‡+}, Fei OUYANG¹, Meilan WEN¹
¹Guilin University of Technology

Presentations 8 JUN, 2018 FRIDAY

Day 5 - 08 Jun 2018, Friday Program Overview

08 Jun 2018, Friday				
Time / Room	AM1	AM2	PM1	PM2
	08:30 - 10:30	11:00 - 12:30	13:30 - 15:30	16:00 - 18:00
MR301	HS22 (p379)	HS22 (p380)		
MR302A	ST05 (p390)	ST05 (p391)		
MR302B	AS38 (p373)	AS38 (p373)		
MR303A	AS32 (p371)	AS32 (p372)		
MR303B	AS47 (p375)	AS47 (p375)		
MR304A	PS19 (p384)	PS19 (p384)		
MR304B	BG09-OS (p378)	BG09-OS (p378)		
MR314	SE36 (p388)	SE36 (p389)		
MR317A	ST01 (p389)	ST01 (p390)		
MR317B	OS09 (p382)	OS09 (p383)		
MR318A	HS24 (p380)	HS24 (p381)		
MR318B	HS15 (p378)	HS15 (p379)		
MR319A	AS45 (p374)	AS45 (p374)		
MR319B	SE24-29 (p386)	SE24-29 (p386)		
MR321A	SE12-17 (p385)	SE12-17 (p385)		
MR321B	SE27 (p387)	SE27 (p388)		
MR322A	BG02-IG (p377)	BG02-IG (p377)		
MR322B	IG17 (p382)	IG15 (p381)		
MR323A	IG11 (p381)	IG25 (p382)		
MR325A	AS05 (p369)	AS05 (p370)		
MR325B	AS04 (p369)	AS04 (p369)		_
MR326A	AS52 (p376)	AS52 (p376)		
MR326B	AS24-25 (p370)	AS24-25 (p371)		
Ballroom B				-

Sessions & Conveners

* Main Convener

AS04-Atmospheric Chemistry in Highly Polluted

Environments: Emissions, Fate, and Impacts

*Jianlin HU Nanjing University of Information Science & Technology, Hongliang ZHANG Louisiana State University, Sri H. KOTA Indian Institute of Technology Guwahati, Qi YING Texas A and M University

AS05-The Science and Prediction of Heavy Rainfall and

*Yali LUO Chinese Academy of Meteorological Sciences, Johnny CHAN City University of Hong Kong

AS24-25-Natural and Anthropogenic Aerosols-Experiments, Measurements and Simulations from Regions of Different Optical Domains

*Cheol-Hee KIM Pusan National University, Chung-Shin YUAN National Sun Yat-sen University, Harilal MENON Goa University, Suresh Babu S. Vikram Sarabhai Space Centre

AS32-Analysis and Prediction of Aviation Weather Hazards

Including the Impact of Climate Variability and Change

*Jung-Hoon KIM National Oceanic and Atmospheric Administration, Hye-Yeong CHUN Yonsei University, Todd LANE The University of Melbourne

AS38-Nexus in the Arctic-midlatitude-tropical Interactions

and Their Impact on Weather/climate Extremes

*Jin-Ho YOON Gwangju Institute of Science and Technology, S. Y. Simon WANG Utah State University, Jee-Hoon JEONG Chonnam National University, Baek-Min KIM Korea Polar Research Institute

AS45- Middle Atmosphere Science

*S. K. DHAKA University of Delhi, Shigeo YODEN Kyoto University, Zeyu CHEN Chinese Academy of Sciences, Hye-Yeong CHUN Yonsei University

AS47-Regional Climate Downscaling and Cordex:

Challenges and Prospects

*Dong-Hyun CHA Ulsan National Institute of Science and Technology, Hyun-Suk KANG Korea Meteorological Administration, Jason EVANS University of New South Wales, Shuyu WANG Nanjing University, Koji DAIRAKU National Research Institute for Earth Science and Disaster Resilience

AS52-Chemistry-Climate Interactions

*Shiliang WU Michigan Technological University, Xiaofeng HUANG Peking University Shenzhen Graduate School, Ling-Yan HE Peking University Shenzhen Graduate School

BG02-IG-Remote Sensing of Essential Climate Variables and Its Applications

*Wei YANG Chiba University, Hideki KOBAYASHI Japan Agency for Marine-Earth Science and Technology, Xin CAO Beijing Normal University, Xiaolin ZHU The Hong Kong Polytechnic University

BG09-OS-Ocean Deoxygenation in the Asia-pacific Region

*S. W. A. NAQVI Council of Scientific, Gil JACINTO The Marine Science Institute, University of the Philippines, Moriaki YASUHARA The University of Hong Kong, Jing ZHANG East China Normal University, S. W. A. NAQVI Council of Scientific

HS15-Hydrologic Extremes in a Changing Climate

*Rajib MAITY Indian Institute of Technology Kharagpur, C. T. DHANYA Indian Institute of Technology Delhi, Harald KUNSTMANN Institute of Meteorology and Climate Research - Atmospheric Environmental Research, Karlsruhe Institute of Technology (KIT/IMK-IFU), Shailesh SINGH National Institute of Water and Atmospheric Research, Harrie-Jan Hendricks FRANSSEN Forschungszentrum Jülich and RWTH Aachen

HS22-Climate Change Risk Assessment and Adaptation on Water-related Disaster and Water Resources in Asia and the Pacific

*Eiichi NAKAKITA Kyoto University, Deg-Hyo BAE Sejong University, Ching-Pin TUNG National Taiwan University, Yasuto TACHIKAWA Kyoto University, Izuru TAKAYABU Meteorological Research Institute, Japan Meteorological Agency

$HS24- The\ Third\ Pole\ Environment- Hydrometeorological$

Processes and Human Dimension

*Petrus (Peter) VAN OEVELEN GEWEX, Yaoming MA Chinese Academy of Sciences, Likun AI Chinese Academy of Sciences, Xin LI Chinese Academy of Sciences

IG11-Integrated Analysis of Geoscience Observations from the Floor to Surface of the Ocean

*Keisuke ARIYOSHI Japan Agency for Marine-Earth Science and Technology, James FOSTER University of Hawaii at Manoa, Wu-Cheng CHI Academia Sinica, Akira KUWANO-YOSHIDA Kyoto University

IG15-Lake Studies of Environmental Change

*Christos GOURAMANIS National University of Singapore, Sean PYNE-O'DONNELL Nanyang Technological University, Stefan ENGELS University of London

IG17-Geo-science Education

*Hoe Teck TAN School of Science and Technology, I-Te LEE Central Weather Bureau

IG25-Tracing Hydrometeorological, Ecohydrological and

Hydrological Processes Using Stable Water Isotopes

*Huade GUAN Flinders University, Xinping ZHANG Hunan Normal University, Grzegorz SKRZYPEK The University of Western Australia

OS09-Regional Oceanic Numerical Modeling and

Observations

*Changming DONG Nanjing University of Information Science & Technology, Yusuke UCHIYAMA Kobe University, Hui WU East China Normal University

PS19-Rosetta, Comets, and Other Icy Bodies

*Bin YANG Yunnan observatories, Chinese Academy of Sciences, Arika HIGUCHI National Astronomical Observatory of Japan, Ramon BRASSER Earth Life Science Institute

SE12-17-Formation and Evolution of the Tethyan Orogenic

Belt: Multi-disciplinary Constraints

*Chuan-Zhou LIU Chinese Academy of Sciences, Di-Cheng ZHU China University of Geosciences, Bo WAN Chinese Academy of Sciences, Ling CHEN Chinese Academy of Sciences

SE24-29-Active Volcanic Processes from the Mantle to the

Atmosphere: Multidisciplinary Approaches to Monitoring,

Hazards, and Impacts

*Florian M. SCHWANDNER Jet Propulsion Laboratory, California Institute of Technology, Clara SOLARO University of Hawaii at Manoa-School of Ocean and Earth Science and Technology SOEST, Helena ALBERT Nanyang Technological University, Yosuke AOKI The University of Tokyo

SE27-Modeling of Slow and Regular Earthquakes

*Yuta MITSUI Shizuoka University, Keisuke ARIYOSHI Japan Agency for Marine-Earth Science and Technology, Naofumi ASO Tokyo Institute of Technology, Suguru YABE Japan Agency for Marine-Earth Science and Technology

SE36-Bridging Scales at Mobile Belts: Fault Rheology and

Earthquake Physics

*James Daniel Paul MOORE Nanyang Technological University, Yukitoshi FUKAHATA Kyoto University

ST01-Flare Activity: Observation, Physics, and Forecasting

*Han HE Chinese Academy of Sciences, Ya-Hui YANG National Central University, Robertus ERDELYI University of Sheffield

ST05-The Responses of Earth's Inner Magnetosphere to

Extreme Solar Events

*Xinlin LI University of Colorado Boulder, Yoshizumi MIYOSHI Nagoya University, Qiugang ZONG Peking University, Wenlong LIU Beihang University

AS04 / Atmospheric Chemistry in Highly Polluted Environments: Emissions, Fate, and Impacts

Fri - 08 Jun | MR325B

Time 08:30 - 10:30

Chair(s) Xinlei GE, Nanjing University of Information Science &

Technology

Hongliang ZHANG, Louisiana State University

AS04-D5-AM1-325B-018 | AS04-A067 (Invited)

Aerosol-Boundary Layer Interaction and its Impact to Haze

Pollution: Multi-Year Observational Evidences in North China

Xin HUANG1#+, Aijun DING1

¹Nanjing University

AS04-D5-AM1-325B-019 | AS04-A048

Aerosol Radiation Feedback Aggravates Heavy Haze in the

North China Plain

Jiarui WU¹⁺, Guohui LI^{1‡}, Junji CAO¹
¹Chinese Academy of Sciences

AS04-D5-AM1-325B-020 | AS04-A009

Changes in Meteorology Caused by Anthropogenic Heat and Their Impacts on Regional Air Quality in Typical Megacities of

Min XIE^{1#+}, Tijian WANG¹
¹Nanjing University

AS04-D5-AM1-325B-021 | AS04-A014

Characteristics of Solar Radiation of China's Three Major Economic Regions and its Relationship with O3 and PM2.5 in the Past 10 Years

Xuejiao DENG1#+

¹China Meteorological Administration

AS04-D5-AM1-325B-022 | AS04-A054

Characteristics of Black-Carbon Containing Particles:

Comparisons Between Very Clean and Highly Polluted

Environments

Xinlei $GE^{1\#+}$, Junfeng $WANG^1$

¹Nanjing University of Information Science & Technology

Time 11:00 - 12:30

Chair(s) Jintai LIN, Peking University

Sri H. KOTA, Indian Institute of Technology Guwahati

AS04-D5-AM2-325B-023 | AS04-A021 (Invited)

Distribution and Sources of Air Pollutants in the North China

Plain Based on On-Road Mobile Measurements

Tong ZHU $^{I\sharp *}$, Yi ZHU I , Junxia WANG I , Yingru LI I , Yiqun HAN I , Jiping ZHANG 2 , Jun LIU 3

¹Peking University, ²Institute of Atmospheric Physics, ³International Institute for Applied Systems Analysis

AS04-D5-AM2-325B-024 | AS04-A016

Global Sources of Ozone over China in the Context of

Globalizing Air Pollution

Jintai LIN^{1#+}, Yingying YAN¹, Ruijing NI¹, Lulu CHEN¹
¹Peking University

AS04-D5-AM2-325B-025 | AS04-A029

Probable Source Region and Associated Health Risk due to PM2.5 in Indian Cities

Shovan SAHU $^{1+}$, Hao GUO 2 , Hongliang ZHANG 2 , Jianlin HU 3 , Oi YING 4 , Sri H. KOTA $^{1\pm}$

¹Indian Institute of Technology Guwahati, ²Louisiana State University, ³Nanjing University of Information Science & Technology, ⁴Texas A and M University

AS04-D5-AM2-325B-026 | AS04-A002

On the Origin of Surface Ozone Episode in Shanghai over

Yangtze River Delta During a Prolonged Heat Wave

Huansheng CHEN^{1#+}, Jianbin WU¹, Oliver WILD²
¹Chinese Academy of Sciences, ²Lancaster University

AS05 / The Science and Prediction of Heavy Rainfall and Floods

Fri - 08 Jun | MR325A

Time 08:30 - 10:30

Chair(s) Johnny CHAN, City University of Hong Kong

Yali LUO, Chinese Academy of Meteorological Sciences

AS05-D5-AM1-325A-024 | AS05-A039 (Invited)

Hydrologic Applications of Ensemble Precipitation Forecasts over the Huaihe River Basin Based on the GEFS Reforecast

Data

Huiling YUAN^{1#+}, Chunlei YANG¹
¹Nanjing University

AS05-D5-AM1-325A-025 | AS05-A046 (Invited)

Spatial Uncertainties in Heavy Precipitation Estimation and its Impact on Flood Modelling

Huan WU^{1‡+}, Zhen GAO², Yan YAN¹
¹Sun Yat-sen University, ²Wuhan University

AS05-D5-AM1-325A-026 | AS05-A086

Real-Time Storm-Scale Ensemble Precipitation Prediction for the NOAA Flash Flood and Intense Rainfall Experiments

Fanyou KONG^{1#+}, Nathan SNOOK¹, Keith BREWSTER¹, Ming XUE^{1,2}, Kevin W. THOMAS¹, Tim SUPINIE¹
¹University of Oklahoma, ²Nanjing University

AS05-D5-AM1-325A-027 | AS05-A085

Ensemble Flood Forecasting Based on Two Ways of Regional Ensemble Prediction Systems: Simple Downscaling of Global EPS and Regional Data Assimilation

Tomoki USHIYAMA^{1,2#+}

¹Public Works Research Institute, ²National Graduate Institute for Policy Studies

AS05-D5-AM1-325A-028 | AS05-A059

Quantitative Precipitation Forecasting with Polarimetric Radar Data Assimilation: Typhoon Soudelor (2015)

Chih-Chien TSAI1#+, Youngsun JUNG2

¹Taiwan Typhoon and Flood Research Institute, ²Center for Analysis and Prediction of Storms

AS05-D5-AM1-325A-029 | AS05-A077

Ensemble Data Assimilation and Ensemble Forecasting for Heavy Rainfall Events

Hong LI1#+, Jingyao LUO1

¹Shanghai Typhoon Institute of China Meteorological Administration

Time 11:00 - 12:30

Chair(s) Huiling YUAN, Nanjing University

Huan WU, Sun Yat-sen University

AS05-D5-AM2-325A-030 | AS05-A008 (Invited)

Multiscale Data Assimilation Impact on Heavy Rain Forecast by Space and Time Multiscale Analysis System (STMAS)

Yuanfu XIE1#, Juxiang PENG2, Jen-Hsin TENG3+

¹Chinese Academy of Meteorological Sciences, ²China Meteorological Administration, ³Central Weather Bureau

AS05-D5-AM2-325A-031 | AS05-A065

Development of Machine Learning Based Warning System for

Extreme Rainfall Events in Taipei Metropolitan Area

Shih-Hao SU^{1#+}, Jung-Lien CHU², Ting-Shuo YO³

¹Chinese Culture University, ²National Science Center for Disaster Reduction, ³DataQualia Lab Co. Ltd.

AS05-D5-AM2-325A-032 | AS05-A084

STEPS-ALARO: Blending High-Frequency NWP Precipitation

Forecasts in a Stochastic Nowcasting System

Lesley DE CRUZ¹⁵⁺, Maarten REYNIERS¹, Laurent DELOBBE¹, Loris FORESTI²

¹Royal Meteorological Institute of Belgium, ²MeteoSwiss

AS05-D5-AM2-325A-033 | AS05-A051

Bayesian Model Averaging with Stratified Sampling for Probabilistic Quantitative Precipitation Forecasting Jiangshan $ZHU^{1\#+}$

¹Chinese Academy of Sciences

AS24-25 / Natural and Anthropogenic Aerosols-Experiments, Measurements and Simulations from Regions of Different Optical Domains

Fri - 08 Jun | MR326B

Time 08:30 - 10:30

Chair(s) Chung-Shin YUAN, National Sun Yat-sen University

Cheol-Hee KIM, Pusan National Universoty

AS24-25-D5-AM1-326B-001 | AS24-25-A007

Chemical Fingerprint and Source Apportionment of PM2.5 During Heavy Urban Haze Episodes in Southern Taiwan Chung-Shin YUAN $^{15+}$

¹National Sun Yat-sen University

AS24-25-D5-AM1-326B-002 | AS24-25-A010

WRF-Chem Simulation of Aerosol Effects on Mesoscale Radiation-Cloud-Precipitation Variables over Northeast Asia during MAPS-Seoul 2015 Campaign

Shin-Young PARK¹⁺, Hyo-Jung LEE¹, Jeong-Eon KANG¹, Taehyoung LEE², Cheol-Hee KIM¹⁺

¹Pusan National University, ²Hankuk University of Foreign Studies

AS24-25-D5-AM1-326B-003 | AS24-25-A011

Chemical Compositions of Particulate Matter Observed in Urban and Background Area in South Korea

Yu-Jin JO¹⁺, Hyo-Jung LEE¹, Hyun-Young JO¹, Cheol-Hee KIM^{1‡}

¹Pusan National University

AS24-25-D5-AM1-326B-004 | AS24-25-A008

Socioeconomic and Atmospheric Factors Affecting Aerosol Radiative Forcing: Production-Based Versus

Consumption-Based View

Jingxu WANG1#+, Jintai LIN1, Ruijing NI1, Qiang ZHANG2, Dabo GUAN³, Yongyun HU¹, Yi HUANG⁴, Da PAN⁵, Dan TONG², Hongyan ZHAO²

¹Peking University, ²Tsinghua University, ³University of East Anglia, ⁴McGill University, ⁵Princeton University

AS24-25-D5-AM1-326B-005 | AS24-25-A009

Diagnostic Study of Nitrate Formation from Nighttime N2O5 Heterogeneous Process for Fine Particulate Prediction over Urban Area in South Korea

Hyun-Young JO1+, Hyo-Jung LEE1, Yu-Jin JO1, Jongjae LEE1, Cheol-Hee KIM1#

¹Pusan National University

AS24-25-D5-AM1-326B-006 | AS24-25-A001

Dust Transported from Africa to Asia and Even Pacific Areas:

Results of the Central Asian Dust Experiment (CADEX)

Dietrich ALTHAUSEN1#+, Julian HOFER1

¹Leibniz Institute for Tropospheric Research

AS24-25-D5-AM1-326B-007 | AS24-25-A006 (Invited)

Satellite Observations and Model Simulations of Aeolian Dust and Combustion Aerosol: Consistent Inter-Annual Variability

and Trend in Major Outflow Regions in Recent Decades

Hongbin YU1#+, Qian TAN2, Yang YANG3, Hailong WANG3, Mian CHIN1, Tianle YUAN4, Lorraine REMER5,6, Robert LEVY1, Steven SMITH3

