Atmospheric Sciences Biogeosciences Hydrological Sciences Interdisciplinary Geosciences Ocean Sciences Planetary Sciences Solar & Terrestrial Sciences Solid Earth Sciences

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16th Annual Meeting AOGGS 28 Jul- 2 Aug 2019 Singapore

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AOGS ... In Asia for Asia and the World



Session Proposal Closes 15 Oct 2019 Log on to www.asiaoceania.org Email Enquiries to info@asiaoceania.org

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SEORAKSAN NATIONAL

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17th Annual Meeting **28 Jun to** 4 Jul 2020 Vivaldi Park Ski Resort, Hongcheon

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AOGS Secretariat Office:

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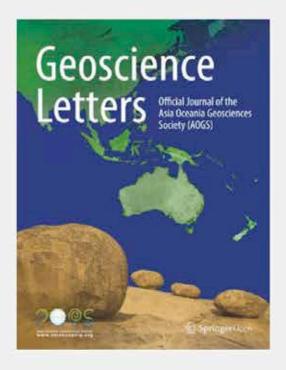
Welcome to AOGS2019 16th Annual Meeting





Geoscience Letters

Editor-in-Chief: Kenji Satake, The University of Tokyo, Japan



The fullly open access journal publishes original, innovative and timely research letter articles and concise reviews on studies of the Earth and its environment, the planetary and space sciences.

Geoscience Letters accepts three types of manuscripts:

- Research Letters
- Letters to the Editors
- Reviews

This journal is covered in Scopus.



Official journal of the Asia Oceania Geosciences Society (AOGS)





geoscienceletters.springeropen.com

WELCOME TO AOGS 2019!

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MESSAGE FROM THE AOGS PRESIDENT



We live in challenging times. The rise of populism generates dialogues about protectionism, the denigration of the migrants and minority groups and the retreat from globalised networks. In a post-truth era, these discourses are often linked to climate change denial and a deep distrust of scientific expertise. In an era when solidarity will be sorely contested, how the Earth and space sciences make the case for scientific truth will be increasingly important. AOGS was established in 2003 with a mission to promote geosciences and recognise the applications of science for the benefit of humanity. During the course of fifteen previous annual meetings the membership has grown and the networks of scientific communities have matured. It was a particularly delight that the 'risk' of locating the meeting in Hawai'i last year, far from the Asian mainland, exceeded box office records with over 3300 participants from 49 countries and more than 3500 scientific presentations. In February 2018, AOGS also delivered its first topical event outside the annual conference series. A joint conference with the European Geophysical Union on Natural Hazards took place in the Philippines. I am pleased to report that a second conference on this theme, located in Indonesia, is now planned for next year.

We return once more to Singapore in a year of anniversaries. Our conference takes place just a few days after the 50th anniversary of the Apollo 11 lunar landing mission. We have many sessions and exhibits relating to the future of space mission and exploration and once again we are thrilled to host the NASA Hyperwall in the Exhibition Area. Please take the opportunity to listen to a talk, admire the imagery and imagine the future. The AOGS Council continues to develop strong and vibrant relationships with our fellow societies including our partnership with the Japan Geoscience Union.

This year is the centenary of the American Geophysical Union and a wide range of centennial events are shining a spotlight on different aspects of geosciences. There is also a Singapore anniversary being marked this year. Two hundred years ago, Stamford Raffles landed at the Singapore River to commence the establishment of the island as a free trade port. His statue gazes across the river opposite Boat Quay. Though the events of 1819 serve as an anniversary marker, it is recognised that the history and culture of Singapore and the region goes much further back of time and the significance of environment is woven into those histories. As we enjoy (or perhaps endure) the air-conditioning of the conference venue we can contemplate the enormous transformation of the physical environment of Singapore over the past two centuries and the grand challenges of creating liveable and sustainable cities. As the percentage of urban population in Asia approaches 50%, the significance of geosciences to deliver pragmatic solutions should not be underestimated.

The conference programme brings together some high profile plenary and section distinguished lectures, several special sessions and over 180 scientific sessions. The number of presentations and participants will exceed any previous Singapore meetings. It is also election year and I would like to thank the candidates for stepping forward to volunteer their time and enthusiasm to serve the society. This year we have a new e-voting procedure on site which should make it even easier than before to cast your vote and select fellow scientists to take the work of AOGS forward. Established three years ago to foster closer collaboration in Asia and especially within Asean, the AOGS Regional Advisory Committee will be exhibiting for the first time at the "AOGS Infinity" booth. Information on academic and student exchange programs and employment opportunities in China, Indonesia, Japan, Taiwan and South Korea will be on display here.

Wishing you a successful conference to catch up on the latest developments in your field, forge new friendships and networks and seek inspiration to use geoscience knowledge towards the solution of societal challenges. And while you are doing this enjoy the sounds, sights and culinary delights of Singapore.

David HIGGITT AOGS President

AWARD



2019 AXFORD MEDALIST Andrew P. ROBERTS

Professor, Australian National University

The Asia Oceania Geosciences Society (AOGS) is honored to present the 2019 Axford Medal to Professor Andrew P. Roberts, Australian National University (ANU), for "ground-breaking contributions and leader-ship in rock, paleo-, and environmental magnetism, and for mentorship of emerging researchers in Asia, Oceania, Europe, and the Americas."

Andrew Roberts enjoyed an Asian childhood. He was born in Japan to parents from New Zealand, and lived for seven years in Taiwan. This background conditioned him to enjoying extensive interaction with Asian collaborators throughout his career. Andrew's high-school and university education were in New Zealand. He earned his PhD from Victoria University of Wellington, followed by post-doctoral periods at the Centre des Faibles Radioactivités in Gif-sur-Yvette, France, and at the University of California, Davis, USA.

In 1996, Andrew obtained a faculty position at the University of Southampton,

UK, where he built an environmental magnetism laboratory that attracted a global pool of talented young researchers, including many from Asia. Andrew trained and mentored them into highly successful academics, many of whom are now leaders in the discipline. Key breakthroughs made during that time include the development of environmental magnetism as a key discipline in paleoclimate and sediment-diagenetic reconstructions, development of first-order reversal curve (FORC) diagrams for characterizing the magnetic properties of natural materials, fundamental rock magnetic studies, including establishing the widespread importance of the mineral greigite in many environmental magnetic records, and development of important high-resolution reconstructions of wind-blown mineral dust inputs into marine sediments. Andrew served as Head of the School of Ocean and Earth Science at the University of Southampton and Associate Director of the National Oceanography Centre, Southampton, from 2005 to 2009.

In 2010, Andrew Roberts moved to Canberra, Australia, to become Director of the Research School of Earth Sciences at the Australian National University (ANU). There, he rebuilt a 50-year old paleomagnetism laboratory, which again attracted a global pool of talented young researchers, this time with an even higher proportion from Asia. Andrew also used this move to intensify collaborations with Asian colleagues, most notably in China, Japan, and Taiwan. For example, since 2010, he has collaborated with co-authors in 28 institutions in China alone. Andrew served a term as Dean of Physical and Mathematical Sciences (serving six Research Schools) at ANU from 2012 to 2017, during which time his research mentorship and leadership continued unabated. Key breakthroughs during his time at ANU to the present include advances in understanding and characterizing fine magnetic particle systems, including demonstrating the global importance of the mineral remains of magnetotactic bacteria in carrying sedimentary magnetic signals, providing critical chronological and environmental contributions to understanding African and Asian monsoon variability, documenting rapid geomagnetic field changes, and understanding sea-level variability through the last 5.3 million years. In 2018-2019, Andrew Roberts was seconded as an Excellent Researcher/Joint Appointed Fellow to the Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology (AIST) in Tsukuba, Japan, where he led a major project pioneering the use of artificial intelligence in rock magnetism.

Professor Roberts is a highly committed leader and researcher with an incredibly broad network of international collaborations. Andrew is entirely dedicated to excellence, and has mentored a large cohort of academics toward highly successful careers. Those fortunate enough to work closely with Andrew for extended periods have been impressed daily by the amount of work he can get through without compromising on quality, especially when undertaking high-level managerial positions alongside a fully committed research pathway. It is this unrelenting commitment that has made Andrew into the international leader in his discipline that he is today.

Andrew's contributions have been acknowledged with several awards and honors, including: Excellent Researcher, AIST, Japan, 2018-2019; Honorary Fellow, Royal Society of New Zealand, 2013; Fellow, American Geophysical Union, 2013; Japan Society for the Promotion of Science Senior Invited Fellow, 2009-2010; Fellow, Royal Society of Arts (London), 2009; Philip Leverhulme Prize, 2001; U.S. National Science Foundation Antarctic Service Medal, 2000; Royal Society of New Zealand Young Scientists' Award, 1989.

Given his transformative, continuing research across Asia-Oceania and globally, the 2019 AOGS Axford Medal is a well-deserved distinction.

GENERAL ELECTION

The AOGS President, Secretary General, Treasurer, and Section Presidents for the term of 2020-2022 will be elected at the 16th General Meeting on 28 July to 2 August, 2019 in Singapore.

ANNOUNCEMENT 2019 General Election

E-Voting Opens - Tue, 30-Jul @ 14:00 Closes - Fri, 02-Aug @14:30

Announce Results Fri, 02-Aug, Nicoll Room During AOGS2019 Closing (Starts 13:30 with Axford Lecture)

Change Primary Section? Update Profile on MARS? Is Closed for Current Members Is Open for First Time Attendee (Must Be Non-Author/Presenter)

NEED HELP? See AOGS2019 Help Desk

Candidates- Executive Committee

President



Shuanggen JIN Professor and Dean Nanjing University of Information Science & Technology Academician, European Academy of Sciences



Chun-Chieh WU Distinguished Professor National Taiwan University

E- Voting Instructions

E-voting will take place during the AOGS2019 annual meeting. Only AOGS Members present are eligible.

- 1. Pick up your name badge. After this, you are automatically enabled for e-voting.
- 2. Launch internet browser by typing the MARS URL
 - Log-in with your email (and password)
 - Click "E-Voting" on the left menu
- 3. On the voting page, voting has to be done for each specific office. Select "Abstain" if you do not desire to cast your vote for a specific office.
- 4. Once you have cast your vote, click "Submit"
- A confirmation box will be displayed and you can choose to confirm (click "OK") or modify (click "CANCEL") your vote.
 Votes cannot be modified after confirmation.
- 6. E-voting opens Tue-30 Jul at 14:00 and ends Fri-02 Aug at 14:30. The e-voting module shall be disabled for voting thereafter.

Secretary General



Robin ROBERTSON Professor of Physical Oceanography Xiamen University Malaysia

Treasurer



Benoit TAISNE Assistant Professor Nanyang Technological University

Candidates- Section Presidents

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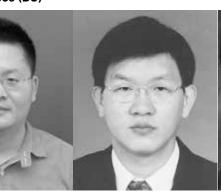


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Biogeosciences (BG)



Long CAO Professor Zhejiang University



Choon Weng LEE Associate Professor University of Malaya



Bhoopesh MISHRA Professor University of Leeds

Hydrological Sciences (HS)



Qingyun DUAN National Chair Professor and Chief Scientist Beijing Normal University

Young-Oh KIM Professor

Seoul National University

Interdisciplinary Geosciences (IG)



Ping-Yu CHANG Associate Professor National Central University Yasuyuki KANO

Associate Professor The University of Tokyo



Anawat SUPPASRI Associate Professor Tohoku University

Ocean Sciences (OS)



Yusuke UCHIYAMA Professor Kobe University



Tso-Ren WU Associate Vice President for International Affairs and Associate Professor, National Central University

Planetary Sciences (PS)



Junichi HARUYAMA Assistant Professor Japan Aerospace Exploration Agency (JAXA)

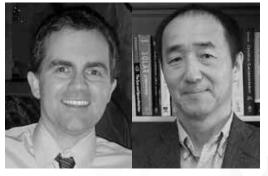


Kyeong Ja KIM Principal/Senior Researcher Korea Institute of Geoscience and Mineral Resources



Steven D. VANCE Planetary Scientist Jet Propulsion Laboratory, Caltech

Solar & Terrestrial Sciences (ST)



Mario BISI Space Weather Scientist Science & Technology Facilities Council

Yoshiharu OMURA Professor Kyoto University

Solid Earth Sciences (SE)