¹NASA Goddard Space Flight Center, ²Bay Area Ennvironmental Research Institute, ³Pacific Northwest National Laboratory, ⁴NASA Goddard Space Flight Center/UMBC JCET, 5University of Maryland, Baltimore County, 6Airphoton LLC

Time 11:00 - 12:30

Chair(s) Harilal MENON, Goa University

Hongbin YU, NASA Goddard Space Flight Center

Cheol-Hee KIM, Pusan National University

AS24-25-D5-AM2-326B-008 | AS24-25-A012 (Invited)

Direct Aerosol Radiative Forcing over Centrally Located Indo-Gangetic Basin: Impact of Absorbing and Scattering

Aerosols

Atul K. SRIVASTAVA¹, Bharat Ji MEHROTRA², S.N. SINGH³, Suresh TIWARI¹, Deewan Singh BISHT¹, Rajeev SINGH², Manoj K. SRIVASTAVA2#+

¹Indian Institute of Tropical Meteorology, ²Banaras Hindu University, ³National Physical Laboratory

AS24-25-D5-AM2-326B-009 | AS24-25-A020

Physico-Chemical Characteristics of Aerosols and its Implications on Aerosol Radiative Forcings- Results of a Study Carried Out Between 15 0 N and 550S Over North Indian

Ocean and Indian Ocean Sector of Southern Ocean

Harilal MENON1#+, Shrivardhan HULSWAR1 ¹Goa University

AS24-25-D5-AM2-326B-010 | AS24-25-A019

Spatiotemporal Variation and Long-Range Transport of Atmospheric Speciated Mercury in the Intersectional Region of Taiwan Island, Luzon Island, and Northern South China Sea Chung-Shin YUAN1#+

¹National Sun Yat-sen University

AS24-25-D5-AM2-326B-011 | AS24-25-A014

Simulation of National Background PM2.5 Concentrations over China, Japan and Korea

Jongjae LEE1#+, Cheol-Hee KIM1, Mizuo KAJINO2, Wei TANG3 ¹Pusan National University, ²Japan Meteorological Agency, ³Chinese Research Academy of Environmental Sciences

AS24-25-D5-AM2-326B-012 | AS24-25-A016

Metals in Marine Aerosol in Western Pacific: Spatial

Distribution, Sources and Deposition

Mei ZHENG1#+

¹Peking University

AS24-25-D5-AM2-326B-013 | AS24-25-A018

Chemical and Isotopic Characteristics of Ambient Aerosols

over the Bay of Bengal: Impact of Continental Outflow

Neeraj RASTOGI1#+, Rajesh AGNIHOTRI2, Ravi SAWLANI2, Anil PATEL¹, Rangu SATISH¹, Suresh Babu S.³

¹Physical Research Laboratory, ²National Physical Laboratory, ³Vikram Sarabhai Space Centre

AS32 / Analysis and Prediction of Aviation Weather Hazards Including the Impact of Climate Variability and Change

Fri - 08 Jun | MR303A

Time 08:30 - 10:30

Chair(s) Jung-Hoon KIM, NOAA/NWS/NCEP/Aviation Weather

Hye-Yeong CHUN, Yonsei University

Todd P. LANE, The University of Melbourne

AS32-D5-AM1-303A-001 | AS32-A011 (Invited)

Global Aviation Turbulence Forecasting Using the Graphical

Turbulence Guidance (GTG)

Robert SHARMAN^{1#+}

¹National Center for Atmospheric Research

AS32-D5-AM1-303A-002 | AS32-A010

Estimation of Aviation Turbulence Using High

Vertical-Resolution Radiosonde Data and Comparison with

In-Situ Flight Data

Hye-Yeong CHUN^{1#+}, Han-Chang KO¹
¹Yonsei University

AS32-D5-AM1-303A-003 | AS32-A013

Forecasting Convectively Induced Turbulence

Wiebke DEIERLING $^{1s+}$, Robert SHARMAN 1 , Julia PEARSON 1 , Domingo MUNOZ-ESPARZA 1 , Gregory MEYMARIS 1

¹National Center for Atmospheric Research

AS32-D5-AM1-303A-004 | AS32-A019

Properties of Convectively-Induced Turbulence over

Developing Oceanic Convection

Katelyn BARBER¹⁵⁺, Wiebke DEIERLING², Gretchen MULLENDORE¹, Robert SHARMAN², Cathy KESSINGER²
¹University of North Dakota, ²National Center for Atmospheric Research

AS32-D5-AM1-303A-005 | AS32-A009

Application of a Convective Gravity-Wave Drag

Parameterization to Development of Near-Cloud Turbulence

Diagnostics

Soo-Hyun KIM $^{1\#+}$, Hye-Yeong CHUN 1 , Robert SHARMAN 2 , Stanley TRIER 2 , Dan-Bi LEE 1

¹Yonsei University, ²National Center for Atmospheric Research

AS32-D5-AM1-303A-006 | AS32-A003

A Case Study of Upper-Level Near-Cloud Turbulence

Dragana ZOVKO-RAJAK 14+, Todd LANE 2-3, Robert SHARMAN 4, Stanley TRIER 4

¹Bureau of Meteorology, ²The University of Melbourne, ³ARC Centre of Excellence for Climate Extremes, ⁴National Center for Atmospheric Research

AS32-D5-AM1-303A-007 | AS32-A012

Multi Model-Based Probabilistic Clear-Air Turbulence (CAT)

Forecast Using Ellrod-Knox Index

Dan-Bi LEE¹⁵⁺, Hye-Yeong CHUN¹, Jung-Hoon KIM^{2,3}, Robert SHARMAN⁴

¹Yonsei University, ²National Oceanic and Atmospheric Administration, ³Colorado State University, ⁴National Center for Atmospheric Research Time 11:00 - 12:30

Chair(s) Todd P. LANE, The University of Melbourne

Hye-Yeong CHUN, Yonsei University

Jung-Hoon KIM, NOAA/NWS/NCEP/Aviation Weather

Center

AS32-D5-AM2-303A-008 | AS32-A016 (Invited)

Global Response of Clear-Air Turbulence to Climate Change

Paul WILLIAMS^{1#+}, Luke STORER¹, Manoj JOSHI²

¹University of Reading, ²University of East Anglia

AS32-D5-AM2-303A-009 | AS32-A014

Impact of Large-Scale Variability on Trans-Oceanic Flight

Routes

Jung-Hoon KIM^{1,2#+}, Daehyun KIM³, Robert SHARMAN⁴, Paul WILLIAMS⁵

¹National Oceanic and Atmospheric Administration, ²Colorado State University, ³University of Washington, ⁴National Center for Atmospheric Research, ⁵University of Reading

AS32-D5-AM2-303A-010 | AS32-A004

Aircraft Observations and Reanalysis Depictions of Trends in

the North Atlantic Polar Jet Stream Wind Speeds and

Turbulence

Joel TENENBAUM^{1#+}, Paul WILLIAMS²

¹State University of New York at Purchase, ²University of Reading

AS32-D5-AM2-303A-011 | AS32-A002

NCEP's Global Icing Ensemble Prediction and its Evaluation

Binbin ZHOU1#+

¹IMSG/EMC/NCEP

AS32-D5-AM2-303A-012 | AS32-A020

A Case Study of Icing Conditions in the Spring in South China

Sun JING1#+

¹Chinese Academy of Meteorological Sciences

AS32-D5-AM2-303A-013 | AS32-A006

Evaluation of 300m Resolution Wind Prediction with the

Unified Model from KMA's Operational Global Forecast by

Modification of Ancillary Files over Incheon International

Airport

Prasanna VENKATRAMAN^{1*}, Hee-Wook CHOI¹, Seon-Ok HONG², Kim GEUN-HOI², Lee YOUNG-GON¹, Baek-Jo KIM³ ¹National Institute of Meteorological Sciences, ²Korea Meteorological Research, ³Korea Meteorological Administration

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AS38 / Nexus in the Arctic-midlatitude-tropical Interactions and Their Impact on Weather/climate Extremes

Fri - 08 Jun | MR302B

Time 08:30 - 10:30

Chair(s) Jin-Ho YOON, Gwangju Institute of Science and

Technology

Jee-Hoon JEONG, Chungnam National University

AS38-D5-AM1-302B-001 | AS38-A011

Could the North Pacific Oscillation be Modified by the

Initiation of East Asian Winter Monsoon?

Yu-Heng TSENG^{1‡+}, Ruiqiang DING², Sen ZHAO^{3,4}
¹National Taiwan University, ²Chinese Academy of Sciences,
³University of Hawaii at Manoa, ⁴Nanjing University of Information
Science & Technology

AS38-D5-AM1-302B-002 | AS38-A002

Contribution of Stratospheric Pathway to Warm Arctic Cold Siberia

Yutian WU^{1±+}, Pengfei ZHANG², Isla SIMPSON³, Karen SMITH⁴
¹Lamont-Doherty Earth Observatory of Columbia University, ²Purdue University, ³National Center for Atmospheric Research, ⁴University of Toronto Scarborough

AS38-D5-AM1-302B-003 | AS38-A003

On the Atmospheric Response Experiment to a Blue Arctic

Tetsu NAKAMURA^{1#+}, Koji YAMAZAKI¹, Meiji HONDA², Jinro UKITA², Ralf JAISER³, Dörthe HANDORF³, Klaus DETHLOFF³ ¹Hokkaido University, ²Niigata University, ³Alfred Wegener Institute for Polar and Marine Research

AS38-D5-AM1-302B-004 | AS38-A004

Effects of Northern Hemispheric Midlatitude Transient Wave on Tropospheric Arctic Amplification in Their Changing Relationship with Arctic Oscillation

Dong XIAO1#+

¹Chinese Academy of Meteorological Sciences

AS38-D5-AM1-302B-005 | AS38-A016

Impact of Additional Arctic Radiosonde Observations on

5-Day Weather Forecasts over Alaska During August 2015

Min-Hee LEE $^{1+}$, Joo-Hong KIM $^{1\pm}$, Hyo-Jong SONG 2 , Jun INOUE 3 , Kazutoshi SATO 3 , Akira YAMAZAKI 4

¹Korea Polar Research Institute, ²Korea Institute of Atmospheric Prediction Systems (KIAPS), ³National Institute of Polar Research, ⁴Japan Agency for Marine-Earth Science and Technology AS38-D5-AM1-302B-006 | AS38-A022

East Asian/Western Pacific Summer Temperature Related to the Arctic Sea-Ice Loss in the Past Autumn

Wookap CHOI1#+

¹Seoul National University

Time 11:00 - 12:30

Chair(s) Jin-Ho YOON, Gwangju Institute of Science and

Technology

AS38-D5-AM2-302B-007 | AS38-A014

Eurasian Winter Temperature Change in Recent Decades and

its Association with Arctic Sea Ice Loss

Hye-Jin KIM^{1#+}, Seok-Woo SON¹
¹Seoul National University

AS38-D5-AM2-302B-008 | AS38-A018

High-Latitude Flaring Black Carbon and Arctic Climates

Mee-Hyun CHO^{1#}, Baek-Min KIM¹, Jinho YOON², Jaein JEONG³, Rokjin J. PARK³

¹Korea Polar Research Institute, ²Gwanhji Institute of Science and Technology, ³Seoul National University

AS38-D5-AM2-302B-009 | AS38-A020

Local Wave Activity as an Objective Diagnostic of Midlatitude

Extreme Weather and Arctic-Midlatitude Interactions

Gang CHEN $^{1\#+}$, Jian LU 2 , Patrick MARTINEAU 3 , Daokai XUE 4 , lantao SUN 5

¹University of California, Los Angeles, ²Pacific Northwest National Laboratory, ³The University of Tokyo, ⁴Nanjing University, ⁵Cooperative Institute for Research in Environmental Sciences

AS38-D5-AM2-302B-010 | AS38-A024

Eddy-Driven Jet Response to Warming: The Role of Cloud

Radiative Effects and ITCZ Width

Oliver WATT-MEYER¹⁵⁺, Dargan FRIERSON¹
¹University of Washington

AS38-D5-AM2-302B-011 | AS38-A009

Sensitivity of the Arctic Climate Forcing Due to Atmospheric

Physical Parameterizations

Jin-Ho YOON^{1‡+}, Baek-Min KIM², Jee-Hoon JEONG³, Philip J. RASCH⁴, Hailong WANG⁴, Ben KRAVITZ⁴, S. Y. Simon WANG⁵ ¹Gwangju Institute of Science and Technology, ²Korea Polar Research Institute, ³Chonnam National University, ⁴Pacific Northwest National Laboratory, ⁵Utah State University

AS45 / Middle Atmosphere Science

Fri - 08 Jun | MR319A

Time 08:30 - 10:30

Chair(s) Shigeo YODEN, Kyoto University

Yoshio KAWATANI, JAMSTEC

AS45-D5-AM1-319A-014 | AS45-A029 (Invited)

The Contrasting Dynamical Roles of the Tibetan Plateau and the Rocky Mountain in Formulating the Northern Winter

Stratospheric Circulation

Rongcai REN^{1#+}, Xin XIA¹
¹Chinese Academy of Sciences

AS45-D5-AM1-319A-015 | AS45-A058 (Invited)

The Coupling Between the Tropospheric and Stratospheric Polar Vortex and its Impact on Mid-Latitude Weather Wenshou $TIAN^{1s+}$ $^1Lanzhou\ University$

AS45-D5-AM1-319A-016 | AS45-A057

Recovery of the Disrupted Quasi-Biennial Oscillation

Larry COY^{1#+}, Paul A. NEWMAN¹, Steven PAWSON¹
¹NASA Goddard Space Flight Center

AS45-D5-AM1-319A-017 | AS45-A051

Relationships Between Antarctic Ozone Hole and Dynamical Fields

Guangyu LIU¹⁵⁺, Toshihiko HIROOKA¹, Nawo EGUCHI¹
¹Kyushu University

AS45-D5-AM1-319A-018 | AS45-A047

A Mechanism to Explain the Variations of Tropopause and Tropopause Inversion Layer in the Arctic Region During a Sudden Stratospheric Warming in 2009

Rui WANG¹*-, Yoshihiro TOMIKAWA²-, Takuji NAKAMURA²-, Kaiming HUANG⁴-, Shaodong ZHANG⁴-, Yehui ZHANG⁵-, Huigen YANG¹-, Hongqiao HU¹

¹Polar Research Institute of China, ²National Institute of Polar Research, ³Graduate University for Advanced Studies, ⁴Wuhan University, ⁵Nanjing University of Information Science & Technology

AS45-D5-AM1-319A-019 | AS45-A043

Multi-Instrument Study of MLT-Region Airglow Intensities,

Temperatures and Winds: Initial Findings

Iain REID^{1,2‡+}, Andrew SPARGO², Jonathan WOITHE¹
¹ATRAD Pty Ltd, ²University of Adelaide

AS45-D5-AM1-319A-020 | AS45-A042

Estimation of the QBO Forcing by the Equatorial Waves Using

High Resolution Radiosoundings at Pacific Islands

Liji WANG^{1,2}, Zeyu CHEN^{1#+}, Daren LYU^{3,4}

¹Chinese Academy of Sciences, ²Zhejiang Meteorological

Administration, ³Institute of Atmospheric Physics, Chinese Academy of

Sciences, ⁴University of Chinese Academy of Sciences

Time 11:00 - 12:30

Chair(s) Shigeo YODEN, Kyoto University

Surendra Kumar DHAKA, University of Delhi

Yoshio KAWATANI, JAMSTEC

AS45-D5-AM2-319A-021 | AS45-A046 (Invited)

QBO Modulation of Tropical Convection and UTLS Synoptic

Structures

Matthew HITCHMAN^{1#+}

¹University of Wisconsin - Madison

AS45-D5-AM2-319A-022 | AS45-A038

Coupling Between Stratosphere and Troposphere During

Major Warming Events with Strong Polar-Night Jet

Oscillations Using Era-Interim and CMIP5-MPI-ESM Data Sets

Dieter H.W. PETERS^{1#+}, Andrea SCHNEIDEREIT¹
¹Leibniz-Institute for Atmospheric Physics

AS45-D5-AM2-319A-023 | AS45-A048

Propagating Annular Modes

Aditi SHESHADRI1#+, R. Alan PLUMB2

¹Stanford University, ²Massachusetts Institute of Technology

AS45-D5-AM2-319A-024 | AS45-A049

Trends in the Northern Hemisphere Stratospheric Polar Vortex

During the 20th and 21st Centuries

Jason FURTADO1#+, Carly NAROTSKY2

¹University of Oklahoma, ²University of North Carolina at Asheville

AS45-D5-AM2-319A-025 | AS45-A034

Possible Influence of Elevated Stratopause Events on the

Lower Atmospheric Circulation

Shunsuke NOGUCHI¹#+, Kohei YOSHIDA¹, Makoto DEUSHI¹, Yuhji KURODA¹

¹Japan Meteorological Agency

AS47 / Regional Climate Downscaling and Cordex: Challenges and Prospects

Fri - 08 Jun | MR303B

Time 08:30 - 10:30

Chair(s) Shuyu WANG, Nanjing University

AS47-D5-AM1-303B-001 | AS47-A019 (Invited)

Spatiotemporal Characteristics of Heat Waves over China in Regional Climate Simulations within the CORDEX-EA

Jianping TANG^{1#+}, Pinya WANG¹
¹Nanjing University

AS47-D5-AM1-303B-002 | AS47-A014

Evaluating Summer Precipitation Using Multiple

High-Resolution Regional Climate Models over South Korea

Changyong PARK^{1#}, Dong-Hyun CHA¹, Seung-Ki MIN², Gayoung KIM¹, Gil LEE¹, Minkyu LEE¹, Myoung-Seok SUH³, Joong-Bae AHN⁴, Hyun-Suk KANG⁵

¹Ulsan National Institute of Science and Technology, ²Pohang University of Science and Technology, ³Kongju National University, ⁴Pusan National University, ⁵Korea Meteorological Administration

AS47-D5-AM1-303B-003 | AS47-A006

Climate Change Evolution of Precipitation Characteristic over

Korea: Assessment of a Regional Climate Model Using Joint

Probability Distribution Function

Ji-Woo LEE $^{1\sharp *}$, Huikyo LEE 2 , Peter GLECKLER 1 , Duane WALISER 2

¹Lawrence Livermore National Laboratory, ²Jet Propulsion Laboratory, California Institute of Technology

AS47-D5-AM1-303B-004 | AS47-A026

Comparison of East Asian Monsoon Evolution Simulated by

HadGEM3-RA and HadGEM2-AO

Seon-Yong LEE1**, Seok-Woo SHIN², Jin-Uk KIM², Young-Hwa BYUN²

¹National Institute of Meteorological Sciencies, ²Korea Meteorological Administration

AS47-D5-AM1-303B-005 | AS47-A020

The Robustness and Uncertainty Analysis of the Relationship of Extreme Precipitations with Temperature

Sridhara NAYAK¹#+, Koji DAIRAKU²

¹Kyoto University, ²National Research Institute for Earth Science and Disaster Resilience

AS47-D5-AM1-303B-006 | AS47-A001

A Hybrid Dynamical-Statistical Downscaling Technique and its Applications to Future Warming Projections in the Great

Los Angeles Area

Fengpeng SUN1#+

¹University of Missouri - Kansas City

AS47-D5-AM1-303B-007 | AS47-A021

Hi-Resolution Multi-Ensemble Statistical Downscaling

Regional Climate Scenarios and CORDEX Asia ESD

Koji DAIRAKU1#+

¹National Research Institute for Earth Science and Disaster Resilience

AS47-D5-AM1-303B-008 | AS47-A023

An Intercomparison of Multiple Statistical Downscaling

Methods for Daily Precipitation and Temperature over China:

Present Climate Evaluations and Future Climate Projections

Yi YANG¹#+, Jianping TANG¹, Shuyu WANG¹

¹Nanjing University

AS47-D5-AM1-303B-009 | AS47-A028

The Regional Climate Model Evaluation System: A Systematic

Evaluation of CORDEX Simulations Using Obs4MIPs

Alexander GOODMAN $^{1\#\ast},$ Huikyo LEE¹, Duane WALISER¹, William GUTOWSKI²

¹Jet Propulsion Laboratory, California Institute of Technology, ²Iowa State University

Time 11:00 - 12:30

 ${\it Chair}(s) \quad {\it Dong-Hyun CHA}, {\it Ulsan National Institute of Science}$

and Technology

AS47-D5-AM2-303B-010 | AS47-A009 (Invited)

Do High-Resolution Regional Climate Simulations Provide

Credible Regional and Local Trends in Temperature and

Precipitation over the Contiguous United States?

Huikyo LEE^{1±+}, Duane WALISER¹, Alexander GOODMAN¹

*Iget Propulsion Laboratory, California Institute of Technology

AS47-D5-AM2-303B-011 | AS47-A024

Improvement of Regional Climate Simulation over East Asia

by Coupled Air-Sea Interaction and Large-Scale Nudging

Dong-Hyun CHA^{1*+}, Chun-Sil JIN¹, Dong-Kyou LEE^{2,3}
¹Ulsan National Institute of Science and Technology, ²Seoul National University, ³Korea Meteorological Administration

AS47-D5-AM2-303B-012 | AS47-A022

Impact of Bias- and Variance-Corrected SST on the Regional

Climate Simulation over CORDEX-East Asia Using

HadGEM3-RA

Seok-Woo SHIN $^{1#+}$, Seon-Yong LEE 2 , Jin-Uk KIM 1 , Young-Hwa BYUN 1

¹Korea Meteorological Administration, ²National Institute of Meteorological Sciencies

AS47-D5-AM2-303B-013 | AS47-A015

Effects of Horizontal Grid Spacing on Simulated Consecutive

Dry Days and Near-Surface Temperature over the Central

Mountains in Japan

Shiori SUGIMOTO^{1,5+}, Rui ITO², Koji DAIRAKU³, Hiroaki KAWASE⁴, Hidetaka SASAKI⁴, Shingo WATANABE¹, Yasuko OKADA¹, Sho KAWAZOE¹, Takeshi YAMAZAKI⁵, Takahiro SASAI⁵

¹Japan Agency for Marine-Earth Science and Technology, ²Japan Meteorological Business Support Center, ³National Research Institute for Earth Science and Disaster Resilience, ⁴Japan Meteorological Agency, ⁵Tohoku University

AS47-D5-AM2-303B-014 | AS47-A007

Evaluation Procedure of Uncertainty Source Due to GCM

Projections in Downscaled Regional Climate

Sachiho ADACHI^{1‡+}, Seiya NISHIZAWA^{2,3}, Ryuji YOSHIDA^{2,4}, Tsuyoshi YAMAURA², Kazuto ANDO², Hisashi YASHIRO², Yoshiyuki KAJIKAWA², Hirofumi TOMITA²

¹RIKEN Center for Computational Science, ²RIKEN Advanced Institute for Computational Science, ³Japan Meteorological Agency, ⁴Kobe University

AS52 / Chemistry-Climate Interactions

Fri - 08 Jun | MR326A

Time 08:30 - 10:30

Chair(s) Lingyan HE, Peking University Shenzhen Graduate

School

AS52-D5-AM1-326A-001 | AS52-A018 (Invited)

Attribution of Ozone and Methane Radiative Forcing in the

Last Decade

Kevin BOWMAN $^{1\sharp *}$, Thomas WALKER 2 , Le KUAI 1 , Zhe JIANG 3 , Helen WORDEN 3

¹Jet Propulsion Laboratory, California Institute of Technology, ²Carleton University, ³National Center for Atmospheric Research

AS52-D5-AM1-326A-002 | AS52-A013 (Invited)

Identification of Emission and Climatological Factors Shaping

Hong Kong's PM10 and Ozone Levels During 1998-2015

Zibing YUAN1#+

¹South China University of Technology

AS52-D5-AM1-326A-003 | AS52-A009

Impact of Wild Fire on U.S. Air Quality over the Past 20 Years -

A Modeling Study in the Satellite Era

Zhining TAO^{1s*} , Hao HE^2 , Chao SUN^2 , Daniel $TONG^3$, Xinzhong $LIANG^2$, Mian $CHIN^4$

¹Universities Space Research Association GESTAR, ²University of Maryland, ³National Oceanic and Atmospheric Administration, ⁴NASA Goddard Space Flight Center

AS52-D5-AM1-326A-004 | AS52-A016

Mechanistic Connections Among Wild Fire, Climate Change,

and Aerosols: Observational Evidence and Modeling Results

Tianle YUAN^{1‡+}, Hongbin YU², Lazaros OREOPOULOS², Huisheng BIAN², Steven GOODMAN³, Lorraine REMER⁴, Kenneth PICKERING⁵

¹NASA Goddard Space Flight Center/UMBC JCET, ²NASA Goddard Space Flight Center, ³National Aeronautics and Space Administration/National Oceanic and Atmospheric Administration, ⁴University of Maryland, Baltimore County, ⁵National Aeronautics and Space Administration

AS52-D5-AM1-326A-005 | AS52-A022

Benchmarking Chemistry-Climate Models'

Top-of-Atmosphere Flux in the 9.6-Micron Ozone Band Using

AURA TES Instantaneous Radiative Kernel

Le KUAI^{1‡+}, Kevin BOWMAN², Helen WORDEN³, Andrew CONLEY³, Jean-François LAMARQUE³, Fabien PAULOT³, David PAYNTER⁴, Luke OMAN⁵, Sarah STRODE⁵, Eugene ROZANOV⁶, Andrea STENKE⁷, Laura REVELL⁸, David PLUMMER⁹, Patrick JÖCKEL¹⁰

¹UCLA / JPL-Caltech, ²Jet Propulsion Laboratory, California Institute of Technology, ³National Center for Atmospheric Research, ⁴NASA Geophysical Fluid Dynamics Laboratory, ⁵NASA Goddard Space Flight Center, ⁶World Radiation Center and ETH Zürich, ⁷Institute for Atmospheric and Climate Science, ⁸Bodeker Scientific, ⁹Environment Canada, ¹⁰German Aerospace Center

Time 11:00 - 12:30

Chair(s) Shiliang WU, Michigan Technological University

Lingyan HE, Peking University Shenzhen Graduate

School

Xiaofeng HUANG, Peking University Shenzhen Graduate

School

AS52-D5-AM2-326A-006 | AS52-A023 (Invited)

The Equilibrium Response of Climate and Composition to Lightning

Lee MURRAY1#+

¹University of Rochester

AS52-D5-AM2-326A-007 | AS52-A017

Oxalate in PM2.5 in Shanghai-Temporal Variation and Sources Jialiang FENG^{1#+}

¹Shanghai University

AS52-D5-AM2-326A-008 | AS52-A008

Global High-Resolution Simulations of Tropospheric Nitrogen

Dioxide Using CHASER V4.0

Takashi SEKIYA¹⁵⁺, Kazuyuki MIYAZAKI¹, Koji OGOCHI¹, Kengo SUDO², Masayuki TAKIGAWA¹

¹Japan Agency for Marine-Earth Science and Technology, ²Nagoya University AS52-D5-AM2-326A-009 | AS52-A014

Predicting High Pollution Episodes Based on Extreme Air

Pollution Meteorology

Pei HOU1#+, Shiliang WU1 ¹Michigan Technological University

BG02-IG / Remote Sensing of Essential Climate Variables and Its Applications

Fri - 08 Jun | MR322A

Time 08:30 - 10:30

Chair(s) Xiaolin ZHU, The Hong Kong Polytechnic University

Wei YANG, Chiba University

BG02-IG-D5-AM1-322A-001 | BG02-IG-A011

Breathing Earth System Simulator: An Integrated Platform to Model Global Land Surface Radiation, Energy, Carbon Fluxes and Sun-Induced Chlorophyll Fluorescence Using Multiple **Satellite Remote Sensing Datasets**

Youngryel RYU1#+, Chongya JIANG1, Benjamin DECHANT1, Yan HUANG1

¹Seoul National University

BG02-IG-D5-AM1-322A-002 | BG02-IG-A015

Retrieval of BRDF/Albedo by the Angular and Spectral

Kernel-Driven Model Using a Simple Parameterization

Dongqin YOU1#+, Jianguang WEN2, Yingtong ZHANG2, Qiang LIU3, Qing XIAO2, Qinhuo LIU2

¹Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, ²Chinese Academy of Sciences, ³Beijing Normal University

BG02-IG-D5-AM1-322A-003 | BG02-IG-A018

The Uncertainty of Mixed Pixels for Land Surface Phenology:

A Simulation Study

Licong LIU1#+, Qiang LI1, Jin CHEN1 ¹Beijing Normal University

BG02-IG-D5-AM1-322A-004 | BG02-A002

Tempo-Spatial Distribution of Vegetation Response to

Precipitation Across the Belt and Road Regions

Liqun SUN1#+, Ji CHEN2, Qinglan LI1

¹Chinese Academy of Sciences, ²The University of Hong Kong

BG02-IG-D5-AM1-322A-005 | BG02-IG-A016

Study on Proportion Estimation of Young Leaves Based on

Computer Simulation

Chishan ZHANG1#+, Jin CHEN1

¹Beijing Normal University

Time 11:00 - 12:30

Chair(s) Xin CAO, Beijing Normal University

Wei YANG, Chiba University

BG02-IG-D5-AM2-322A-006 | BG02-IG-A024

Towards a Climate Data Record for Aerosol Optical Depth: The

Deep Blue Aerosol Data Sets

Andrew SAYER1#+, N. Christina HSU2, Jaehwa LEE2, Woogyung

 KIM^2

¹Universities Space Research Association, ²NASA Goddard Space

Flight Center

BG02-IG-D5-AM2-322A-007 | BG02-IG-A010

Surface Elevation Variability and its Impact on Column CO2

Measurements

Bing LIN1#+, Zhaoyan LIU2

¹NASA Langley Research Center, ²Science Systems and Applications,

Inc./ NASA Langley Research Center

BG02-IG-D5-AM2-322A-008 | BG02-IG-A020

Semantic Classification of High-Resolution Remotely Sensed

Images

Xiaolin ZHU1#+, Tao WEI2

¹The Hong Kong Polytechnic University, ²Beijing Normal University

BG02-IG-D5-AM2-322A-009 | BG02-IG-A027

Satellite Remote Sensing Evapotranspiration Rate in Three

Forests Sites in China Using Microwave Emisscivity Difference

Vegetation Index

Rui LI1#+, Yipu WANG1, Yu WANG1

¹University of Science and Technology of China

BG02-IG-D5-AM2-322A-010 | BG02-IG-A008

Improving Land Cover Classification by Deep Learning with

Large But Rough Training Dataset

Xuehong CHEN1#+, Tianfu LIU1, Jin CHEN1, Xin CAO1, Xihong

 CUI^1

¹Beijing Normal University

BG02-IG-D5-AM2-322A-011 | BG02-IG-A013

Phenological Responses to Climate Change in Arid-Mountain

Ecosystems in China

Jun DU1#+

¹Chinese Academy of Sciences

BG09-OS / Ocean Deoxygenation in the Asia-pacific Region

Fri - 08 Jun | MR304B

Time 08:30 - 10:30

Chair(s) Moriaki YASUHARA, University of Hong Kong

S.Wajih A. NAQVI, Council of Scientific & Industrial

Research

BG09-OS-D5-AM1-304B-001 | BG09-OS-A004 (Invited)

Bio-Argo Autonomous Profiling Float Observations Reveal the

Dynamics of Deep Biomass Distributions in the Denitrifying

Oxygen Minimum Zone of the Arabian Sea

Bozena WOJTASIEWICZ^{1‡+}, Tom TRULL², Udaya Bhaskar TVS³, Mangesh GAUNS⁴, Satya PRAKASH³, Ravichandran M³, Damodar SHENOY⁴, Dirk SLAWINSKI¹, Nick HARDMAN-MOUNTFORD¹

¹Commonwealth Scientific and Industrial Research Organisation, ²Antarctic Climate and Ecosystems Cooperative Research Centre (ACE CRC), ³Indian National Centre for Ocean Information Services, ⁴National Institute of Oceanography

BG09-OS-D5-AM1-304B-002 | BG09-OS-A007

Deoxygenation in the North Indian Ocean

S. W. A. NAQVI1#+

¹Council of Scientific

BG09-OS-D5-AM1-304B-003 | BG09-OS-A010 (Invited)

Deoxygenation over the Eastern Arabian Sea Shelf

GVM GUPTA1#+, Maruthadu SUDHAKAR1

¹Ministry of Earth Sciences

BG09-OS-D5-AM1-304B-004 | BG09-OS-A006

Hypoxia in Coastal Waters of China and the Controlling

Mechanisms for Oxygen Deficiency in the Bohai Sea

Huade ZHAO^{1*+}, Juying WANG¹, Kunpeng ZANG¹, Nan ZHENG¹, Xuemei XU¹, Cheng HUO¹, Jingli MU¹
¹National Marine Environmental Monitoring Center

BG09-OS-D5-AM1-304B-005 | BG09-OS-A008

A Modeling Study on Hypoxia Dynamics and Oxygen Budget

Off the Changjiang Estuary

Haiyan ZHANG $^{\mbox{\tiny 1}\#\mbox{\tiny 4}}$, Katja FENNEL $^{\mbox{\tiny 2}}$, Arnaud LAURENT $^{\mbox{\tiny 2}}$, Liang ZHAO $^{\mbox{\tiny 3}}$, Changwei BIAN $^{\mbox{\tiny 4}}$

¹Tianjin University, ²Dalhousie University, ³Tianjin University of Science and Technology, ⁴Ocean University of China

BG09-OS-D5-AM1-304B-006 | BG09-OS-A002

Coastal Seasonal Hypoxia and Plankton Ecology of the

Western Continental Shelf of India

Mangesh GAUNS^{1*+}, Anil PRATIHARY¹, Damodar SHENOY¹, Siby KURIAN¹, Hema NAIK¹, S. W. A. NAQVI²
¹National Institute of Oceanography, ²Council of Scientific

Time 11:00 - 12:30

Chair(s) Moriaki YASUHARA, University of Hong Kong

BG09-OS-D5-AM2-304B-007 | BG09-OS-A005

Paleo-Records of Histories of Deoxygenation and Its Ecosystem

Impact

Moriaki YASUHARA^{1,+}, Nancy N. RABALAIS², Daniel J. CONLEY³, Dimitri GUTIÉRREZ AGUILAR⁴

¹The University of Hong Kong, ²Louisiana State University, ³Lund University, ⁴Instituto del Mar del Perú

BG09-OS-D5-AM2-304B-008 | BG09-OS-A013

Hypoxia in the East China Sea

Zhuoyi ZHU $^{1#+}$, Hui WU 1 , Sumei LIU 2 , Ying WU 1 , Wenxia ZHANG 1 , Jing ZHANG 1

¹East China Normal University, ²Ocean University of China

BG09-OS-D5-AM2-304B-009 | BG09-OS-A014 (Invited)

Oxygen Deoxygenation Processes in the Pearl River Estuarine

Coastal Waters

Kedong YIN^{1#+}, Jianzhang HE¹
¹Sun Yat-sen University

BG09-OS-D5-AM2-304B-010 | BG09-OS-A015

Isotopomer and Isotopologue Abundance of Nitrous Oxide in

Mid and Deep Oceans for its Source and Sink Indicator

Naohiro YOSHIDA¹**, Sakae TOYODA¹, Osamu YOSHIDA², Shuichi WATANABE³

¹Tokyo Institute of Technology, ²Rakuno Gakuen University, ³Japan Agency for Marine-Earth Science and Technology

HS15 / Hydrologic Extremes in a Changing Climate

Fri - 08 Jun | MR318B

Time 08:30 - 10:30

Chair(s) Ashish SHARMA, University of New South Wales

Rajib MAITY, Indian Institute of Technology Kharagpur

HS15-D5-AM1-318B-001 | HS15-A015

A Comparative Analysis of Regional Drought Characterization over Krishna River Basin in India Using Potential and Actual

Evapotranspiration

Rehana SHAIK^{1‡+}, Nellibilli TINKUMONISH¹, Sireesha NAIDU¹
¹International Institute of Information Technology

HS15-D5-AM1-318B-002 | HS15-A016

Risk Evaluation of Forest Fire in Whole Japan in the Future

Using Land Surface Model

Yoshiya TOUGE^{1‡+}, Grace Puyang EMANG¹, So KAZAMA¹
¹Tohoku University

HS15-D5-AM1-318B-003 | HS15-A018

Evaluation on the Adaptability of Water Resources to Climate

Change in Huaihe River Basin

Cuishan LIU^{1‡+}, Junliang JIN¹, Guoqing WANG¹, Jianyun ZHANG¹, Yanli LIU¹, Zhenxin BAO¹
¹Nanjing Hydraulic Research Institute

HS15-D5-AM1-318B-004 | HS15-A002

Trivariate Probabilistic Assessment of Meteorological Drought to Develop Drought Severity Maps

Kironmala CHANDA1#+, Rajib MAITY2

¹Indian Institute of Technology (Indian School of Mines) Dhanbad, ²Indian Institute of Technology Kharagpur

HS15-D5-AM1-318B-005 | HS15-A019 (Invited)

Hydrological Changes Under Specific Warming Levels in the Ganga River Basin

Ashvani GOSAIN1#+

¹Indian Institute of Technology Delhi

Time 11:00 - 12:30

Chair(s) Ashvani K GOSAIN, Indian Institute of Technology Delhi

Rajib MAITY, Indian Institute of Technology Kharagpur

HS15-D5-AM2-318B-006 | HS15-A005 (Invited)