Sang-Mook LEE Professor Seoul National University



Javed N MALIK Professor Indian Institute of Technology Kanpur

Florian M. SCHWANDNER Project Scientist III NASA Jet Propulsion Laboratory

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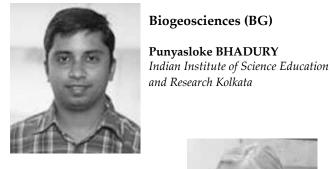
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Interdisciplinary Geosciences (IG)

> **Fiona WILLIAMSON** National University of Singapore





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Ji CHEN The University of Hong Kong



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Jann-Yenq (Tiger) LIU National Central University

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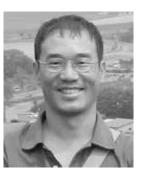
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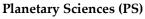




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MEETINGS & FUNCTIONS

Sun - 28 Jul 11:00 – 14:00, MR 323 Student Volunteer Training

14:00 - 15:30, MR 323 General Election Debrief

16:00 - 20:30, MR 323 Council Meeting/Get-together Dinner

Mon - 29 Jul 12:30 - 14:00, MR 320 Guidelines Committee Meeting

16:00 - 18:30, Nicoll Room AOGS2019 Opening, Axford Lectures, General Assembly

18:30 - 20:30, Exhibition Hall Welcome Reception/Exhibition Opens Poster Sessions - AS1, IG, PS - AOGS-EOS Geoscience Challenge

Tue - 30 Jul 12:30 - 13:30

Section Meetings (Lunch Provided)

Section	Rooms
AS	309
BG	300
HS	Nicoll 3
IG	323
OS	302
PS	310
ST	Nicoll 2
SE	329

Wed - 31 Jul

12:30 - 14:00, MR 320 AOGS2020 Preparation Meeting

12:30 - 14:00, MR 323 Belmont Forum

18:00 - 20:30, Wah Lok, Carlton Hotel Friends of AOGS Networking Social (By Invitation Only)

Thu - 01 Aug 12:30 - 14:00, MR 320 AOGS-EGU Nat Hazards (2) Planning Meeting

18:00 - 19:30, MR 320 Publication Committee/Geoscience Letters Meeting

18:30 - 21:00, MR 323 2022 Venue Proposal Presentation – Fukuoka & Melbourne

18:30 – 21:00 Student Volunteer Night (Requires Advance Registration) **Fri - 02 Aug 12:30 - 14:00, MR 320** Regional Advisory Committee Meeting

13:30 – 15:30, Nicoll Room AOGS2019 Closing, Special Lecture, Awards & Recognitions, AOGS2020 Presentation Announce General Election Results

15:30 - 16:30, Exhibition Hall Farewell Reception

16:30 - 20:30, S.E.A Aquarium Convener's Dinner (Ticketed Event)

Sat - 03 Aug 09:00 - 15:30, MR 323 Council Meeting, Lunch & Site Inspection

Opening/Closing Program

Mon - 29 Jul

AOGS2019 Opening: 16:00- 20:30

16:00	AOGS2019 Opening Axford Lectures
17:30	General Assembly Award Presentation: Axford Medal
	Award I resentation. Axiora wiedar
18:30	Welcome Reception/Exhibition
	Opens
	Poster Sessions
	- AS1, IG, PS
	 AOGS-EOS Geoscience Challenge

Fri - 02 Aug

AOGS2019 Closing: 13:30 - 16:30

13:30	Axford Medalist Lecture
14:00	Awards & Recognition: Best Student Posters, Geoscience Challenge
14:30	Next Meeting Destination Presentation – AOGS2020 in Gangwon
15:00	Announcement of General Election Results
15:30	Farewell Reception

AXFORD LECTURES

Mon – 29 Jul, Nicoll Room, Level 3

John E. P. CONNERNEY

NASA Goddard Space Flight Center



16:15 – 16:45 "Magnetic Fields of the Gas Giants Jupiter and Saturn"

Gas giants Jupiter and Saturn have been objects of intensive study for decades, with in-situ observations first gathered by the Pioneer and Voyager flybys in the past century. From these missions we learned that the gas giants are at best fraternal twins, birthed in the solar nebula and largely of solar composition, but with dramatically different personalities. Saturn, with its uniquely axisymmetric magnetic field arising from differential rotation of its deep atmosphere, is resplendent with its brilliant ring system, enduring in its present form for tens, or perhaps hundreds, of million years. The more massive, and likely first-born twin, Jupiter, hosts a complex and non-axisymmetric magnetic field that long ago reduced his rings to the residue that remains today. Both twins, recently visited again (Cassini at Saturn; Juno at Jupiter), have already surrendered many secrets to these polar-orbiting observatories, reaching beneath the clouds with measurements of gravity and magnetic fields, and microwave emissions (Juno). The axisymmetry of Saturn's zonal harmonic magnetic field was tested anew, and found not wanting. Sliding between Saturn's rings and atmosphere, Cassini found the rings shedding mass via orbital decay and via electromagnetic erosion of the rings ("ring rain"), delivering mass along magnetic field lines to the atmosphere. Jupiter's magnetic field, still being mapped, was found to be surprisingly complex, with a non-dipolar magnetic field in its northern hemisphere, and a dipolar magnetic field south of the equator, where an enigmatic "Great Blue Spot" resides within a band of opposite polarity. Jupiter's magnetic field is likely sculpted by differential rotation of its belts and zones, extending to depths (few thousand km) where the electrical conductivity of its molecular hydrogen atmosphere grips field lines. In this lecture, I hope to grip you with some of the fascinating insights delivered by Cassini and Juno, and perhaps entertain you with historical and artistic perspective.

Philip Li-Fan LIU

National University of Singapore



16:45 – 17:15 "2018 Sulawesi Earthquake and Palu Tsunami"

On September 28, 2018 a shallow (20 km) earthquake of Mw = 7.5 struck in the neck of Minahassa Peninsula, Sulawesi. Roughly 20 to 30 min after the main shock, a tsunami hit city of Palu and many settlements along the shore of Palu Bay. The shaking of earthquake not only damaged many buildings, but also caused severe liquefaction in areas in and around Palu, which let to mudflows. The combined effects of earthquake and tsunami led to the death of at least 2,256 people.

The focal mechanism of the earthquake showed that it was caused by strike-slip faulting on the Palu-Koro fault, trending North-South. Geodetic evidence (Pixel tracking and InSAR images) clearly showed rupture (including surface rupture through the city of Palu) over a length of 150 km. It is noted that at Palu there are several parallel fault strands defining the margins of a pullapart basin.