Urban Flooding Increasing While the Countryside Dries Up - A Global Assessment of Water (IN) Security Due to Rising

Temperatures

Ashish SHARMA^{1‡+}, Conrad WASKO²
¹University of New South Wales, ²University of Melbourne

HS15-D5-AM2-318B-007 | HS15-A003

Regional Climate Change Impact on Hydrologic Extremes of

Watersheds in North America and Africa

Thian Yew GAN^{1s+}, Xiaosheng QIN², Jianfeng LI³, Chun Chao KUO⁴, Mesgana GIZAW⁴, Tebikachew TARIKU⁴, Xuezhi TAN⁵ ¹Research Ambassador, ²Nanyang Technological University, ³Hong Kong Baptist University, ⁴University of Alberta, ⁵Sun Yat-sen University

HS15-D5-AM2-318B-008 | HS15-A010

Temporal Shifts in Peak Flow Magnitudes Across the Island of Maui, Hawai'i

Yu-Fen HUANG^{1‡+}, Ayron STRAUCH², Yin-Phan TSANG¹, Hannah CLILVERD¹

¹University of Hawaii at Manoa, ²Department of Land and Natural Resources HS15-D5-AM2-318B-009 | HS15-A014

Candidate Distributions for Drought Characterization Using Standardized Precipitation Evapotranspiration Index for

Meteorological Zones of India

Rehana SHAIK^{1‡+}, Nellibilli TINKUMONISH¹, Sireesha NAIDU¹
¹International Institute of Information Technology

HS22 / Climate Change Risk Assessment and Adaptation on Water-related Disaster and Water Resources in Asia and the Pacific

Fri - 08 Jun | MR301

Time 08:30 - 10:30

Chair(s) Kenji TANAKA, Kyoto University

Tae-Woong KIM, Hanyang University

HS22-D5-AM1-301-030 | HS22-A056

Re-Evaluation of Boryeong Dam Conduit Project's Economic Feasibility with Real Options Analysis

Seung Beom SEO^{1‡+}, Sun Hoo IHM², Young-Oh KIM¹
¹Seoul National University, ²Korea Environment Institute

HS22-D5-AM1-301-031 | HS22-A035

Risk Assessment of Future Extreme Drought According to Climate Change Scenarios

Ji-Eun KIM¹⁺, Si-Jung CHOI², Jisoo YU¹, Tae-Woong KIM^{1‡}
¹Hanyang University, ²Korea Institute of Civil Engineering and
Building Technology

HS22-D5-AM1-301-032 | HS22-A055

Fluvial and Pluvial Flood Risk Curve and its Future Changes in

Urban Areas: A Case Study of the Shonai River Basin, Japan

Tomohiro TANAKA^{1‡+}, Keiko KIYOHARA¹, Yasuto TACHIKAWA¹, Yutaka ICHIKAWA¹, Kazuaki YOROZU¹
¹Kyoto University

HS22-D5-AM1-301-033 | HS22-A059

Estimation for Storm Surge Height and Inundation Area on

Climate Change at Osaka Bay, Japan

Yoko SHIBUTANI^{1#}+, Sota NAKAJO², Sooyoul KIM³, Nobuhito MORI⁴, Hajime MASE⁴

¹Toyo Construction Co., Ltd., ²Osaka City University, ³Tottori University, ⁴Kyoto University

HS22-D5-AM1-301-034 | HS22-A050

Estimation of Public Preference for High-Tide Disaster Risk

Reduction Under Uncertainty

Toshio FUJIMI^{1#+}

¹Kumamoto University

HS22-D5-AM1-301-035 | HS22-A018

Development of Bias Correction Methods and of Extreme

Values Assessment Technology

Toshikazu KITANO1#+

¹Nagoya Institute of Technology

HS22-D5-AM1-301-036 | HS22-A044

A Comparison of Stochastic Extreme Downscaling Models for an Assessment of Changes in Rainfall

Intensity-Duration-Frequency Curves over South Korea

Hyun-Han KWON $^{{\scriptscriptstyle 1}\sharp*},$ Yong-Tak KIM $^{{\scriptscriptstyle 1}},$ Huy NGUYEN DINH $^{{\scriptscriptstyle 1}},$ Hong-Geun CHOI $^{{\scriptscriptstyle 1}}$

¹Chonbuk National University

Time 11:00 - 12:30

Chair(s) Nobhito MORI, Kyoto University

Tohikazu KITANO, Nagoya Institute of Technology

HS22-D5-AM2-301-037 | HS22-A048

Assessing Quantile Mapping Method for GCM Outputs Bias

Correction

Ke-Sheng CHENG^{1#}, Bo-Yu CHEN¹⁺
¹National Taiwan University

HS22-D5-AM2-301-038 | HS22-A053

Dual Window Bias Correction for Hourly Precipitation

Projected by Super Ensemble Experiments

Satoshi WATANABE1#+

¹The University of Tokyo

HS22-D5-AM2-301-039 | HS22-A002

Impact Assessment of Climate Change on Coastal Hazards in

East Asia

Nobuhito MORI1#+

¹Kyoto University

HS22-D5-AM2-301-040 | HS22-A019

Potential Wave-Attacked Risk Maps for Extreme Typhoon

Events Along the Coast of Taiwan

Hung-Ju SHIH $^{1\sharp}$, Ting-Yu LIANG 1 , Chih-Hsin CHANG 1 , Wei-Bo CHEN 1 , Lien-Kwei CHIEN 2*

¹National Science and Technology Center for Disaster Reduction,

²National Taiwan Ocean University

HS22-D5-AM2-301-041 | HS22-A041

Downscaling of Coastal Current in the Eastern Japan with

Included Freshwater Impact

Josko TROSELJ
1 $^{\sharp *}$, Yuki IMAI¹, Junichi NINOMIYA², Nobuhito MORI¹

¹Kyoto University, ²Kanazawa University

HS22-D5-AM2-301-042 | HS22-A037

High-Resolution Wave Climate Projection for Northwestern

Atlantic and Coastal Eastern USA

Adrean WEBB^{1#+}, Tomoya SHIMURA¹, Nobuhito MORI¹
¹Kyoto University

HS24 / The Third Pole Environment -Hydrometeorological Processes and Human Dimension

Fri - 08 Jun | MR318A

Time 08:30 - 10:30

Chair(s) Peter J VAN OEVELEN, International GEWEX Project

Office/USRA

HS24-D5-AM1-318A-001 | HS24-A001 (Invited)

Quantifying Recent Precipitation Change and Predicting Lake Expansion in the Inner Tibetan Plateau

Kun YANG1,2#+

¹Institute of Tibetan Plateau Research, Chinese Academy of Sciences, ²

HS24-D5-AM1-318A-002 | HS24-A003

Monitoring and Modeling the Multi-Sphere Interactions of the

Third Pole Region

Yaoming MA^{1,*}, Weiqiang MA¹, Zeyong HU¹, Lei ZHONG², Maoshan LI³, Fanglin SUN¹, Binbin WANG¹, Cunbo HAN¹, Zhangwei DING¹, Zhikun ZHU¹, Xuelong CHEN⁴

¹Chinese Academy of Sciences, ²University of Science and Technology of China, ³Chengdu University of Information Technology, ⁴University of Twente

HS24-D5-AM1-318A-003 | HS24-A005

Study on Replacing Land Surface Parameters to WRF Model and Validate Heat Fluxes over the Tibetan Plateau

Weiqiang MA1#+, Yaoming MA1, Lei ZHONG2

¹Chinese Academy of Sciences, ²University of Science and Technology of China

HS24-D5-AM1-318A-004 | HS24-A007

Exploring the Water Storage Changes in the Largest Lake (Selin

Co) over the Central Tibetan Plateau

Lei WANG1#+, Jing ZHOU1

¹Chinese Academy of Sciences

HS24-D5-AM1-318A-005 | HS24-A011

Quantitative Analysis of Surface Warming Amplification over the Tibetan Plateau After the Late 1990s Using Surface Energy

Balance Equation

Anmin DUAN^{1#+}, Jiayi SU¹, Haiming XU²

¹Chinese Academy of Sciences, ²Nanjing University of Information Science & Technology Time 11:00 - 12:30

Chair(s) Yaoming MA, Institute of the Tibetan Plateau, ITP-CAS

Peter J VAN OEVELEN, International GEWEX Project

Office/USRA

HS24-D5-AM2-318A-006 | HS24-A012

Spatiotemporal Variability of Snow Cover and Snow Water

Equivalent over Eurasia

Yinsheng ZHANG1#+

¹Chinese Academy of Sciences

HS24-D5-AM2-318A-007 | HS24-A006

The Activities of Low Level Pressure System over the Qinghai-Xizang Plateau and its Links with Evolution of

Plateau Monsoon

Zeyong HU1#+

¹Chinese Academy of Sciences

IG11 / Integrated Analysis of Geoscience Observations from the Floor to Surface of the Ocean

Fri - 08 Jun | MR323A

Time 08:30 - 10:30

Chair(s) Keisuke ARIYOSHI, JAMSTEC

Akira KUWANO-YOSHIDA, Kyoto University

James FOSTER, University of Hawaii

IG11-D5-AM1-323A-001 | IG11-A001

A Total Station Plan Combined with "Chikyu" and Donet: A Trial of Simultaneous Observation from Seafloor to

Atmosphere

Keisuke ARIYOSHI^{1#}, Shuhei NISHIDA¹, Yuya MACHIDA¹, Takeshi IINUMA¹, Hiroshi UCHIDA¹, Akira NAGANO¹, Takuya HASEGAWA¹, Toru MIYAMA¹, Yasumasa MIYAZAWA¹, Masahide WAKITA¹, Tatsu KUWATANI¹, Kan AOIKE¹, Mikiko FUJITA¹, Akiko TO¹, Akira KUWANO-YOSHIDA², Kaoru ICHIKAWA³

¹Japan Agency for Marine-Earth Science and Technology, ²Kyoto University, ³Kyushu University

IG11-D5-AM1-323A-002 | IG11-A005 (Invited)

A Modular Geodesy System for Subsea Monitoring

Jacob SOBIN $^{1\sharp +}$, Che Keong LEE 1 , Carsten FRANK 1 , Mathias MEYER 2

¹Kongsberg Maritime, ²Kongsberg Maritime Contros GmbH

IG11-D5-AM1-323A-003 | IG11-A004

Atypical Large-Meander Path of the Kuroshio South of Japan

Occurred in September 2017

Akira NAGANO^{1#}, Yusuke YAMASHITA², Keisuke ARIYOSHI¹, Takuya HASEGAWA¹, Masanao SHINOHARA³

¹Japan Agency for Marine-Earth Science and Technology, ²Kyoto University, ³The University of Tokyo

IG11-D5-AM1-323A-004 | IG11-A009

Waveglider-enabled Low-cost Sea-floor Geodesy and Ocean

Tomography

James FOSTER^{1‡*}, Todd ERICKSEN², Brian BINGHAM³, Bruce HOWE⁴

¹University of Hawaii at Manoa, ²United States Geological Survey, ³Naval Postgraduate School, ⁴University of Hawaii

IG11-D5-AM1-323A-005 | IG11-A006

Impact of Explosive Cyclones on the Deep Ocean in the North

Pacific: Simulations and Observations

Akira KUWANO-YOSHIDA^{1#+}, Hideharu SASAKI², Shigeki HOSODA², Yoshikazu SASAI³, Yasumasa MIYAZAWA², Katsufumi SATO⁴, Takuya FUKUOKA⁴, Tomoko NARAZAKI⁴ ¹Kyoto University, ²Japan Agency for Marine-Earth Science and Technology, ³Frontier Research Center for Global Change, ⁴The University of Tokyo

IG15 / Lake Studies of Environmental Change

Fri - 08 Jun | MR322B

Time 11:00 - 12:30

Chair(s) Chris GOURAMANIS, National University of Singapore

IG15-D5-AM2-322B-001 | IG15-A006

Heavy Metals in Lacustrine Sediments from Laguna De Bay,

Philippines: Analysis of Contamination History Using

Geochemical and GIS Methods

Bertrand Aldous SANTILLAN¹⁺, Decibel FAUSTINO-ESLAVA²⁺, Jonathan MACUROY¹, Clarisse Ann SIABABA¹, Loucel CUI¹, Betchaida PAYOT³, Carla DIMALANTA³, Juan Miguel GUOTANA³, Maria Victoria ESPALDON¹

¹University of the Philippines Los Baños, ²University of the Philippines, ³University of the Philippines Diliman

IG15-D5-AM2-322B-002 | IG15-A007

Did Climate Drive the Human Colonisation of the South

Pacific? New Evidence from Multi-Proxy Lake Sediment

Records

David SEAR1#+

¹University of Southampton

IG17 / Geo-science Education

Fri - 08 Jun | MR322B

Time 08:30 - 10:30

Chair(s) I-Te LEE, Central Weather Bureau

IG17-D5-AM1-322B-001 | IG17-A007

The Sydney Schools Weather and Air Quality (SWAQ)

Network

Melissa HART¹, Angela MAHARAJ¹²⁺, Giovanni DI VIRGILIO¹ ¹University of New South Wales

IG17-D5-AM1-322B-002 | IG17-A009

The Copernicus Academy Network and the EO4GEO Project

Valerio TRAMUTOLI1#+

¹University of Basilicata

IG17-D5-AM1-322B-003 | IG17-A010

The Best Educational Tool for Interdisciplinary Earth Science -

Giovanni

Jennifer WEI^{1#+}, Jim ACKER², Mahabaleshwara HEGDE², David MEYER³

¹NASA Goddard Earth Sciences Data and Information Services Center, ²NASA Goddard Earth Sciences Data and Information Services Center/ Adnet Systems, ³NASA Goddard Space Flight Center

IG17-D5-AM1-322B-004 | IG17-A003

Earth Science Education with a Portable 3D Digital Globe

System

A. SAITO^{1#+}, Takuya TSUGAWA², Takahito KAZAMA¹, Noriyuki NISHI³, Yoko ODAGI¹

¹Kyoto University, ²National Institute of Information and Communications Technology, ³Fukuoka University

IG17-D5-AM1-322B-005 | IG17-A004

In-School Service for the Geoscience by Central Weather

Bureau in Taiwan

I-Te LEE^{1,2‡+}, Jia-Chi CHEN¹, Fu-Yu WU¹, Mark CHENG¹¹Central Weather Bureau, ²National Central University

IG17-D5-AM1-322B-006 | IG17-A005

Creating and Using OER Materials in an Intro-Level

Atmospheric Science Class

Alison D. NUGENT $^{1\pm}$, Jennifer GRISWOLD 1 , Christina KARAMPERIDOU 1

¹University of Hawaii at Manoa

IG17-D5-AM1-322B-007 | IG17-A006

Carbonator: A Simple Climate Model for Secondary Science

Angela MAHARAJ1#+, Alexander SEN GUPTA1

¹University of New South Wales

IG25 / Tracing Hydrometeorological, Ecohydrological and Hydrological Processes Using Stable Water Isotopes

Fri - 08 Jun | MR323A

Time 11:00 - 12:30

Chair(s) Xinping ZHANG, Hunan Normal University

Huade GUAN, Flinders University

IG25-D5-AM2-323A-006 | IG25-A009 (Invited)

Data Assimilation of Water Isotope Information for

Constraining Hydrolmeteorological Processes

Kei YOSHIMURA1#+

¹The University of Tokyo

IG25-D5-AM2-323A-007 | IG25-A005

Stable Isotope Variations in Precipitation over an Endorheic Lake Basin (Siling Co) in the Central Tibetan Plateau During Different Seasons Related to Various Meteorological Factors and Moisture Sources

Yinsheng ZHANG^{1‡+}, Teng ZHANG^{1,2}, Yanhong GUO^{1,2}
¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

IG25-D5-AM2-323A-008 | IG25-A001

Multi-Site Precipitation Oxygen Isotope Index from the Asian Summer Monsoon Region Reflects Coherent ENSO Variability Zhongyin CAI^{1,8+}, Lide TIAN², Gabriel BOWEN³, Nai CAO⁴ ¹Chinese Academy of Sciences, ²Yunnan University, ³University of Utah, ⁴China University of Petroleum

OS09 / Regional Oceanic Numerical Modeling and Observations

Fri - 08 Jun | MR317B

Time 08:30 - 10:30

Chair(s) Changming DONG, Nanjing University of Information

Science and Technology

OS09-D5-AM1-317B-014 | OS09-A057 (Invited)

M2 Internal Tide Generation and Propagation Modulated by

Kuroshio to the Northeast of Taiwan

Zhenhua XU^{1‡+}, Hang CHANG¹, Baoshu YIN¹
¹Chinese Academy of Sciences

OS09-D5-AM1-317B-015 | OS09-A032

Assessment of Fine-Scale Parameterizations in the Deep Ocean of the North Pacific

Guiying CHEN¹⁺, Changrong LIANG¹, Xiaodong SHANG¹⁺
¹Chinese Academy of Sciences

OS09-D5-AM1-317B-016 | OS09-A035

Observation of Enhanced Nonlinear Interactions After the

Passage of Typhoon in the Western South China Sea

Xiaodong SHANG^{1‡+}, Changrong LIANG¹, Guiying CHEN¹ ¹Chinese Academy of Sciences

OS09-D5-AM1-317B-017 | OS09-A018

Fortnightly Variation of the Tsushima Warm Current on the

Continental Shelf of the Southwestern Japan Sea

Tetsutaro TAKIKAWA¹^{‡+}, Akihiko MORIMOTO², Moeto KYUSHIMA³, Kaoru ICHIKAWA⁴, Masashi ITO⁵, Kei YUFU⁴
¹Nagasaki University, ²Ehime University, ³Nagoya University,
⁴Kyushu University, ⁵Japan Fisheries Research and Education Agency

OS09-D5-AM1-317B-018 | OS09-A038

Research on the Multi-Scale Spatial and Temporal Variation of

Waves in the Southern California Bight

Yuhan CAO $^{1,2\sharp *}$, Changming DONG 1,3 , Yusuke UCHIYAMA 4 , Jin WANG 1 , Xunqiang YIN 2

¹Nanjing University of Information Science & Technology, ²State Oceanic Administration, ³University of California, Los Angeles, ⁴Kobe University

OS09-D5-AM1-317B-019 | OS09-A055

Numerical Study on the Tidal Dynamics and Asymmetry in

Zhoushan Archipelagoes, East China with a High Resolution

Finite Volume Model

Dongdong CHU¹, Jicai ZHANG^{1‡+}, Anzhou CAO¹, Li LI¹ ¹Zhejiang University

OS09-D5-AM1-317B-020 | OS09-A040

Variation of the Long-Term Yangtze River Discharge and its

Impact on Salt-Water Intrusion in the Yangtze River Estuary

Haiyun SHI¹⁺, Changming DONG^{1,2‡}, Chunhui LI¹, Changshui YI A³

¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles, ³State Oceanic Administration