The tide gage (an acoustic sensor), located inside the port of Pantoloan, recorded clear tsunami signals. They indicated that the leading tsunami wave arrived at Pantoloan about 6 min after the earthquake and was a depression wave. The leading wave height was about 4 m with a wave period about 4 min. Several videos showed the arrival of tsunamis at Palu city roughly 20 ~ 30 min after the earthquake. Other videos indicated that many local (smaller scale) landslides generated tsunamis inside the bay.

Several post-tsunami field surveys were conducted. Runup heights and inundation depths along the coast of Palu bay as well as along the northern coast outside the bay were reported. It was evident that there was very little evidence of the tsunami damage along the coast outside of the Palu bay. This suggests that the sources for tsunami generation must be within the bay. Tsunami simulations were performed using the geodetic constrained slip models. Simulated tsunami waves significantly under-estimated the measured wave heights at Pantoloan as well as those reported in Palu city area. This further suggests possible mechanisms such as submarine landslides or a pull-apart occurred in the bay area that had triggered the localized tsunami waves inside the bay.

To confirm or refute the hypotheses, two submarine bathymetry surveys were conducted. Multi- Beam and Single-Beam echo sounders were used. The horizontal resolution in the deeper water (> 300 m) is about 10 m, while in the shallower water the resolution is about 80 cm. The new survey data are compared with the pre-earthquake bathymetry data (2014). The results strongly indicate the occurrence of several local landslides and a large area of subsidence in the deepwater region north of Pantoloan port. Further analysis is being carried out and results will be reported in the lecture.

SECTION LECTURES

Atmospheric Sciences Wed – 31 Jul, Nicoll 2, Level 3

Distinguished Lecture **Zhe-Min TAN**, *Nanjing University*



12:00 - 12:30 "Dynamics of Tropical Cyclone Intensity Change: External and Internal Influences"

Tropical cyclones (TCs) are among the deadliest and costliest of disasters, causing destructions due to the strong winds, the flooding and mudslides associated with storm surges and heavy rainfall. Despite the continuing improved forecast of TC's track, the prediction of TC intensity and structure still faces the great challenges in atmospheric sciences today, and progresses marginally due to the large uncertainties of our understanding on the dynamics and physics that govern the changes of TC's structure and intensity, both internally and externally.

Large-scale environmental vertical wind shear is one of the most important external factors that regulate TC intensity and structure. Our recent study suggests a new thermodynamic pathway that explains the detrimental role of deep-layer shear on TC intensity. The persistent patterns of shear-organized convection outside the eyewall transport the moist entropy upward effectively. This pathway works collectively with the classic mid-level and low-level ventilation to reduce the radial gradient of moist entropy across the eyewall. As a result, the heat engine efficiency is reduced so as to weaken TC intensity. In addition to the axisymmetric point of view, the weakening of TC intensity begins with a quadrant-dependent evolution in terms of low-level tangential wind through the multi-scale processes (vortex scale and convective scale). Given that tropical cyclones could still intensify under strong vertical wind shear, it is not only the deep-layer shear, but also the vertical profile of environmental flows, need to be considered to explain the large variability of TC intensity change. In the presence of complicated environmental flows, it is the relative configuration of low-level vortex tilt and the overall vortex tilt that determines the regions where upward motions dominant with respect to the deep-layer shear. This configuration, together with TC movement, primarily controls the convection organization in the azimuthal direction. This further determines whether a positive or a negative feedback would be established through the coupling between vortex tilt and convection to affect the precession of overall vortex tilt that is important for TC's intensification variability.

The concentric eyewall structures are common in the intense TCs, which are related to the pronounced changes of TC intensity and structure. Thus, the second eyewall formation (SEF) and subsequent eyewall replacement cycle (ERC) are the one of important internal process influenced TC intensity and structure change. Although substantial advances have been made in understanding SEF and ERC, some key disagreements remain, and there no consensus on any single theory of SEF. Our recent study suggests that in the intense TCs, the SEF generally occurs in association with the asymmetric outer rainbands. The enhancement of convection in the SEF region follows the formation and inward contraction of an outer rainband. The descending radial inflow in the middle and downwind portions of the outer rainband initiates/maintains a strong inflow in the boundary layer. The latter is able to penetrate into the inner-core region, sharpens the gradient of radial velocity, and reinforces convergence. Consequently, warm and moist air is continuously lifted up at the leading edge of the strong inflow to support deep convection. Moreover, the inflow from the outer rainband creates strong supergradient winds that are ejected outward downwind, thereby enhancing convergence and convection on the other side of the storm. The interaction between outer rainband forcing and boundary layer dynamics is the key factor for the SEF. These also imply that the favorable environment for outer rainband formation is necessary condition for the SEF. A relatively large size for TC wind structure is conducive to the SEF.

In this talk I will discuss the dynamical process related to both internal and external influence on the tropical cyclone intensity and structure change and their implications for the improvement of tropical cyclone intensity prediction. Section Lectures Atmospheric Sciences Cont'd... Kamide Lecture **Yen-Ting HWANG**, National Taiwan University



11:30 – 12:00 "Local and Remote Control on Tropical Circulation and Precipitation under Anthropogenic Climate Change"

The local control of sea surface temperature on tropospheric stability and convection in the tropics has long been recognized to play a critical role in determining the position of the tropical rain belt. The newly developed global energetic constraint, on the other hand, has emphasized extratropical influence on tropical precipitation. Confusion arises when constructing a predictive framework for tropical precipitation in global warming scenarios: The local perspective predicts a southward shift of the tropical rain belt toward the equator, caused by an El Niño-like warming pattern in most global climate models; whereas the energetic perspective points to a northward shift of the tropical precipitation due to positive feedbacks over Northern Hemisphere high latitudes and enhanced heat uptake over the Southern Ocean.

Here we point to a structural change in Hadley Circulation when reconciling the two perspectives. Take the Community Earth System Model (CESM) Large Ensemble Project's historical and RCP8.5 simulations as an example. An intertropical convergence zone (ITCZ) index and a precipitation centroid (PC) index are defined to quantify the meridional displacement of the zonal-mean rainfall peak and the overall tropical precipitation pattern, respectively. Throughout the simulations, both indices show complex transient responses but different turning points in their time series. The ITCZ is initially stationary but begins to shift southward toward an enhanced equatorial warming pattern that appears after the 1990s. On the other hand, the PC first shifts southward when aerosols cool the Northern Hemisphere during the 20th century, and then shifts northward after year 2000 when greenhouse gas warming is larger in the Northern than Southern Hemisphere. The structural changes in Hadley Circulation can also be seen in other global climate models participated in CMIP (the Coupled Model Intercomparison Project of the World Climate Research Program). The ITCZ and the PC shift toward the opposite directions as the climate warms. The global energetic framework has a stronger constraint on the subtropical precipitation changes, as the stability changes less in the subtropics comparing with the deep tropics in climate change scenarios.

Biogeosciences Wed – 31 Jul, MR 300, Level 3

Distinguished Lecture **Minhan DAI**, *Xiamen University*





Many studies have shown that coastal hypoxia is primarily associated with autochthonous organic carbon (Auto-OC) production, stimulated by coastal eutrophication resulting from excessive terrestrial nutrient runoff. Nutrients stimulate algal blooms in coastal surface waters. Sinking and remineralization of algal biomass drive dissolved oxygen (DO) consumption below the pycnocline. Therefore, Auto-OC is believed to be the predominant oxygen sink. Other studies, however, have suggested that Auto-OC may support only a fraction of DO consumption in the hypoxic zone. The relative contributions from eutrophication-induced autochthonous and terrestrially sourced allochthonous organic matter in causing coastal hypoxia are, however, still the subject of considerable debate despite decades of research. Another emerging but less studied environmental problem associated with entrophication is the enhanced ocean acidification (OA) in the coastal ocean, which often occurs accompanied by hypoxia. This enhanced acidification is typically induced by two processes. One is the in situ decomposition of the settled organic matter, which produces CO₂ and decreases pH. The other is the decrease of the buffering capacity of the water, which further decrease pH.

This study examines major drivers of hypoxia and OA in both the East China Sea off the Changjiang estuary and in South China Sea off the Pearl River estuary. Also examined is the interplays between eutrophication, hypoxia, and ocean acidification in these two highly impacted systems. My presentation will then examine the global scale environmental issues related to eutrophication and its interactive biogeochemistry with hypoxia and ocean acidification in the coastal system. My research also highlights that both the hydrodynamic and biogeochemistry should be taken into consideration and multidisciplinary research approach is essential in order to diagnose individual processes in complex coastal environment.

Section Lectures Biogeosciences Cont'd...

Kamide Lecture

Masayuki KONDO, Center for Environmental Remote Sensing (CEReS), Chiba University



11:30 – 12:00 "The Role of CO2 Fluxes by Land Use Changes in Recent Terrestrial Carbon Balance"

CO₂ flux by human-induced land use changes (LUC) is the integral component of current terrestrial carbon balance. With the magnitude accounting for approximately 20% of anthropogenic CO₂ emissions, variability in LUC activities can shift the direction of the net CO₂ flux either to the land or to the atmosphere. Common LUC practices such wood harvesting, deforestation, shifting cultivation, and grazing and crop harvesting induce CO₂ emissions via decomposition of litter residues and consumption of cultivated products. While plants that were left or managed to re-grow after large scale LUC activates can contribute to CO₂ uptake from the atmosphere. Until today, our understanding about the net LUC flux (an exchange of CO₂ between the atmosphere and land resulted from LUC activities) has progressed owning to the development of several independent estimation techniques such an aggregation of national statistics of ecosystem inventory measurements (statistical approach), carbon stock and land cover monitoring based on satellite observations (remote-sensing approach), and estimation of individual components of the net LUC flux based on theoretical and empirical relations (modelling approach). Using these approaches, this lecture presents the two case studies demonstrating the impact of (1) LUC emissions and (2) CO₂ uptake by plant regrowth in recent terrestrial carbon balance.

(1) Recent pattern of LUC emissions and its role in variability of the net CO_2 flux in Southeast Asia. LUC activity and climate variability induce large variations in the net CO_2 flux in the pantropics, shifting the direction of flux either to the land or to the atmosphere. In Southeast Asia, LUC emissions account for a major fraction globally and climatic conditions are directly influenced by El Niño Southern Oscillation (ENSO). However, the variability of the net CO_2 flux in Southeast Asia is not fully understood, and there has been no detailed studies addressing effects of the LUC and climate on flux variability. Using modeling and remote-sensing approaches, this study illustrates the decadal variability of the net CO_2 flux in Southeast Asia over the past 30 years, with an aim to identify underlying factors controlling the decadal variability of the net CO_2 flux. (2) Plant regrowth as a driver of recent enhancement of terrestrial CO₂ uptake. Attributing drivers of net CO₂ uptake in detail leads to clarification of causes for the recent enhancement of CO₂ uptake by the terrestrial biosphere. The increasing strength of the land uptake in the 2000s has been attributed so far to a stimulating effect of rising atmospheric CO₂ on photosynthesis (CO₂ fertilization). However, it is still arguable whether the CO₂ fertilization is a dominant cause for the recent enhancement of CO, uptake because, in addition to the level of atmospheric CO_{γ} , the terrestrial biosphere has undergone historical changes through land use and management. Here using multiple approaches for CO₂ flux estimation, this study shows a decadal-scale CO₂ uptake enhancement is induced not only by CO, fertilization, but also an increasing uptake by plant regrowth from past land use changes (LUC), with its effect most pronounced in eastern North America, southern and eastern Europe, and southeastern temperate Eurasia.

Hydrological Sciences Tue – 30 Jul, Nicoll 3, Level 3

Distinguished Lecture Venkataraman LAKSHMI, University of Virginia



12:00 - 12:30 "Observing the Terrestrial Water Cycle from Space"

Land surface hydrology is a collection of complex processes. Precipitation is partitioned into infiltration and runoff depending on antecedent soil moisture conditions, the properties of the soil, the slope of the land surface and the atmospheric demand for evapotranspiration. The spatial variability both the land surface properties (soil and vegetation) as well as the meteorological inputs (precipitation and radiation) play an important role in hydrology. Land surface hydrology is heterogeneous in space and time - making observation and modeling activities very difficult. Satellite remote sensing has a broad spatial view of the land surface and is able to provide data for use in hydrology such as soil moisture, surface temperature and vegetation density. Satellite sensors include - microwave observations for soil moisture and precipitation; visible/near infrared for vegetation and evapotranspiration, gravity for groundwater/total water and thermal observations for surface temperature. Soil moisture is a key variable in hydrology.