Time 11:00 - 12:30

Chair(s) Changming DONG, Nanjing University of Information

Science and Technology

Yusuke UCHIYAMA, Kobe University

OS09-D5-AM2-317B-021 | OS09-A053 (Invited)

Simulation Studies on the Coastal and Interior Circulation

Dynamics of the South China Sea

Dongxiao WANG1#+, Tingting ZU2, Dongxiao WANG3, Yeqiang SHU2

¹South China Sea Institute of Oceanology, Chinese Academy of Sciences, ²Chinese Academy of Sciences, ³South China Sea Institute of Oceanology

OS09-D5-AM2-317B-022 | OS09-A043

On Improving Mesoscale Eddy Simulation Through a Bogus

Scheme in the Model Initialization

Yuhang ZHU¹⁺, Shiqiu PENG^{1#}
¹Chinese Academy of Sciences

OS09-D5-AM2-317B-023 | OS09-A046

Downscaling Experiments of Japan Coastal Seas Using Ocean

Past/Future Climate Prediction Simulations

Shiro NISHIKAWA^{1‡+}, Tsuyoshi WAKAMATSU², Yusuke TANAKA¹, Kei SAKAMOTO³, Hiroyuki TSUJINO³, Yoichi ISHIKAWA¹

¹Japan Agency for Marine-Earth Science and Technology, ²Nansen Environmental and Remote Sensing Center, ³Japan Meteorological Agency

OS09-D5-AM2-317B-024 | OS09-A048

Interannual Variability of Boundary Currents and Barrier

Layer Thickness over the Bay of Bengal and its Relation with

Indian Ocean Dipole

Arun CHAKRABORTY1#+

¹Indian Institute of Technology Kharagpur

OS09-D5-AM2-317B-025 | OS09-A023

Air-Sea Interaction in the Kuroshio Area of East China Sea

During a Typhoon

Yang YU^{1‡+}, Changming DONG^{1,2}, Haixia SHAN¹, Bin ZOU³
¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles, ³National Satellite Ocean Application Center

OS09-D5-AM2-317B-026 | OS09-A042

Seasonal Variability of Eddy-Induced Vertical Nutrient Flux and Associated Upper-Ocean Primary Production Along the

Yusuke UCHIYAMA^{1#+}, Yota SUZUE², Hidekatsu YAMAZAKI³ ¹Kobe University, ²CTI Engineering Co., Ltd., ³Tokyo University of Marine Science and Technology

PS19 / Rosetta, Comets, and Other Icy Bodies

Fri - 08 Jun | MR304A

Time 08:30 - 10:30

Chair(s) Arika HIGUCHI, National Astronomical Observatory of

Japan

Michael S. P. KELLEY, University of Maryland

PS19-D5-AM1-304A-001 | PS19-A001

Inner Solar System Objects with Hyperbolic Orbits:

Interstellar Origin or Oort Cloud Comets?

Arika HIGUCHI^{1#+}, Eiichiro KOKUBO¹
¹National Astronomical Observatory of Japan

PS19-D5-AM1-304A-002 | PS19-A018 (Invited)

Water Chemistry on Early Ceres: Its Implications for Planetary

Formation

Yasuhito SEKINE1#+, Takazo SHIBUYA2

¹The University of Tokyo, ²Japan Agency for Marine-Earth Science and Technology

PS19-D5-AM1-304A-003 | PS19-A021

Geological Processes on Comets: Insights from the Rosetta

Mission

M. Ramy EL-MAARRY^{1#+}
¹University of Colorado Boulder

PS19-D5-AM1-304A-004 | PS19-A010 (Invited)

The Seasonal Cycle of Water Ice at the Surface of Comet

67P/Churyumov-Gerasimenko as Observed by Virtis Onboard

Rosetta

Mauro CIARNIELLO¹⁵⁺, Gianrico FILACCHIONE¹, Fabrizio CAPACCIONI¹, Maria Cristina DE SANCTIS¹, Maria Teresa CAPRIA¹, Andrea RAPONI¹, Federico TOSI¹, Michelangelo FORMISANO¹, Andrea LONGOBARDO¹, Giovanna RINALDI¹, Stephane ERARD², Dominique BOCKELEE-MORVAN², Cedric LEYRAT², Gabriele ARNOLD³, Maria Antonietta BARUCCI², Eric QUIRICO⁴, Sonia FORNASIER⁵, David KAPPEL³, Batiste ROUSSEAU⁶, Stefano MOTTOLA³

¹National Institute for Astrophysics, ²Paris Observatory, ³German Aerospace Center, ⁴Centre Nationnal de la Recherche Scientifique, ⁵Paris Diderot University, ⁶Institut de Planétologie et d'Astrophysique de Grenoble

PS19-D5-AM1-304A-005 | PS19-A023 (Invited)

Manx Comets: A Test of Solar System Dynamics Evolutionary

Models

Karen MEECH^{1‡+}, Jan KLEYNA¹, Jacqueline KEANE², Olivier HAINAUT³, Richard WAINSCOAT¹, Bin YANG³, Marco MICHELI⁴, Alessandro MORBIDELLI⁵

¹University of Hawaii at Manoa, ²University of Hawaii, ³European Southern Observatory, ⁴European Space Agency, ⁵Observatoire de la Cote d'Azur PS19-D5-AM1-304A-006 | PS19-A028 (Invited)

On the Orbital History and the Outburst Activity of Centaurs

Wing-Huen IP1#+, Yu-Chi CHENG1

¹National Central University

PS19-D5-AM1-304A-007 | PS19-A020 (Invited)

Rotational Evolution of Comets

Nalin SAMARASINHA1#+, Beatrice MUELLER1

¹Planetary Science Institute

PS19-D5-AM1-304A-008 | PS19-A006

A Fireball and Potentially Hazardous Binary Asteroid (164121)

2003 YT1

Toshihiro KASUGA¹⁵⁺, Mikiya SATO², Masayoshi UEDA², Yasunori FUJIWARA², Chie TSUCHIYA³, Junichi WATANABE³ ¹NAOJ / Kyoto Sangyo University, ²The Nippon Meteor Society,

³National Astronomical Observatory of Japan

Time 11:00 - 12:30

Chair(s) Bin YANG, Yunnan Observatories, Chinese Academy of

Sciences

Ramon BRASSER, EarthLife Science Institute, Tokyo

Institute of Technology

PS19-D5-AM2-304A-009 | PS19-A025

Modeling the Diurnal Cycle of Water

Sublimation/Condensation on Comet 67P

Liang Liang YU^{1#+}, Tilman SPOHN², Wing-Huen IP³

¹Macau University of Science and Technology, ²German Aerospace
Center, ³National Central University

PS19-D5-AM2-304A-010 | PS19-A022 (Invited)

Six Years of TRAPPIST Comet Survey

Cyrielle OPITOM $^{1\sharp +}$, Emmanuel JEHIN 2 , Damien HUTSEMÉKERS 2 , Jean MANFROIF 2

¹European Southern Observatory, ²University of Liège

PS19-D5-AM2-304A-011 | PS19-A027

Rosetta/Osiris Imaging of Variable Emission of Volatile

Fragment Species in the Inner Coma of Comet

67P/Churyumov-Gerasimenko

Fiorangela LA FORGIA1 1 +, Monica LAZZARIN1, Dennis BODEWITS 2

¹University of Padova, ²University of Maryland

PS19-D5-AM2-304A-012 | PS19-A009

Photometric and Spectroscopic Study of Comet C/2017 K2

Xiliang ZHANG^{1#+}, Bin YANG^{2,3}

¹Chinese Academy of Sciences, ²Yunnan observatories, Chinese Academy of Sciences, ³European Southern Observatory

PS19-D5-AM2-304A-013 | PS19-A013

The Search for Unexpected and Infrequent Ultraviolet Coma Emission Features at 67P/Churyumov-Gerasimenko with Data

from the Alice Ultraviolet Spectrograph

John NOONAN^{1‡+}, S. Alan STERN², Joel PARKER², Brian KEENEY², Paul FELDMAN³, Andrew STEFFL², Ronald VERVACK³, Jean-Loup BERTAUX⁴, Harold WEAVER³, Lori FEAGA⁵, Matthew KNIGHT⁵

¹Lunar and Planetary Laboratory, ²Southwest Research Institute, ³Johns Hopkins University, ⁴University of Versailles Saint-Quentin-en-Yvelines, ⁵University of Maryland

PS19-D5-AM2-304A-014 | PS19-A024

Thermal Modeling of Comet-Like Objects from AKARI Observations

Yoonsoo BACH¹⁺, Masateru ISHIGURO^{1‡}, Fumihiko USUI² ¹Seoul National University, ²Kobe University

SE12-17 / Formation and Evolution of the Tethyan Orogenic Belt: Multi-disciplinary Constraints

Fri - 08 Jun | MR321A

Time 08:30 - 10:30

Chair(s) Chuan-Zhou LIU, Chinese Academy of Sciences

Di-Cheng ZHU, China University of Geosciences

SE12-17-D5-AM1-321A-001 | SE12-17-A016 (Invited)

Late Miocene Tectonic Complexity in the Arabia-Eurasia

Collision Zone from a Magmatic Perspective

Kwan-Nang PANG $^{1s+}$, Sun-Lin CHUNG 2 , Mohammad Hossein ZARRINKOUB 3 , Aliakbar BAHARIFAR 4 , Han-Yi CHIU 1 , Hao-Yang LEE 1

¹Academia Sinica, ²National Taiwan University, ³Birjand University, ⁴Payame-Noor University

SE12-17-D5-AM1-321A-002 | SE12-17-A030

Initiation of Continental Underthrusting: Insights from

Intracontinental Deformation of Northeast Iran

Yang CHU^{1#+}, Bo WAN¹, Ling CHEN¹
¹Chinese Academy of Sciences

SE12-17-D5-AM1-321A-003 | SE12-17-A009

High Pressure Granulite-Facies Overprinting During the

Exhumation of Eclogites in the Bangong-Nujiang Suture Zone,

Central Tibet: Link to Flat-Slab Subduction

Xiu-Zheng ZHANG $^{1\pm}$, Qiang WANG 2 , Yong-Sheng DONG 3 , Chunfu ZHANG 4

¹Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, ²Chinese Academy of Sciences, ³Jilin University, ⁴Fort Hays State University

SE12-17-D5-AM1-321A-004 | SE12-17-A024

New U-Pb Zircon Ages and Hf Isotopic Composition of Abor

Volcanics of Eastern Himalaya, Northeast India

Krishnakanta ATHOKPAM SINGH1#+

¹Wadia Institute of Himalayan Geology

SE12-17-D5-AM1-321A-005 | SE12-17-A002

Paleocene (Ca. 62 Ma) Leucogranites in Southern Lhasa, Tibet:

Products of Syn-Collisional Crustal Anatexis During Slab

Roll-Back?

Lin MA1#+, Qiang WANG2, Andrew KERR3

 ${}^1Guangzhou\ Institute\ of\ Geochemistry,\ Chinese\ Academy\ of\ Sciences,$

²Chinese Academy of Sciences, ³Cardiff University

Time 11:00 - 12:30

Chair(s) Bo WAN, Chinese Academy of Sciences

SE12-17-D5-AM2-321A-006 | SE12-17-A010 (Invited)

Sn Wave Attenuation Beneath the Tibetan Plateau

Lian-Feng ZHAO^{1‡+}, Xiao-Bi XIE², Xiao MA¹, Zhen-Xing YAO¹
¹Chinese Academy of Sciences, ²University of California, Santa Cruz

SE12-17-D5-AM2-321A-007 | SE12-17-A027

Source of Ore-Related and Ore-Barren Magmas of Miocene

Porphyry Copper Deposits in the Eastern Tethyan Orogenic

Belt: Evidence from Sr, O Isotopes and Sr/Y Ratios

Chen DENG¹⁺, Bo WAN^{1#}, Leilei DONG¹, Talebian MORTEZA², B.F. WINDLEY³

¹Chinese Academy of Sciences, ²Geological Survey of Iran, ³University of Leicester

SE12-17-D5-AM2-321A-008 | SE12-17-A007

Geodynamical Evolution of the India-Asia Collision Zone

Since the Late Cretaceous

Di-Cheng ZHU $^{1\sharp *},$ Qing WANG 1, Peter A. CAWOOD 2, Zhidan ZHAO 1, Sun-Lin CHUNG 3

¹China University of Geosciences, ²Monash University, ³National Taiwan University

SE24-29 / Active Volcanic Processes from the Mantle to the Atmosphere: Multidisciplinary Approaches to Monitoring, Hazards, and Impacts

Fri - 08 Jun | MR319B

Time 08:30 - 10:30

Chair(s) Armin KLEINBOEHL, NASA-JPL

Florian M. SCHWANDNER, NASA-JPL

SE24-29-D5-AM1-319B-001 | SE24-29-A025

Petrogenesis of the Layered Mafic-Ultramafic Cumulates of the Palawan Ophiolite, Philippines

Betchaida PAYOT $^{1\pm}$, Gabriel Theophilus VALERA 1 , Jeanne Myrtia MACALALAD 1 , Valerie Shayne OLFINDO 2 , Juan Miguel GUOTANA 1

¹University of the Philippines Diliman, ²University of the Philippines

SE24-29-D5-AM1-319B-002 | SE24-29-A022 (Invited)

Water Transport of Subducting Slabs

Lijuan HE1#+

¹Chinese Academy of Sciences

SE24-29-D5-AM1-319B-003 | SE24-29-A035

3-D Crustal and Upper Mantle Velocity Structure Beneath the

Cenozoic Intraplate Volcanic Belt in Northeast China

Ying CHEN¹, Yinshuang AI^{1‡+}, Yingjie YANG², Jianshe LEI³
¹Chinese Academy of Sciences, ²Macquarie University, ³China
Earthquake Administration

SE24-29-D5-AM1-319B-004 | SE24-29-A037

Calcic Amphibole Thermobarometry: Refinement and

Application to Volcanic Rocks

Filippo RIDOLFI^{1±+}, Francois HOLTZ¹, Renat ALMEEV¹, Chao ZHANG¹, Dongmei QI¹, Adriana Miriam CURRIN SALA¹, Robert BALZER¹, Stefan Andreas LINSLER¹

Leibniz Universität Hannover

SE24-29-D5-AM1-319B-005 | SE24-29-A002 (Invited)

Volcanoes and Lunar Cycles: Towards Using Tidal Stresses to Forecast Eruptions

Társilo GIRONA^{1‡+}, Christian HUBER², Corentin CAUDRON³
¹Jet Propulsion Laboratory, California Institute of Technology, ²Brown University, ³Royal Observatory of Belgium

SE24-29-D5-AM1-319B-006 | SE24-29-A034

Magma Chamber and Volcanic Conduit Interaction: A Tale from Long-Period Tremor Activities in Aso Volcano, Japan Teh-Ru Alex SONG¹⁵⁺, Jieming NIU¹ ¹University College London SE24-29-D5-AM1-319B-007 | SE24-29-A032

Temporal Variation of Magma Feeding System from BC466 to

Present in Chokai Volcano, NE Japan

Masao BAN^{1‡+}, Takuya TAKAHASHI¹, Takanori SATO¹, Shintaro HAYASHI², Tsukasa OHBA², Ryuichi SHINJO³, Yuki NISHI¹
¹Yamagata University, ²Akita University, ³University of the Ryukyus

SE24-29-D5-AM1-319B-008 | SE24-29-A008 (Invited)

Analyzing the Continuous Volcanic Tremors Detected During

the 2015 Phreatic Eruption of the Hakone Volcano

Yohei YUKUTAKE^{1#+}, Ryou HONDA¹, Masatake HARADA¹, Ryosuke DOKE¹, Tatsuhiko SAITO², Tomotake UENO², Shin'ichi SAKAI³, Yuichi MORITA³

¹Hot Springs Research Institute of Kanagawa Prefecture, ²National Research Institute for Earth Science and Disaster Resilience, ³The University of Tokyo

SE24-29-D5-AM1-319B-009 | SE24-29-A004

Processes and Timescales Leading to Eruption of Monogenetic

Volcanism in Ocean Islands

Helena ALBERT^{1#+}, Fidel COSTA¹
¹Nanyang Technological University

Time 11:00 - 12:30

Chair(s) Florian M. SCHWANDNER, NASA-JPL

SE24-29-D5-AM2-319B-010 | SE24-29-A017 (Invited)

Silent Degassing from Volcanoes: Implications for Monitoring

and Global Flux Budgets

Nemesio PEREZ¹#+, Pedro HERNANDEZ²,³, Padron ELEAZAR²,³, Gladys MELIAN²,³

 1 Instituto Volcanol \tilde{A}^3 gico de Canarias (INVOLCAN), 2 Instituto Volcanológico de Canarias (INVOLCAN), 3 Institute of Technology and Renewable Energy

SE24-29-D5-AM2-319B-011 | SE24-29-A009

Remote Sensing of Volcanic CO2: Satellites, Aircraft, sUAS, and Proxies

Florian M. SCHWANDNER^{1,2s+}, Simon A. CARN³, Charles MILLER¹, Robert R. BOGUE¹, David PIERI⁴, Akihiko KUZE⁵, Kei SHIOMI⁵, Fumie KATAOKA⁶, Eliecer DUARTE⁷, Jorge Andres DIAZ⁷, Joshua B. FISHER¹, Kerry-Anne CAWSE-NICHOLSON¹

¹Jet Propulsion Laboratory, California Institute of Technology,

²University of California, Los Angeles, ³Michigan Technological University, ⁴California Institute of Technology, ⁵Japan Aerospace Exploration Agency, ⁶Remote Sensing Technology Center of Japan (RESTEC), ⁷National University of Costa Rica

SE24-29-D5-AM2-319B-012 | SE24-29-A003 (Invited)

HCN Emissions from the Explosive Volcanic Eruption of Mt.