Section Lectures Hydrological Sciences Cont'd...

However, the spatial resolution of soil moisture observations is on the order of 10km and this is very coarse for catchment hydrological applications. In this talk I will discuss an innovative method for downscaling soil moisture to 1km and its validation with ground and aircraft observations at a regional scale and high spatial resolution soil moisture for the continental United States. I will show how the satellite observations and model outputs can be used to close the water budget for continental river basins. From a societal context, satellite observations are instrumental in determining the available water resources in regions of the world where observations are lacking and local economy is tied closely to water.

Kamide Lecture

Wei GONG, Beijing Normal University



11:30 – 12:00 "Surrogate Modeling-based Optimization Methods for Large Complex Dynamical Geoscience Models"

Dynamical geoscience models, including but not limited to hydrology and land surface models, atmospheric models, ocean models and Earth system models, are plagued by various uncertainties arising from the chaotic nature of the underlying dynamic system, the observational error, and a lack of knowledge about the physical/chemical/ biological processes and their complex interactions. One key source of uncertainties comes from the empirical parameterization schemes used to describe the processes occurring at sub-grid scale, such as surface and subsurface hydrological processes, and the physical processes related to turbulent exchange between land surface and atmosphere, clouds and convection. Those parameterization schemes contain a large number of empirical parameters (i.e., constants and exponents in model equations) that must be tuned to make sure that model simulations are consistent with the corresponding observational data. This tuning process can be a time-consuming process and an extremely difficult challenge to model users.

Here we present a framework specifically designed to automatically optimize the parameters and to quantify the associated parametric uncertainty of large complex geoscience models. Our framework consists of three major steps: (1) uniform sampling of parameter space, (2) parameter screening based on global sensitivity analysis, and (3) surrogate modeling-based optimization and uncertainty quantification of model parameters. We have integrated within our framework many widely used methods to perform parameter sampling and to conduct sensitivity analysis. We have also implemented numerous machine learning methods to build a series of surrogate model-based optimization methods, including: (1) the single objective optimization method ASMO (Adaptive Surrogate Modeling-based Optimization); (2) the multi-objective optimization method MO-ASMO (Multi-Objective Adaptive Surrogate Modeling-based Optimization); and (3) the parameter optimization and probability distribution estimation method ASMO-PODE (Adaptive Surrogate Modeling-based Optimization - Parameter Optimization and Distribution Estimation). In this talk, we briefly introduce the framework first. We then present several examples to demonstrate the advantages of our methods as compared to currently used popular optimization methods such as SCE-UA, NSGA-II and MCMC-Metropolis methods. A variety of geoscience models, from a simple hydrological model (e.g., SAC-SMA), to more complex land surface models (e.g., CoLM, CLM and Noah-MP), and finally to a computationally demanding numerical weather prediction model (e.g., WRF) and an Earth system model of intermediate complexity (e.g., LOVECLIM), were used to illustrate the effectiveness and efficiency of our framework.

Interdisciplinary Geosciences Mon – 29 Jul, MR 323, Level 3

Distinguished Lecture Nerilie ABRAM, Australian National University



12:00 – 12:30 "Tight Coupling of Tropical Indian and Pacific Climate Variability Through the Last Millennium"

The Indian Ocean Dipole (IOD) impacts climate and rainfall across the world, and most severely in nations surrounding the Indian Ocean. The frequency and intensity of positive IOD events increased during the 20th Century, and may continue to intensify in a warming world; however, confidence in future IOD changes is limited by known biases in model representations of the IOD and the limited information on natural IOD variability prior to anthropogenic climate change. Here we use precisely dated and highly resolved spliced fossil coral records from

Section Lectures Interdisciplinary Geosciences Cont'd...

the eastern equatorial Indian Ocean, where the signature of IOD variability is optimised, to produce a semi-continuous reconstruction of IOD variability that covers five centuries of the last millennium. Our reconstruction demonstrates that extreme positive IOD events such as the 1997 strongest-on-record event are rare, but this event was not unprecedented with at least one event that was 20% larger occurring naturally during the 17th Century. High variability of the IOD during the 17th Century coincided with an anomalous interval where El Niño Southern Oscillation (ENSO) variability also exceeded the high variability observed in recent decades, and our reconstruction demonstrates for the first time that a persistent, tight coupling existed between variability of the IOD and ENSO during the last millennium including times prior to anthropogenic climate forcing. This tight coupling of tropical Indo-Pacific climate variability and a multi-decadal clustering of positive IOD events evident in our reconstruction have important implications for improving seasonal and decadal prediction schemes, with the potential to enable societal adaptation to the impacts of IOD variability.

Kamide Lecture Anh Kim NGUYEN, National Central University



11:30 - 12:00

"Remote Sensing and GIS for Quantifying Eco-environmental and Social Vulnerability to Natural Hazards and Manmade Disturbances for Improved Adaptive Capacity"

Natural variation and its complex interaction with anthropogenic processes significantly alter the eco-environment and regional climate patterns. In the context of climate change, Asian countries particularly in tropical climate zone with high humidity and unevenly distributed abundant precipitation tend to have frequent occurrence of drought and flooding. The increase in frequency and magnitude of severe weather extremes (torrential rain, summer heat waves, winter unusual snowfall, and urban heat island) likely linked to anthropogenic processes highlights the demands of quantifying eco-environmental and social vulnerability to enhance adaptive capacity.

Remote sensing data and Geographical Information System (GIS) have been instrumental in mapping the features of

the earth's surface for decades. Recently, there has been an increasing trend on environmental and social studies by use of remotely sensed data and GIS for mapping eco-environmental and social vulnerability, monitoring vector-borne diseases, and evaluating adaptive capacity. This lecture will provide further applications on how remotely sensed data and GIS can be used in vulnerability and adaptive capacity assessment corresponding to natural hazards, manmade disturbances, and health applications. We take advantages of remote sensing products and freely accessible datasets to create vulnerability and adaptive capacity maps of Vietnam in response to tropical storms and generate eco-environmental vulnerability map at multi-scale. This aims are to minimize the negative impacts of climate change and environmental management, promise the possibility of establishing open GIS database with highlighted regions for citizen participation, and provide deeper knowledge to support environmental and social and public health research.