Pinatubo in 1991

Armin KLEINBOEHL^{1‡+}, Geoffrey TOON¹, Max COLEMAN¹, Florian M. SCHWANDNER^{1,2}, Debra WEISENSTEIN³, Yuk YUNG⁴, Tamsin MATHER⁵, Vlada STAMENKOVIC¹

¹Jet Propulsion Laboratory, California Institute of Technology, ²Gas Monitoring Solutions, ³Harvard University, ⁴California Institute of Technology, ⁵Oxford University

SE24-29-D5-AM2-319B-013 | SE24-29-A020 (Invited)

The Causes of the Little Ice Age

Brian ZAMBRI^{1#+}, Alan ROBOCK¹
¹Rutgers University

SE24-29-D5-AM2-319B-014 | SE24-29-A036

Structural Characteristics and Collapse Mechanism of the

Cretaceous Geumseongsan Caldera, South Korea

Seongjun LEE1^{\$+}, Youngbeom CHEON¹, Moon SON¹

¹Pusan National University

SE24-29-D5-AM2-319B-015 | SE24-29-A007

Impact of Accumulation Period and Seasonality on Ashfall

Load Approximation via an Inverse Power Law Model

Alexandros POULIDIS $^{1\#}$, Tetsuya TAKEMI 1 , Atsushi SHIMIZU 2 , Masato IGUCHI 1 , Susanna JENKINS 3

 $^1Kyoto\ University,\ ^2National\ Institute\ for\ Environmental\ Studies,$

³Nanyang Technological University

SE24-29-D5-AM2-319B-016 | SE24-29-A028 (Invited)

Translating Volcanic Hazard Complexity into an Interactive

Game of Risk Mitigation Management

Isaac KERLOW1#+

¹Nanyang Technological University

SE27 / Modeling of Slow and Regular Earthquakes

Fri - 08 Jun | MR321B

Time 08:30 - 10:30

Chair(s) Yuta MITSUI, Shizuoka University

Naofumi ASO, University of Tokyo

Suguru YABE, JAMSTEC

SE27-D5-AM1-321B-001 | SE27-A015

Along Strike Variation and Migration of Long-Term Slow Slip

Event in the Nankai Subduction Zone

Ryota TAKAGI^{1#+}, Naoki UCHIDA¹, Kazushige OBARA² ¹Tohoku University, ²The University of Tokyo

SE27-D5-AM1-321B-002 | SE27-A004

Moment Tensor Inversion of Shallow Very Low-Frequency

Earthquakes Around off the Kii Peninsula, Japan, Using a

Three-Dimensional Velocity Structure Model

Shunsuke TAKEMURA^{1±+}, Takanori MATSUZAWA², Takeshi KIMURA², Takashi TONEGAWA³, Katsuhiko SHIOMI²
¹National Research Institute for Earth Science and Disaster Resilience,
²National Research Institute for Earth Science and Disaster Prevention,
³Japan Agency for Marine-Earth Science and Technology

SE27-D5-AM1-321B-003 | SE27-A001

Focal Mechanism Estimation of Low-Frequency Earthquakes Using High Frequency Seismogram: Method and Synthetic

Test

Suguru YABE^{1‡+}, Shunsuke TAKEMURA²
¹Japan Agency for Marine-Earth Science and Technology, ²National
Research Institute for Earth Science and Disaster Resilience

SE27-D5-AM1-321B-004 | SE27-A006

Numerical Experiments for Estimating CMT Solutions Using

Inland and Offshore Seismic Networks in Tohoku

Tatsuya KUBOTA^{1*}, Shunsuke TAKEMURA¹, Tatsuhiko SAITO¹
¹National Research Institute for Earth Science and Disaster Resilience

SE27-D5-AM1-321B-005 | SE27-A019

Effects of Fractal Roughness on Critical Jump Distance for

Propagating Earthquake Ruptures Across Step-Overs in Virtual

Quake Simulations

 $Molly\ LUGINBUHL^{1z+},\ John\ WILSON^1,\ John\ RUNDLE^1,\ Donald\ TURCOTTE^1$

¹University of California, Davis

SE27-D5-AM1-321B-006 | SE27-A011

Stochastic Dynamic Modeling to Reproduce Variability of Earthquakes

Naofumi ASO^{1±+}, Ryosuke ANDO², Satoshi IDE²
¹Tokyo Institute of Technology, ²The University of Tokyo

SE27-D5-AM1-321B-007 | SE27-A021

A 2D Stochastic Cell-Automaton Model for Slow Earthquakes

Satoshi IDE1#+, Suguru YABE2

¹The University of Tokyo, ²Japan Agency for Marine-Earth Science and Technology

Time 11:00 - 12:30

Chair(s) Keisuke ARIYOSHI, JAMSTEC

Yuta MITSUI, Shizuoka University

SE27-D5-AM2-321B-008 | SE27-A007

Deformation of Lawsonite Blueschist at High Pressure and High Temperature and Implications for Slow Earthquakes in Subduction Zones

Haemyeong JUNG^{1‡+}, Seungsoon CHOI¹, Sejin JUNG¹
¹Seoul National University

SE27-D5-AM2-321B-009 | SE27-A014

Effect of Pore-Fluid Pressure on the Frictional Velocity

Dependence of Subduction-Zone Faults

Akito TSUTSUMI^{1#+}, Saki HIGA¹
¹Kyoto University

SE27-D5-AM2-321B-010 | SE27-A005

Dehydration Faulting in Layered Serpentinized Peridotite: Implications for the Genesis of Regular and Slow Earthquakes in Subduction Zones

Junfeng ZHANG^{1#+}, Yongfeng WANG¹
¹China University of Geosciences

SE36 / Bridging Scales at Mobile Belts: Fault Rheology and Earthquake Physics

Fri - 08 Jun | MR314

Time 08:30 - 10:30

Chair(s) James D P MOORE, Earth Observatory of Singapore

Yukitoshi FUKAHATA, Kyoto University

SE36-D5-AM1-314-001 | SE36-A008 (Invited)

Lithosphere and Shallow Asthenosphere Rheology from

Observations of Post-Earthquake Relaxation

Fred POLLITZ1#+

¹United States Geological Survey

SE36-D5-AM1-314-002 | SE36-A009

Characteristics of Crustal Deformation of an

Elastic-Viscoelastic Composite System: Very Long Effective

Relaxation Time than the Intrinsic One

Yukitoshi FUKAHATA^{1‡+}, Mitsuhiro MATSU'URA² ¹Kyoto University, ²Institute of Statistical Mathematics

SE36-D5-AM1-314-003 | SE36-A017 (Invited)

Transient Behavior of the Earthquake Cycle Associated with

Change of Slip Direction and Fault Strength

Kiyokazu OOHASHI^{1#+}
¹Yamaguchi University

SE36-D5-AM1-314-004 | SE36-A020

Stress-Constrained Inversion for Interseismic Coupling on

Shallow Megathrusts: Life in the Stress Shadow

Eric LINDSEY^{1,‡+}, Rishav MALLICK¹, Lujia FENG¹, Rafael ALMEIDA¹, Kyle BRADLEY¹, Judith HUBBARD¹, Emma HILL² ¹Nanyang Technological University, ²Earth Observatory of Singapore / NTU

SE36-D5-AM1-314-005 | SE36-A011

Transient Mantle Wedge Flow Along the Sumatran Subduction

Zone Accelerated by Decade of Great Earthquakes

Qiang QIU^{1*+}, James Daniel Paul MOORE¹, Sylvain BARBOT¹, Lujia FENG¹, Emma HILL²

 $^1\mbox{Nanyang Technological University,}\,^2\mbox{Earth Observatory of Singapore}\,/\,\mbox{NTU}$

SE36-D5-AM1-314-006 | SE36-A005

Frictional Sliding of Limestone Fault Gouge Under

Hydrothermal Conditions

Yongsheng ZHOU¹⁵⁺, Helen LACEY², Jiao YU¹, Lei ZHANG¹, Wenming YAO¹, Changrong HE¹ ¹China Earthquake Administration, ²Imperial College London

SE36-D5-AM1-314-007 | SE36-A016 (Invited)

Near-Field Surface Displacement of the 2016 Norcia &

Kaikoura Earthquakes Measured Using Low-Cost GNSS

Maxwell WILKINSON¹⁵⁺, Richard JONES¹, Kenneth MCCAFFREY², Gerald ROBERTS³, Robert HOLDSWORTH², Laura GREGORY⁴, Richard WALTERS², Edward RHODES⁵, Luke WEDMORE⁴, Simon LAMB⁶, Huw GOODALL⁴, Francesco IF77I³

¹Geospatial Research Limited, ²Durham University, ³University College London, ⁴University of Leeds, ⁵University of Sheffield, ⁶Victoria University of Wellington

SE36-D5-AM1-314-008 | SE36-A007

Origin of a Foreland-Dipping Seismogenic Zone and its Basal

Decollement in Southwestern Taiwan

Wei-Hau WANG^{1#+}, Strong WEN¹
¹National Chung Cheng University

Time 11:00 - 12:30

Chair(s) James D P MOORE, Earth Observatory of Singapore

Yukitoshi FUKAHATA, Kyoto University

SE36-D5-AM2-314-009 | SE36-A010 (Invited)

Modeling the Strain Concentration Zone in the Japanese Island Arc Crust to Understand the Generation Processes of Large Intraplate Earthquakes

Bunichiro SHIBAZAKI¹*, Takuya NISHIMURA², Satoshi MATSUMOTO³, Takumi MATSUMOTO⁴

¹International Institute of Seismology and Earthquake Engineering, ²Kyoto University, ³Kyushu University, ⁴National Research Institute for Earth Science and Disaster Prevention

SE36-D5-AM2-314-010 | SE36-A003 (Invited)

The 3-D Tectonic Stress Field in and Around Japan Inferred from CMT Data Inversion

Toshiko TERAKAWA^{1#+}
¹Nagoya University

SE36-D5-AM2-314-011 | SE36-A004 (Invited)

Stress Rotation Near the Main Fault of the 2000 Tottori

Earthquake

Takaki IWATA^{1#+}
¹Tokiwa University

SE36-D5-AM2-314-012 | SE36-A006 (Invited)

Earthquake Swarms and Their Relation to Crustal Fluid as Revealed by Dense Seismic Observation in Hakone Volcano, Central Japan

Yohei YUKUTAKE1#+

¹Hot Springs Research Institute of Kanagawa Prefecture

SE36-D5-AM2-314-013 | SE36-A013

The Role of Active Minor Faults in the Tectonic Deformation Budget of the Inland High-Strain Rate Zone, Central Japan

Tomonori TAMURA^{1‡+}, Kiyokazu OOHASHI¹, Makoto OTSUBO², Ayumu MIYAKAWA², Masakazu NIWA³
¹Yamaguchi University, ²National Institute of Advanced Industrial Science and Technology, ³Japan Atomic Energy Agency

SE36-D5-AM2-314-014 | SE36-A014

Thermochronologic Reconstruction of the Long-Term

Uplift-Denudation of the Japan Arc

Takahiro TAGAMI^{1‡+}, Shigeru SUEOKA²
¹Kyoto University, ²Japan Atomic Energy Agency

SE36-D5-AM2-314-015 | SE36-A024

A Hierarchical Clustering of Dense Gnss Data in Taiwan to

Identify Active Tectonic Boundaries

Atsushi TAKAHASHI $^{1\pm}$, Manabu HASHIMOTO 1 , Jyr-Ching HU 2 , Yukitoshi FUKAHATA 1

¹Kyoto University, ²National Taiwan University

ST01 / Flare Activity: Observation, Physics, and Forecasting

Fri - 08 Jun | MR317A

Time 08:30 - 10:30

Chair(s) Han HE, National Astronomical Observatories of Chinese

Academy of Sciences

Robertus ERDELYI, University of Sheffield

ST01-D5-AM1-317A-001 | ST01-A013 (Invited)

Solar Flare Probability Prediction Using Deep Neural

Networks: Deep Flare Net

Naoto NISHIZUKA
1 $^{\sharp *}$, Komei SUGIURA¹, Yuki KUBO¹, Mitsue DEN¹, Mamoru ISHII¹

¹National Institute of Information and Communications Technology

ST01-D5-AM1-317A-002 | ST01-A001

Deep Learning Based Solar Flare Forecasting Model

Xin HUANG1#+, Huaning WANG2

¹National Astronomical Observatories, Chinese Academy of Sciences, ²Chinese Academy of Sciences

ST01-D5-AM1-317A-003 | ST01-A002 (Invited)

Tracking the Evolution of Flaring Active Regions in 3D

Marianna KORSOS1#+

¹University of Sheffield

ST01-D5-AM1-317A-004 | ST01-A017

AI-generated Magnetograms of the Sun

Taeyoung KIM¹#+, Eunsu PARK¹, Harim LEE¹, Yong-Jae MOON¹, Daye LIM¹, Soojeong JANG¹, Sung-Ho BAE¹, Lokwon KIM¹, Il-Hyun JO¹, Myungjin CHOI²

¹Kyung Hee University, ²InSpace Co., Ltd

ST01-D5-AM1-317A-005 | ST01-A016

A Coronal Force-Free Field Construction Method and its

Application to AR 11974 that Produced Two Flares and a

Coronal Mass Ejection

Sibaek YI1+, Gwang-Son CHOE1+, Kap-Sung KIM1, Kyungsuk CHO2

¹Kyung Hee University, ²Korea Astronomy and Space Science Institute

ST01-D5-AM1-317A-006 | ST01-A020

On the Topological Feature of a Flare-CME Event

Juan GUO^{1#+}, Huaning WANG², Xiaoshuai ZHU², Xinghua DAI²
¹National Astronomical Observatories, Chinese Academy of Sciences,
(NAOC), ²Chinese Academy of Sciences

Time 11:00 - 12:30

Chair(s) Robertus ERDELYI, University of Sheffield

ST01-D5-AM2-317A-007 | ST01-A007 (Invited)

Formation of Coronal Magnetic Flux Ropes

Rui LIU^{1#+}

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ST01-D5-AM2-317A-008 | ST01-A008

${\bf Magnetic\ Configuration\ Associated\ with\ Two-Ribbon\ Solar}$

Flares: AR 10930 vs. AR 11158

Han HE^{1s+} , Huaning WANG¹, Yihua YAN¹, Bo LI², Peng-Fei CHEN³

¹Chinese Academy of Sciences, ²Shandong University, ³Nanjing University

ST01-D5-AM2-317A-009 | ST01-A009 (Invited)

Multi-Episode Chromospheric Evaporation Observed in a Solar Flare

Hui TIAN1#+, N.-H. CHEN2

¹Peking University, ²Korea Astronomy and Space Science Institute

ST01-D5-AM2-317A-010 | ST01-A011 (Invited)

Observation of a Large-Scale Quasi-Circular Secondary Ribbon

Associated with Successive Flares and a Halo CME

Eun-Kyung LIM¹º+, Vasyl YURCHYSHYN², Pankaj KUMAR³, Kyuhyoun CHO⁴, Chaowei JIANG⁵, Sujin KIM⁶, Heesu YANG¹, Jongchul CHAE⁴, Kyungsuk CHO¹, Jeongwoo LEE⁴ ¹Korea Astronomy and Space Science Institute, ²New Jersey Institute of Technology, ³National Aeronautics and Space Administration, ⁴Seoul National University, ⁵Harbin Institute of Technology, ⁶Kyunghee University

ST01-D5-AM2-317A-011 | ST01-A010

Statistical Investigation of Low Atmospheric Response During Flares Using the Multi-Wavelengths Observations by Hinode, IRIS, and SDO

Kyoung Sun LEE^{1‡+}, Kyoko WATANABE², Shinsuke IMADA³, David BROOKS⁴, Hirohisa HARA¹

¹National Astronomical Observatory of Japan, ²National Defense Academy of Japan, ³Nagoya University, ⁴George Mason University

ST05 / The Responses of Earth's Inner Magnetosphere to Extreme Solar Events

Fri - 08 Jun | MR302A

Time 08:30 - 10:30

Chair(s) Wenlong LIU, Beihang University

ST05-D5-AM1-302A-001 | ST05-A003 (Invited)

Radiation Belt Enhancements Due to Strong Solar Wind

Forcing

Daniel BAKER^{1#+}

¹University of Colorado Boulder

ST05-D5-AM1-302A-002 | ST05-A021 (Invited)

Shock-Driven Instant Relativistic Electron Dynamics in the Outer Belt

Yixin HAO^{1#+}, Zhiyang LIU¹, Ying LIU¹, Xuzhi ZHOU¹
¹Peking University

ST05-D5-AM1-302A-003 | ST05-A017

On the Relation of Deep Penetration of MeV Electrons and

Extreme Solar Wind Conditions

Xinlin LI^{1‡+}, Daniel BAKER¹, Hong ZHAO¹, Allison JAYNES², Shri KANEKAL³, Berhard BLAKE⁴, Michael TEMERIN⁵
¹University of Colorado Boulder, ²University of Iowa, ³NASA Goddard Space Flight Center, ⁴The Aerospace Corporation, ⁵University of California, Berkeley

ST05-D5-AM1-302A-004 | ST05-A026

Energetic Electron Penetration into Inner Radiation Zone

Joseph FENNELL $^{1;*}$, Drew TURNER 1 , James ROEDER 1 , Seth CLAUDEPIERRE 1 , Berhard BLAKE 1 , James CLEMMONS 1 , Craig KLETZING 2 , Shri KANEKAL 3 , Allison JAYNES 4

¹The Aerospace Corporation, ²The University of Iowa, ³NASA Goddard Space Flight Center, ⁴University of Iowa

ST05-D5-AM1-302A-005 | ST05-A018 (Invited)

Quasiperiodic Modulations of Energetic Electron Fluxes in the

ULF Range Observed by the ERG Satellite

Mariko TERAMOTO¹²⁺, Tomoaki HORI¹, Satoshi KURITA¹, Shinji SAITO¹, Nana HIGASHIO², Takefumi MITANI², Ayako MATSUOKA², Inchun PARK¹, Takeshi TAKASHIMA², Reiko NOMURA², Masahito NOSE³, Akiko FUJIMOTO⁴, Yoshimasa TANAKA⁵, Manabu SHINOHARA⁶, Iku SHINOHARA²

¹Nagoya University, ²Japan Aerospace Exploration Agency, ³Kyoto University, ⁴Kyushu University, ⁵National Institute of Polar Research, ⁶National Institute of Technology, Kagoshima College

ST05-D5-AM1-302A-006 | ST05-A004

Substorm Related ULF Waves Observed in the Magnetosphere

Qiugang ZONG^{1#+}

¹Peking University

ST05-D5-AM1-302A-007 | ST05-A020

A Statistical Study on GLE and Non-GLE Events

Kazi FIROZ^{1#+}, Yong-Jae MOON¹
¹Kyung Hee University

Time 11:00 - 12:30

Chair(s) Xinlin LI, University of Colorad at Boulder

ST05-D5-AM2-302A-008 | ST05-A027 (Invited)

New Epoch-Based Plasmapause Model, with Van Allen Probes

Validation

Jerry GOLDSTEIN^{1#+}

¹Southwest Research Institute

ST05-D5-AM2-302A-009 | ST05-A019 (Invited)

Temporal and Spatial Variations of the Plasmasphere and

Ionosphere During Geomagnetic Storms Based on Global

GNSS-TEC and Arase Satellite Observations

Atsuki SHINBORI¹⁵⁺, Yuichi OTSUKA¹, Takuya TSUGAWA², Michi NISHIOKA², Atsushi KUMAMOTO³, Fuminori TSUCHIYA³, Shoya MATSUDA⁴, Yoshiya KASAHARA⁵

¹Nagoya University, ²National Institute of Information and Communications Technology, ³Tohoku University, ⁴ISAS/JAXA,

⁵Kanazawa University

ST05-D5-AM2-302A-010 | ST05-A013 (Invited)

Instabilities of Charged Particle Energy Spectrum and Plasma

Waves Trigged by Changes in Solar Wind Dynamic Pressure

Liuyuan LI^{1#+}, Jiang YU¹, Bin LIU¹, Jinbin CAO¹
¹Beihang University

ST05-D5-AM2-302A-011 | ST05-A010

High-Time Resolution Optical Observations of Pulsating

Aurora in Coordination with Arase Satellite

Keisuke HOSOKAWA¹⁵⁺, Yoshizumi MIYOSHI², Shin-Ichiro OYAMA³, Yasunobu OGAWA⁴, Satoshi KURITA², Yoshiya KASAHARA⁵, Yasumasa KASABA⁶, Satoshi YAGITANI⁵, Shoya MATSUDA⁷, Mitsunori OZAKI⁵, Fuminori TSUCHIYA⁶, Atsushi KUMAMOTO⁶, Ryuho KATAOKA⁴, Kazuo SHIOKAWA², Hiroshi MIYAOKA⁴, Yoshimasa TANAKA⁴, Satonori NOZAWA², Mariko TERAMOTO², Iku SHINOHARA⁸, Takeshi TAKASHIMA⁸

¹University of Electro-Communications, ²Nagoya University, ³Institute for Space-Earth Environmental Research, ⁴National Institute of Polar Research, ⁵Kanazawa University, ⁶Tohoku University, ⁷ISAS/JAXA, ⁸Japan Aerospace Exploration Agency

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EXHIBITORS & BOOTH LOCATIONS

AOGS 2018 Geosciences World Community Exhibition (Ballroom B, Level 4)

Exhibitor Registration

Sun – 3 Jun | From 14:00 Mon – Fri, 4 – 8 Jun | From 08:00

Booth Dressing

Mon – 4 Jun | 15:00 – 18:00

Exhibition Opens/Welcome Reception

Mon - 4 Jun | 18:30 - 20:30

All Day Exhibition

Tues – Thu, 5 – 7 Jun | 09:30 – 18:00 Fri – 8 Jun | 09:30 – 16:00

Innovation Theatre

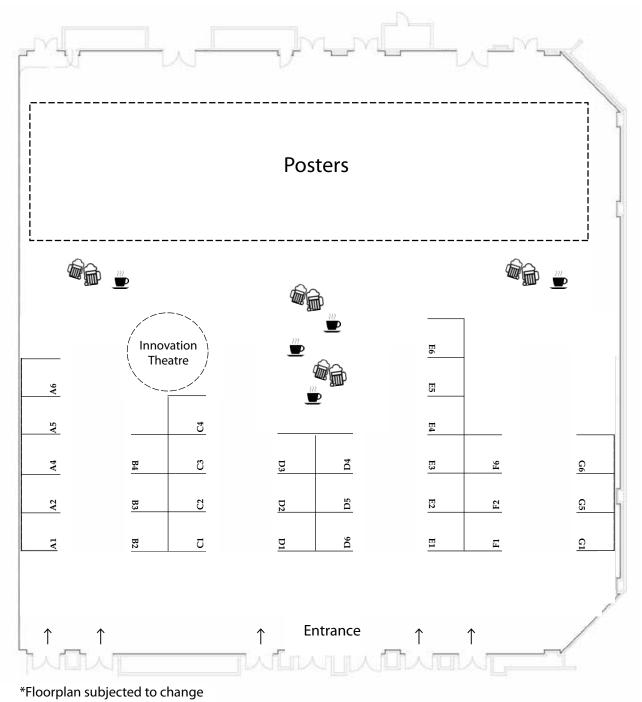
Mon – 4 Jun | 18:45 – 19:15 & 19:30 – 20:00 Tue – Fri, 5 – 8 Jun | 10:30 – 11:00 & 15:30 – 16:00

Tear Down / Ship-Out

Fri – 8 Jun | By 17:00

S/N	Organisation	Booth No.
1	36Th International Geological Congress 2020, New Delhi, India	A01 - A02
2	ADC BioScientific Ltd	E04
3	AGICO	F06
4	Earth Science Research Promotion Center & TAO Journal	E02
5	Earthquake Research Institute, The University of Tokyo	E06
6	European Geosciences Union (EGU)	F02
7	Gangwon Convention & Visitors Bureau	A04
8	Geological Society of America	B04
9	Güralp Systems Limited	A06
10	IBS Center for Climate Physics	C02
11	Institute of Oceanology, Chinese Academy of Science	G01
12	IOP Publishing	A05
13	Isotopx	E03
14	IUGG General Assembly 2019 in Montreal	G05
15	Japan Geoscience Union	F01
16	Kinemetrics, Inc.	C03
17	Korea Institute of Ocean Science and Technology (KIOST)	B02
18	Korean Meteorological Society	B03
19	METER Group, Inc. USA	C01
20	Nanometrics	G06
21	NASA	D01 - D06
22	Picarro, Inc	C04
23	Springer	E05
24	Taiwan Earthquake Research Center	E01

EXHIBITION FLOOR PLAN (Ballroom B, Level 4)



*Floorplan subjected to change Booth Size: 10' x 10'

EXHIBITORS



A01-A02: 36Th International Geological Congress 2020, New Delhi, India

Secretary General, 36 IGC 2020, Secretariat, Puspha Bhawan, Madangir Raod, New Delhi, India, Pin-110062

Email: himangshu1970@gmail.com Website: www.36igc.org

The 36th International Geological Congress themed "Geosciences: The Basic Science for Sustainable Future" will be organised by the Government of India funded body-the 36th IGC during 2-8 March 2020 with support from Indian National Science Academy. The Co-host Nations includes Bangladesh, Nepal, Pakistan, and Sri Lanka. The Geological Survey of India is the Nodal Agency for organizing the Event.



E04: ADC BioScientific Ltd

Global House Geddings Road Hoddesdon Herts EN11 0NT, United Kingdom

Tel: +44 (0)1992 464527 | Fax: +44 (0)1992 444245 Email: Steve@adc.co.uk | Website: http://www.adc.co.uk

For nearly 50 years ADC's name has been synonymous with quality bioscience instrumentation. This year we will be exhibiting our latest range of instrumentation for the measurement of photosynthesis, transpiration, leaf area, chlorophyll fluorescence, chlorophyll content and soil respiration. Stop by our exhibition stand to discuss your monitoring needs.



F06: AGICO

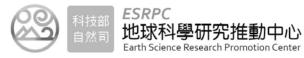
AGICO, S.R.O., Jecna 29A, Czech Republic

Tel: +420 511116303 | Fax: +420 541634328

 $Email: vejmelek@agico.cz \mid Website: www.agico.com$

AGICO (Advanced Geoscience Instruments Company) situated in Brno, Czech Republic, is one of the most respected world producers of scientific instruments for rock magnetism, palaeomagnetism and environmental magnetism. AGICO instruments enable measurement of

remanent magnetization, AF demagnetization, measurement of magnetic susceptibility and anisotropy of low-field magnetic susceptibility, measurement of frequency-dependent magnetic susceptibility, investigation of temperature variation of bulk susceptibility, investigation of anisotropy of isothermal and anhysteretic magnetic remanence



E02: Earth Science Research Promotion Center & TAO Journal

No. 300, Jhongda Rd., Jhongli District, Taoyuan City 32001Taiwan (R.O.C)

Tel: +886-3-4276264 | Fax: +886-3-4227443

Email: esrpc@ncu.edu.tw

Website: http://esrpc.ncu.edu.tw/

The Earth Science Research Promotion Center (ESRPC) is operated under the Ministry of Science and Technology, Taiwan. Our mission is to promote collaborative research with global scientists in a broad spectrum of earth sciences by supporting scientific activities of inviting visiting scholars to Taiwan and holding international conference in Taiwan. We also promote the circulation of Terrestrial, Atmospheric and Oceanic Sciences (TAO), a SCI journal since 1990.



E06: Earthquake Research Institute, The University of Tokyo

1-1-1 YayouBunkyo-ku, Tokyo 113-0032 Japan

Tel: +81 35841 0394 | Fax: +81 3 5841 5643

Email: moe@eri.u-tokyo.ac.jp

Website: http://www.eri.u-tokyo.ac.jp/en/

Earthquake Research Institute, University of Tokyo, Japan, is the largest university institute for Solid Earth Science in our country, and is one of the oldest and renowned of its kind in the world with over 80 top-notch academics. We deal with: earthquake, tsunami, volcano, and Earth's interior.



F02: European Geosciences Union (EGU)

European Geosciences Union EGU Executive Office Luisenstrasse 37, Germany Tel: +49 (0)89 2180-6549 | Fax: +49 (0)89 2180-17855

Email: executive-secretary@egu.eu Website: http://www.egu.eu/

The European Geosciences Union (EGU) is, with over 15,000 members, Europe's premier geosciences union. It is dedicated to the pursuit of excellence in the earth, planetary, and space sciences for the benefit of humanity. The EGU has a current portfolio of 17 diverse Open Access journals and its annual General Assembly is the largest European geosciences event.



A04: Gangwon Convention & Visitors Bureau

5, Jungang-ro, Chuncheon-S1, Gangwon-do South Korea

Tel: +82332494426 | Fax: +82332515495 Email: bkpark@visitgangwon.or.kr Website: visitgangwon.or.kr

A leports paradise city, a pleasant convention in Gangwon South Korea. The Gangwon Convention Visitors & Bureau is an excellent partner for superior one-stop support service for international conference. As testimony to its excellence, hosting the 2018 Pyeongchang Winter Olympic Games will propel Gangwon Province to the top of the bleisure convention destination.



B04: Geological Society of America

3300 Penrose Place, P.O Box 9140, United States

Tel: +1 303-357-1004 | Fax: +1 303-357-1071 Email: rfreeman@geosociety.org Website: https://www.geosociety.org/

Established in 1888, The Geological Society of America is a global professional society with a growing membership of more than 26,000 individuals in 115 countries. GSA recognizes earth science excellence with awards, promotes lifelong learning through scientific conferences, and publishes a wide range of peer-reviewed publications.



A06: Güralp Systems Limited

3 Midas House, Calleva Park, United Kingdom

Tel: +44 1189 819056

Email: eseymour@guralp.com Website: www.guralp.com

Güralp has been designing and manufacturing revolutionary, force-feedback broadband seismic instrumentation for more than thirty years. Our sensors and digitisers are used worldwide by academic, public, governmental and private organisations to understand and explore our world. We are exhibiting at AOGS with San Lien, our distributor for Taiwan and Vietnam.



C02: IBS Center for Climate Physics

2 Busandaehak-ro, 63 beon-gil Geumjeong-gu, Korea, South

Tel: +82 51 510 7691

Email: jikim0204@pusan.ac.kr | Website: iccp.ibs.re.kr

The IBS Center for Climate Physics (ICCP) was established in January, 2017 as the first Earth Science center within the Institute for Basic Science (IBS). ICCP seeks to expand the frontiers of earth system science by conducting cutting edge research into climate dynamics and utilizing high-performance computer simulations, with the goal of improving decadal earth system forecasts and longterm projections.



G01: Institute of Oceanology, Chinese Academy of Science

7 Nanhai Road, China

Tel: +86-532-82898902; +86-532-82896912

Fax: +86-532-82898612 Email: jzhao15@qdio.ac.cn

Website: http://english.qdio.cas.cn/

The Institute of Oceanology, Chinese Academy of Sciences (IOCAS) is the first ocean research institute in China. During its 68-year history, the institute has

trained around 1,000 senior scientists and technicians. At present, the institute has nearly 500 scientific and technical personnel, including 175 senior research technicians and 101 doctoral instructors.

IOP Publishing

A05: IOP Publishing

Temple Circus, Temple Way, United Kingdom

Tel: +441179297481

Email: lisa.searle@iop.org | Website: ioppublishing.org

IOP Publishing provides a range of journals, ebooks, conference proceedings, and digital products services covering research in the physical sciences and beyond. Visit our booth at AOGS to find out more about our environmental products and to see what we can offer you.



E03: Isotopx

12 Pinewood Lane, United States

Tel: +1 4406558994

Email: steve.shuttleworth@isotopx.com

Website: www.isotopx.com

Isotopx manufactures a range of thermal ionization and noble gas mass spectrometers for analysis in isotope geochemistry.



G05: IUGG General Assembly 2019 in Montreal

1555 Peel Street, suite 500, Canada

Tel: +1 514-287-1804

Email: acarbonneau@jpdl.com Website: iugg2019montreal.com

The International Union of Geodesy and Geophysics (IUGG; www.iugg.org) will hold its next General Assembly in Montréal, Canada, in July 2019. We will offer a diverse scientific program for geoscientists from around the globe, including special events to celebrate IUGG's centennial year. We look forward to welcoming you to Montréal.



F01: Japan Geoscience Union

4F Gakkai Center Bldg., 2-4-16 Yayoi, Bunkyo-ku, Tokyo 113-0032, Japan

Tel: +81-3-6914-2080 | Fax: +81-3-6914-2088

Email: office@jpgu.org

Website: http://www.jpgu.org/index-e/

The Japan Geoscience Union (JpGU), with more than 8,500 members, is a multidisciplinary geoscience organization based in Japan promoting excellence in all fields related to Earth and planetary science. This year we had the first joint meeting with AGU, the JpGU-AGU Joint Meeting 2017. The JpGU also publishes a peer-reviewed open access e-journal, Progress in Earth and Planetary Science (PEPS) in partnership with SpringereOpen.



C03: Kinemetrics, Inc.

222 Vista Avenue Pasadena, CA 91107 USA

Tel: +1-626-795-2220 | Fax: +1-626-795-0868 Email: mathias.franke@kmi.com | Website: www.kmi.com

Kinemetrics has been a leader in the earthquake instrumentation business for over forty years, creating innovative products and solutions for seismic arrays and networks, for monitoring bridges, dams, structures and nuclear power industry. We also support and run several large seismic networks including DPC Italy, USArray, US PBO.



B02: Korea Institute of Ocean Science and Technology (KIOST)

Haeyang-ro 385, Yeongdo-gu, BUSAN, 49111, South Korea

Tel: +82-51-664-3140 | Fax: +82-70-4275-1211

Email: han77@kiost.ac.kr Website: http://www.kiost.ac.kr

KIOST (Korea Institute of Ocean Science and Technology is a state-run institution tasked with discovering new scientific knowledge about the ocean, developing cutting-edge scientific technology. KIOST/KOSC (Korean Ocean Satellite Center) is also a designated operation agency for the Geostationary Ocean Color Imager (GOCI) and GOCI-II which will be launched in 2019.



B03: Korean Meteorological Society

1510 Renaissance Tower Bldg14 Mallijae-ro, Mapo-gu, Seoul 04195 Korea

Tel: +82-2-835-1619 | Fax: +82-2-849-1541

Email: komes@komes.or.kr Website: http://www.komes.or.kr/

The Korean Meteorological Society (KMS), with over 2,600 members, has been devoted to improving our understanding of earth systems with a particular focus on atmospheric sciences, meteorology, and climate change, and also communicating potential or predicted catastrophic events caused by severe weather systems, climate change, and local/regional air pollution to the public. The KMS publishes both international and domestic peer-reviewed journals, 'Asia-Pacific Journal of Atmospheric Sciences' and 'Atmosphere'.



METER ENVIRONMENT

C01: METER Group, Inc. USA 2365 NE Hopkins Court, United States

Tel: +1 5093322756 | Fax: +1 5093325158 Email: sandra@metergroup.com

Website: www.metergroup.com

METER features the ATMOS41 & EM60G data logger for an advanced all-in-one weather station that remotely collects weather data in real time. Combined with METER's market-leading soil moisture sensors, these instruments are an essential part of any field research study. Stop by booth C1 to learn more.



G06: Nanometrics 250 Herzberg Rd, Canada

Tel: +1 613-505-5079

Email: alyssaparks@nanometrics.ca Website: www.nanometrics.ca

For over 30 years, Nanometrics has provided award-winning monitoring solutions and equipment for studying man-made and natural seismicity. Nanometrics delivers world-class network design, installation and training services throughout the globe in a safety conscious environment that is utilized by the world's leading

scientific institutions, universities and major corporations.



D01-D06: NASA

NASA Goddard Space Flight Center, Building 33, Room E112 Greenbell, MD 20771. United States

Tel: +1 301 614-5560 | Fax: +1 301 614-6530 Email: winnie.h.humberson@nasa.gov

Website: www.nasa.gov

NASA leads the United States on a great journey of discovery, seeking new knowledge and understanding of our Sun, Earth, solar system, and the universe. NASA, together with its domestic and international partners, uses space observatories to conduct scientific studies of the Earth and Sun, to visit and return data and samples from other planetary bodies, and to peer out into the universe.

PICARRO

C04: Picarro, Inc

3105 Patrick Henry Drive., United States

Tel: +1 408 4600688

Email: gabhun2015@gmail.com Website: www.picarro.com

Picarro is the world's leading provider of stable isotope and gas concentration measurement systems for many scientific applications. The ultra-precise and easy-to-use instruments are deployed across the globe offering unmatched performance and enabling scientists around the world to measure GHGs, trace gases and stable isotopes found in the air, water, and land.

SPRINGER NATURE

E05: Springer

233 Spring Street, United States

Tel: +1 212-726-9367

Email: exhibits-ny@springer.com

Website: http://www.springernature.com/gp/

Springer Nature is one of the world's leading global research, educational and professional publishers, home to an array of respected and trusted brands providing quality content through a range of innovative products and services. Springer Nature is the world's largest academic book publisher and numbers almost 13,000 staff in over 50 countries. www.springernature.com



E01: Taiwan Earthquake Research Center

128, Sec. 2, Academia Road, Nangang, Taipei 11529, Taiwan

Tel: +886-2-27839910#519 | Fax: +886-2-27839871

Email: tec@earth.sinica.edu.tw Website: http://tec.earth.sinica.edu.tw

TEC (Taiwan Earthquake Research Center), a platform to present our most state-of-the-art earthquake science studies and to deliver our knowledge to the general public.

INNOVATION THEATRE

By Taiwan Earthquake Research Center



"Innovative Earthquake Science and Technologies Developed in Taiwan"

J. Bruce H. SHYU National Taiwan University

Mon – 4 Jun, 18:45 – 19:15 Ballroom B, Level 4

In the past decade, the Taiwan Earthquake Research Center (TEC) has promoted a series of studies on real-time seismology, earthquake early warning (EEW) and seismic hazard and risk analysis with support from the Minister of Science and Technology (MOST). In addition to the Taiwan Central Weather Bureau (CWB), who is doing a great job in monitoring regional seismicity, the earthquake science communities have been constantly developing new technologies to contribute to seismic hazard mitigation.

An automated near real-time moment tensor monitoring system (RMT) has been constructed to monitor the seismic activity by taking advantage of a grid-based moment tensor inversion technique and long-period broadband seismic recordings. All source parameters, including the event origin time, hypocentral location, moment magnitude and focal mechanism can be determined simultaneously with 117 seconds after the occurrence of an earthquake.