In addition, this lecture will present the first quantitative map of eco-environmental vulnerability at a global scale using multi-indicators. Results suggest that: (i) at continental scale, human and nature play a dominant role in making disturbances in Asia and Africa more than the other continents. A possible reason behind may be due to the fact that in these regions human beings significantly depend on goods and services from eco-system and natural resources. The resulting pressure will continue to increase with a high rate of growing population and intensive infrastructure development. (ii) At national scale, China and India are the most vulnerable in Asia and in the world.

Finally, we will present a conceptual framework that incorporates 21 indicators to identify vulnerability and adaptive capacity (VAC) using geospatial techniques at regional scales over Vietnam. Results indicate large spatial differences in VAC and identify top-priority regions that need to enhance their adaptation to typhoons. The Southern Coastal area, South East and Red River Delta demonstrate high and very high vulnerability because of their physical features and the intensity of typhoons that frequently cross these parts of Vietnam. The lower Mekong Delta and Northern Coastal areas are vulnerable to typhoon-driven flood threats, and in particular compounded by sea-level rise.

Ocean Sciences Thu – 01 Aug, Nicoll 1, Level 3

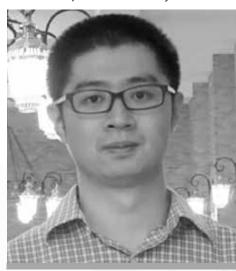
Distinguished Lecture **Wenju CAI**, *Commonwealth Scientific and Industrial Research Organisation*



12:00 – 12:30 "Response of El Niño/La Niña to Greenhouse Warming"

The El Niño-Southern Oscillation (ENSO) is the dominant and most consequential climate phenomenon with global impacts. The response of ENSO sea surface temperature (SST) variability to greenhouse warming is one of the most important issues in climate change science, and has challenged scientists for decades. I will present recent findings showing that the frequency of extreme La Niña, and variability of eastern Pacific El Niño SST are expected to increase in response to unabated greenhouse gas emissions. With this projected increase, we should expect more occurrences of extreme weathers associated with ENSO events, with pronounced implications for the twenty-first century climate, extreme weather, and ecosystems.

Kamide Lecture **Zhao JING**, *Ocean University of China*



11:30 -12:00 "Ocean Mesoscale Eddy-Atmosphere Interaction and Its Impact on Eddy Energetics and Transport"

Mesoscale eddies are ubiquitous in the upper ocean, containing 70% of oceanic kinetic energy. They are a key component in the ocean energetics and contribute significantly to the transport of heat, carbon dioxide and nutrients. Characteristics and variabilities of mesoscale eddies used to be understood from a pure ocean dynamics viewpoint. However, observational and modeling studies in the past two decades indicate that they are strongly coupled to the atmosphere. On one hand, mesoscale eddies have a profound influence on the atmospheric boundary layer, exerting a significant imprint on the turbulent heat flux, winds/ wind stress and rainfall and further providing a source of influence on midlatitude weather pattern changes. One the other hand, the atmospheric response can in turn affect mesoscale eddies and large-scale circulations in several ways. This talk provides a brief review on this feedback and introduces some new findings from our research group. Topics include (1) how the air-sea interaction affects the eddy energetics, (2) how this effect changes the eddy transport in the ocean, and (3) what its impact is on the large-scale ocean circulation and stratification.

Planetary Sciences Mon - 29 Jul, Nicoll 3, Level 3

Distinguished Lecture **Peter READ**, University of Oxford



12:00 – 12:30 "The Turbulent Dynamics of Jupiter's and Saturn's Weather Layers: Order Out of Chaos?"

The cloudy atmospheres of Jupiter and Saturn have long fascinated observers and theoreticians because they exhibit a wealth of phenomena where long-lived, coherent features, such as large-scale vortices and zonally banded jets, coexist with intense chaotic motion on smaller scales. The persistent pattern of zonal jets accounts for around 90% of the kinetic energy of the circulation near Jupiter's cloud tops and forms a nearly unchanging flow structure on timescales \leq 100 yrs, yet seems to be maintained by the action of a turbulent

Section Lectures Planetary Sciences Cont'd...

spectrum of waves and eddies. Since the early work of Gareth Williams in the 1970s, theoretical and numerical models have suggested the importance of rapid rotation, spheroidal planetary curvature and vertical stratification in directing the transfer of kinetic energy into zonal jets. But the origins of the energetic eddies and their vertical structure and depth of penetration have remained poorly constrained and understood, despite a wealth of observations from missions such as Voyager, Galileo, Cassini and Juno.

In recent work, we have re-examined the observed interactions between eddies and zonal flows on Jupiter, using for the first time a full spectral decomposition of cloud-tracked winds from Cassini's closest approach in 2000. These clearly demonstrate the anisotropic nature of the inverse cascade of kinetic energy from fairly small-scale eddies towards larger scales and, in particular, into zonal flows. At the smallest resolved scales, however, with horizontal wavelengths ≤ 3000 km, the sense of kinetic energy transfer is evidently direct, i.e. towards even smaller scales. This kind of bi-directional "dual cascade" has only recently been identified as a fundamental paradigm for rotating, stratified flows, and further suggests a kinetic energy source for eddies on Jupiter at scales around 3000 km. Given this is close to estimates of the Rossby radius of deformation on Jupiter, such an energy source is most likely to be from the potential energy of the stably-stratified background thermal field of the weather layer itself, released through a form of baroclinic instability. Such a process, however, is likely to differ significantly in form from baroclinic cyclones found on Earth and other terrestrial planets, for which interactions with the underlying surface play an important role.

This interpretation has also received support from other recent work in our group using a numerical general circulation model (GCM) of Jupiter's weather layer (spanning pressures from 20 bars to 10 mb). This model is able to reproduce many qualitative features of the observed cloud-level circulation on Jupiter and Saturn, including their extra-tropical zonal jets and prograde equatorial jet, without invoking a deep convective circulation. A spectral analysis of energy transfers within these model simulations demonstrates a similar pattern of kinetic energy cascades to those observed, including a dual cascade with an energy source at scales around 3000 km and eddy-zonal flow interactions that peak close to the tropopause. The energy source in our model is due to conversion from available potential energy by baroclinic instabilities at zonal wavelengths around 2000-5000 km, centred around the tropopause.