The P-Alert, a MEMS accelerometer that is specially designed for on-site earthquake early warning, has been widely deployed island-wide in Taiwan. It can detect first P-wave arrival and provide an alert with predicted intensity when the amplitude of vertical P-wave is over 0.35 cm. This EEW system is not only providing the on-site EEW

but also reinforce the earthquake disaster prevention education.

By integrating the earthquake science, earthquake engineering, and social science communities of Taiwan, the Taiwan Earthquake Model (TEM) program is to improve our understanding of Taiwan earthquake mechanisms and therefore provide new insight into seismic hazard and risk assessments for Taiwan. We have published the first science-based hazard model of Taiwan on the basis of the Probability of Seismic Hazard Assessment (PSHA) approach.

The TEC not only acts as a platform for the advanced researches in earthquake science and technology, but also presenting real-time earthquake information and creative and diversity tools and materials for seismic education outreach.

By Kinemetrics, Inc.



"Q8 - Ultra-Low Power, High-Resolution Seismic System"

Mathias FRANKE Kinemetrics, Inc.

Mon – 4 Jun, 19:30 – 20:00 Ballroom B, Level 4

The very successful USArray has illuminated the geological structure below the continental US (and now Alaska), with over 2,000 deployments over the last 14 years with a data return of 99.5% used for 130+ Ph.D. dissertations and 250+ peer-reviewed papers. The project is part of the EarthScope Program that was declared the "most epic science project of the last 15 years" by Popular Science Magazine. The experience gained over the years as both instrument providers and operators went into the design of the Qantix Q8. It is the newest member of the Quanterra family of ultra-high resolution data acquisition systems at ultra-low power consumption. Small in size and volume, the Q8 is designed for "plug'n play" into permanent seismic networks or portable deployments improved and offering reliability, extraordinary temperature stability and data redundancy. Woods Hole Oceanographic Institution, who is currently using Quanterra digitizers as OEM dataloggers in their Ocean Bottom Seismographs (OBS), will exploit these qualities.

The Q8 features 6+1 high-resolution channels for seismic data and loopback of calibration signals, while the 6 additional low-resolution channels could be used to monitor other ancillary equipment, such as meteorological stations, power monitoring, etc. A built-in ±2g MEMS 3-component accelerometer can provide critical information on near-field measurements or location-awareness of an OBS. The Q8 has Wi-Fi, Ethernet and Mesh communication, the latter enabling onsite maintenance without needing direct instrument access. Mirroring data on a removable USB flash drive (250GB) increases data availability and facilitates rapid

data retrieval when needed. The Q8 also uses GNSS or external timing. For EEWS the Q8 provides low-latency (<1s) streaming. All this at 250mW.

The most innovative and unique feature however is the new low-noise mode with very low thermal drift increasing the already exceptional 142dB full RMS sinewave to RMS noise by another 3dB.

By Earthquake Research Institute, The University of Tokyo



"Earthquake Research Institute at your service" Masataka KINOSHITA

Earthquake Research Institute, The University of Tokyo

Tue – 5 Jun, 10:30 – 11:00 Ballroom B, Level 4

The primary mission of the Earthquake Research Institute (ERI) is to promote basic & advanced researches of the solid earth to better understand earthquakes and volcanic activities. These understandings will promote basic researches for predicting earthquakes and volcanic eruptions and for mitigating their hazards. We also pursue basic researches on geodynamics of the solid earth. We have 80 researchers (professors, associate professors and research associates) expertized in seismology to volcanology, geophysics, geochemistry, geology, geodesy, applied mathematics, information science, civil engineering and seismic engineering. We have ~70 graduate students, and many of them are from overseas. We have a visiting professors/post-docs program up to one year (fully-funded by ERI).

During the AOGS 2018 general assembly, we have our exhibit booth at E06 with a dedicated staff standing by. We have some breaking events in Japan (Shin-Moe Dake eruption, Kumamoto earthquake, etc.) on display.

Also, our staff will help you guide for joining us with our researchers, either as a graduate student, post-docs, or visiting researchers.

By METER Group, Inc. USA



METER ENVIRONMENT

"Advances in All-in-one Weather Station Technology, a Practical Option for On-ground Microclimate Monitoring" Shannon MITCHELL METER Group Tue – 5 June, 15:30 – 16:00 Ballroom B, Level 4

Today, weather data improves the lives of many people. But, there are still parts of the globe where weather monitoring doesn't exist. There is a need for a new type of microclimate monitoring station that is less cluttered, complicated, and frustrating to install and maintain, especially for remote locations and novice users. Compact all-in-one weather stations solve many of these problems. The microclimate station developed by METER packages 12 weather sensors into a single, compact device. There are no moving parts to fail, installation and maintenance have been simplified, making it ideal for long-term data monitoring. The data are transmitted over a single cable, and the weather station works seamlessly with a plug-and-play data logger and cloud-based data storage. The Trans-African Hydro-Meteorological Observatory (TAHMO) and the Montana Mesonet (Montana, USA) are key development partners, testing and verifying the microclimate station under various environmental conditions. The TAHMO initiative seeks to install and operate 20,000 weather stations in sub-Saharan Africa. To date, TAHMO has installed 300 weather stations since 2012. The main goals are to provide high-quality microclimate data, freely available to governments, scientists, and farmers in near-real time. Most TAHMO weather stations are being installed at schools where teachers are using the data in their classroom lessons. The Montana Mesonet will build out a system of over 150 weather stations in Montana, USA. To date, 26 stations have been installed since 2016. The stations are installed in locations representing the range of environments and land uses across Montana. The main goals are to support adaptive management of agricultural lands, rangelands, and natural ecosystems with the aim of building resilient and sustainable economic and ecological systems. This talk will highlight the advances in METER's all-in-one microclimate sensor suite technology and describe case studies that have validated the instrument design.

By Picarro, Inc

PICARRO

"Real-time Measurements of Formaldehyde in an Urban Airshed by Near-infrared Cavity Ring-down Spectroscopy"

Thomas GOTTSCHALK *Picarro, Inc*

Wed – 6 Jun, 10:30 – 11:00 Ballroom B, Level 4

Formaldehyde is a critically important species in atmospheric chemistry. There are multiple direct emission sources of HCHO, and it is the photochemically-driven decay product of volatile organic compounds from both natural and anthropogenic sources. For this reason, real-time formaldehyde measurements provide critical insights into the mechanisms of tropospheric ozone formation. We describe a new commercial instrument based on cavity ring-down spectroscopy that provides real-time quantitative analysis of formaldehyde concentration in ambient air. In this presentation, we report on a 12-month measurement campaign of ambient HCHO at a 10m urban tower in the San Francisco

Bay area. Measurements of HCHO (one minute averages) are analyzed, along with other key trace species H2O, CO2, CO, and CH4. Clear diurnal, synoptic, and seasonal cycles are apparent in this data set, and we observe transient HCHO signals from the August 2017 partial eclipse and the October 2017 Northern California wildfireevent. The new analyzer used for this campaign has a precision (1-sigma) of about 1 ppb at a measurement rate of 1 second, and provides measurements of less than 100 ppt with minutes of averaging. Repeated measurements of a single gas standard over a period of months demonstrate that the instrument provides stable measurements (drift < 1 ppb) over long periods of time. The instrument has been ruggedized for both mobile (ground and flight) applications or for unattended operation at ground monitoring stations, and with a fast response time of a couple of seconds, it is suitable for ground-based vehicle deployments for fence line monitoring of formaldehyde emissions.

By Earth Science Research Promotion Center & TAO **Journal**





ESRPC 地球科學研究推動中心 Earth Science Research Promotion Center

"Collaborative Research Action of Belmont Forum: Disaster Risk Reduction and Resilience"

Yue-Gau CHEN National Taiwan University

Wed - 6 Jun, 15:30 - 16:00 Ballroom B, Level 4

Belmont Forum intends to support co-development of science and stakeholder-based approaches to natural disaster risk reduction and hazard prevention through this joint call for proposals on the theme of Disaster Risk Reduction and Resilience. For the purpose of this call, we define disasters as extreme environmental events that significantly impact the well-being of economic, health, infrastructure, social, and other aspects of the coupled human-nature systems. In recent decades, through national, regional, international endeavors, our global society gradually learned to manage devastating consequences of natural disasters and acknowledge that disaster mitigation can be most efficiently and effectively managed by collaborative engagement of all sectors of our society and through integration of interdisciplinary scientific understanding with stakeholder knowledge. Hence, this call specifically focuses on research efforts involving co-engagement and collective actions of all stakeholders to ameliorate natural disaster risk and enhance overall societal resilience to natural disasters. A good context for this call are the four priority areas for disaster risk reduction identified in the Sendai Framework for Disaster Reduction, namely: (1) understanding disaster risk; (2) strengthening disaster risk governance; (3) investing in disaster reduction for resilience; and (4) enhancing disaster preparedness for effective response, and to "build back better" in recovery, rehabilitation and reconstruction.

By Isotopx



"Recent Advances in Mass Spectrometric Technologies For The Earth Sciences"

Stephen SHUTTLEWORTH Isotopx Inc

Thu - 7 Jun, 10:30 - 11:00 Ballroom B, Level 4

This talk will discuss isotope fractionation in the earth sciences, their causes, and how new advances in mass spectrometer detector technology can better measure this fractionation with greater accuracy and precision. Mass Spectrometric techniques are somewhat limited by the performance characteristics of their detector. In this work we discuss how the ATONA amplifier can replace the resistor in the detector feedback circuit with a capacitor. This results in extremely low noise Far aday detectorsystems when compared with resistors while at the same time providing for a very large dynamic range. This unique combination of low noise with a dynamic range in excess of nine orders of magnitude offers the opportunity to measure extremely small ion signals (samples) on Faraday collectors and also large isotope ratios using the same detector, without requiring a range of resistors, or combining Faraday with ion counting detection. This technology is opening up new opportunities for higher precision and better accuracy on dating techniques across a wide range of isotope ratio measurements in noble gas mass spectrometry and thermal ionization mass spectrometry (TIMS).

By IBS Center for Climate Physics



"The IBS Center for Climate Physics: scientific vision and research opportunities"

Axel TIMMERMANN IBS Center for Climate Physics

Thu - 7 Jun, 15:30 - 16:00 Ballroom B, Level 4

The mission of the newly founded IBS Center for Climate Physics (ICCP) in Busan, South Korea is to enhance the basic understanding and improve the predictability of natural climate variability, man-made climate change and their impacts on the hydrological cycle, regional processes, ice-sheets, marine biogeochemistry and sea level. ICCP strives to make breakthroughs in the understanding of our climate system, its predictability and its interactions with humans. ICCP will provide basic scientific knowledge on the evolution of the climate system and its environmental and potential societal impacts. This information can eventually help the general public and policymakers in planning, decision making, and in optimizing adaption and mitigation efforts to climate-induced risks. The ICCP complements research activities in other Korean universities and international institutions by exploring and advancing new research frontiers in earth system science and by training a new generation of climate scientists in atmospheric

sciences, oceanography, hydrodynamics, cryosphere and marine biogeochemistry, dynamical systems' analysis, numerical methods and advanced statistics. The ICCP pursues a holistic research approach to gain a deeper understanding of the interactions between the components of the climate system (i.e. atmosphere, ocean, vegetation, ice-sheets, marine biosphere and carbon cycle) and on a variety of timescales (days to millennia). My presentation will describe our current research portfolio, our future plans and future research opportunities for enthusiastic scientists.

By Springer

SPRINGER NATURE

"Springer Services and Tutorials for Journal Authors" Petra VAN STEENBERGEN Springer

Fri – 8 Jun, 10:30 – 11:00 Ballroom B, Level 4

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By Güralp Systems Limited



"Smart Seismic Hardware: New Strategies for networking"
Clare SWEENEY
Güralp

Fri – 8 Jun, 15:30 – 16:00 Ballroom B, Level 4

Limitations in communication infrastructures and seismic instrumentation are common challenges faced by network operators seeking to install an efficient and accurate seismic network capable of handling the requirements of Earthquake Early Warning Systems (EEWS) Güralp's range of 'smart' seismic hardware offer a simple interface with advanced on-board processing and can issue triggered event details and alerts with ultra-low-latency. This means a delay time of just 40-60ms from system triggering to issuing an alert. Güralp Data Interchange, (GDI) is an ultra-low latency data transmission protocol used by Guralp hardware which allows seismic waveforms to be transmitted sample by

sample as they are acquired by the instrumentation. GDI adapts the size of the data packets to suit the network bandwidth available. This flexibility within the protocol means the lowest possible latency for the given network can be achieved.

A configurable voting mechanism is implemented on the Minimus to eliminate false positives which can incorporate a 'score' from different data sources i.e. Z channel on seismometer, N/S E/W channels on accelerometer and the internal Minimus MEMS. If the score exceeds the set threshold then an alert, in the form of a UDP packet, is sent to a predefined 'Master Minimus'. If the pre-configured threshold on the Master Minimus is triggered then the Master will issue the triggered event data and/or an alert.

Minimus can issue alerts using Common Alert Protocol (CAP). CAP is the XML based data format used for exchanging and describing public warnings and emergencies. Whenever the trigger conditions are met the Minimus can send a signed UDP packet to the configured CAP receiver which will then send the alert via SMS, e-mail or CAP forwarding, or multiples thereof. Being able to stream the alerts to multiple destinations provides increased network redundancy.

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Hawaii Convention Centre

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Emergency Services

Police, Fire & Ambulance	911
Non-Emergency	935-3311

About Hawaii

Hawaii Visitors and Convention Bureau	+1 (808) 923-1811
Honolulu International Airport Visitor Information	+1 (808) 836-6413
National Weather Service Forecast Office - Hawaii	+1 (808) 973-5286
Visitor Aloha Society of Hawaii (Oahu)	+1 (808) 926-8274

Transport Services

Charley's Taxi & Tour	+1 (808) 233-3333
Elite Limousine Service Inc	+1 (800) 776-2098
Roberts Hawaii Airport EXPRESS Shuttle Service	+1 (808) 439-8800
TheBus Information Department	+1 (808) 848-5555
Waikiki Trolley	+1 (808) 593-2822

Credit Card

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Conference Hotels

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Ala Moana Hotel	+1 (808) 955-4811
Aqua Palms Waikīkī	+1 (808) 947-7256
Doubletree by Hilton Alana - Waikīkī Beach	+1 (808) 941-7275
East West Center – Lincoln Hall	+1 (808) 944-7805
Equus Hotel	+1 (808) 949-0061
Holiday Inn Express – Waikīkī	+1 (808) 947-2828
Luana Waikīkī	+1 (808) 955-6000
Prince Waikīkī	+1 (808) 956-1111
Ramada Plaza – Waikīkī	+1 (808) 947-1799

NECESSITIES GUIDE

Currency

Hawaii uses standard United States currency (USD). Money changing services can be found at major shopping centres, hotels, at the airport & banks. Cash machines (ATMs) are also available all over the islands, at banks, hotels and convenience stores. However, on top of the differences in currency exchange, you may also have to pay a surcharge for withdrawing your money in such ATMs.

Most locations in Hawaii accept major international credit cards, including American Express, MasterCard and Visa. If you're traveling from a foreign country, it is advisable to activate the magnetic strip of your credit card for overseas use. Conversely, you can also call your credit card companies in advance to let them know you will be travelling abroad. This way they won't question charges that start appearing from an international venue.

Tipping

Tipping is a customary in the USA and generally, a 15-20% gratuity is standard for restaurants. It is also a customary to tip taxi drivers (around 15% of your taxi fare). Baggage porters, bellboys and valet parking attendants will also appreciate a tip of \$1-2 whenever they help you with your bags/cars.

Electricity and Voltage

Electric power is standardized in all states across the USA at 110 Volts. Type A (flat blade attachment) and Type B (two flat parallel pins and a round grounding pin) electrical sockets are used. Therefore, if you are bringing any electrical appliance to the USA, you may need an adaptor to fit the US electrical receptacle. You may also need a converter to change the voltage from 110 volts to 220 volts.

Connectivity

International calls can be made directly from hotel rooms with IDD phones. 011 is the international prefix used to dial somewhere outside of USA, plus country code, area/city code and number. In some countries, some cell phone providers have an international calling plan. As such, you can also try to contact your cell phone providers in advance to activate an international calling plan which can potentially be less expensive.

Local Prepaid SIM Cards are readily sold around Hawaii; from major grocery stores like Walmart to local telco providers like AT&T, Verizon, etc.

Maps, Apps & City Guides

Have ready-access information on everything about Hawaii in the palm of your hands! From places of interests, upcoming events, food guides to booking of transportation services, these mobile apps will ensure that you will not miss any highlights and happenings during your stay in Hawaii. You can also download the GoHawaii App (by the Hawaii Tourism Authority).

Transport

There are myriad of ways to get around from place to place in Hawaii. From resort shuttles, trolleys, car rentals to the City & County of Honolulu's award-winning bus system (TheBus), you will find a number of convenient transportation options at your disposal.

Resort Shuttles

Many resorts do provide shuttle transportation to popular tourist spots within the vicinity of the resort. For more information, do check with your hotel concierge.

The Bus

Honolulu's award-winning transportation system, aptly named "TheBus", is a popular visitor's choice to explore the islands. TheBus currently offers 93 routes serving the entire island of Oahu. There are also special visitor passes available for multiple day uses. For more information on fares, bus routes to popular attractions and other useful information visit http://www.thebus.org.

The Waikiki Trolley

The open-air trolley is a convenient means of transportation around Oahu's most popular visitor attractions, including the Waikiki Aquarium, King Kamehameha Statue, Iolani Palace, Bishop Museum and more. For more information,

visit http://www.aloha-hawaii.com/oahu/waikiki-trolley/.

Rental Cars & Taxis

Most visitors get around by either renting a car or taxi. Taxi stands can be found at most major hotels, shopping centres, and at the airport. Major car rental companies, including Alamo, Avis, Budget, Dollar, Hertz, National, Thrifty are also available around Hawaii. Service desks are located at the airports and at major hotels.

NOTES



An autonomous institute of Nanyang Technological University EOS conducts fundamental research on earthquakes, volcanic eruptions, tsunamis and climate change in and around Southeast Asia, toward safer and more sustainable societies.



The Earth Observatory of Singapore is an institute for geohazard research, focusing on tectonics, volcanoes, climate change and risk in and around Southeast Asia. Situated in Nanyang Technological University, the Observatory is committed to acquiring knowledge of these natural hazards, passing this information on to at-risk communities by contributing to forecasts of such natural phenomena, and helping them adapt to these challenges.

To find out more about EOS research projects and other activities, please visit **earthobservatory.sg** or join EOS mailing list at **earthobservatory.sg/subscribe** and follow EOS on **earthobservatorysg**

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