In this talk I will discuss both observations and models of turbulent cascades in the weather layers of Jupiter and Saturn and their implications for our understanding of the atmospheric circulations of these planets and the associated transport of momentum and constituents. One feature of the observed cloud level circulation that is not well represented in most gas giant GCMs is the spontaneous development of large-scale, long-lived oval vortices such as the Great Red Spot, Oval BA or the recently discovered polar vortices. The reasons for this are not well understood, but possible implications will be discussed, together with desirable directions for future research.

Kamide Lecture Jiwei XIE, Nanjing University



11:30 – 12:00 "Exoplanets: From Individual Discoveries to Population Census"

Since the first exoplanet discovered in 1990s, over 3900 exoplanets have been found so far. People are not satisfied with simply increasing this discovery number by finding more exoplanets, but have become more interested in the statistical characteristics of exoplanets. How are they classified? What are the properties of different planet populations? What if they are compared to our solar system? What can we learn about the formation history from the discovered exoplanets? Exoplanet population census is a key towards the answers of these questions.

Solar & Terrestrial Sciences Tue – 30 Jul, Nicoll 2, Level 3

Distinguished Lecture

Hanli LIU, National Center for Atmospheric Research



12:00 – 12:30 "The Power of the Powerless--The Significant Role of Mesoscale Processes in the Atmosphere"

Section Lectures Solar & Terrestrial Sciences Cont'd...

It is well established that the atmospheric kinetic energy spectrum follows a power law in the mesoscale range with a slope of ~ -5/3. This makes the mesoscale processes, likely gravity waves, appear quite powerless in the overall energy budget. On the other hand, gravity waves are thought to strongly affect the circulation pattern in the middle and upper atmosphere, though there are large uncertainties in quantifying such effects in global models because mesoscale waves are not well resolved. Even with increasing spatial resolutions and more realistic and detailed representation of the atmosphere, the forcing on the mean circulation by resolved waves in general circulation models (GCMs) is still not converging. This suggests the importance of unresolved, smaller-scale waves in the global momentum budget, which still defies physically consistent quantification. In this talk, I will present a recent study of the zonal spectra of momentum flux and wave forcing over the resolved mesoscale range, which shows that they display scale invariance and have shallow slopes. By assuming the same statistical distribution throughout mesoscale range and with the knowledge of the resolved portion, it is possible to quantify the forcing by the portion that is unresolved in global models. The result reveals the leading order importance of this forcing in comparison to that by the resolved waves--thus the power of these small-scale waves--and it is in general agreement with that required for obtaining the zonal mean wind climatology. It is also found that wave and mean flow interaction is important in maintaining the rather robust spectral structure. This method may provide a strategy to design physically consistent and scale-aware parameterization schemes for scale invariant quantities, when a model has sufficient resolution to partially resolve their power-law spectra.

Kamide Lecture Yang-Yi SUN, China University of Geosciences



11:30 – 12:00 "GNSS Helps Us Get Our Feet Back on the Ground from Ionosphere"

The Earth's ionosphere (from ~70 to thousands km above the Earth) is central to our solar-terrestrial environment. Both solar activity (e.g. solar flare, solar wind, coronal mass ejection, and moon shadow of eclipse) and perturbations from lower atmosphere (e.g. cyclone, convection, and El Niño - Southern Oscillation) and ground motion (e.g. earthquake, tsunami,

and volcanic eruption) leave many of shape footprints messy on the ionosphere. We do appreciate any novel technique being around to help us to investigate unexplained phenomena.

Dense Global Navigation Satellite System (GNSS) networks can globally scan ionospheric electron density structures in both horizontal and vertical directions with high temporal and spatial resolutions. Scientists have benefits from the ground- and space-based GNSS observations to comprehensively study ionospheric morphology response to solar activities in the recent two decades. This talk first briefly introduces the effect of the solar activities, such as geomagnetic storm and solar eclipse, on the change of ionospheric structures that critically impacts radio wave communication and navigation systems.

Other than the impact of solar activities, numerous ionospheric phenomena that may result from perturbations from lower atmosphere and ground remain unexplained. This talk pays attention to the influence of El Niño - Southern Oscillation (ENSO), which is considered to be the primary dynamical driver of the interannual variations in troposphere, on the quasi-biennial oscillation (QBO) in stratosphere (U30 index, the monthly mean of zonal wind at 30mb pressure level over Singapore), mesosphere, lower thermosphere, and even ionosphere. The ENSO signatures in the QBOs at various altitudes are observed by the FORMOSAT-3/COSMIC radio occultation (RO) sounding profiles of temperature and electron density. The RO technique records ENSO signals which are pertinent to the ongoing study attempting to establish the long-term change in the troposphere connection to the upper atmosphere.

Moreover, ground motions due to a large earthquake or tsunami can significantly perturb the ionosphere. The horizontal movement of seismo-traveling atmospheric disturbance (STAD) in the ionosphere have been comprehensively observed by dense ground-based GNSS networks. However, study for its vertical component is rare. This talk shows that the 2011 Mw9.0 Tohoku earthquake/tsunami can perturb the vertical structures of not only the ionosphere, but also the stratosphere. The RO-recorded vertical component of STADs allows a more comprehensive understanding of excitation, propagation, and dissipation of earthquake/tsunami-induced waves in the whole atmosphere. The waves detection in the lower atmosphere is benefit to earthquake/tsunami warning system.

The ground- and space-based GNSS is a powerful technique to capture atmospheric variabilities in both horizontal and vertical directions at various altitudes, that bring us a holistic view of dynamic interaction between the Earth's spheres and help us to seek a deeper understanding of our solar-terrestrial environment.

Solid Earth Sciences Thu – 01 Aug, Nicoll 2, Level 3

Distinguished Lecture Wenjiao XIAO, Chinese Academy of Sciences



12:00 – 12:30 "Late Paleozoic Multiple Accretionary and Collisional Processes in Southern Altaids and their Implications for Metallogeny"

The formation and development of the southern Altaids is controversial with regard to its accretionary orogenesis and mineral deposits. The Altay-East Junggar-Tianshan collages of North Xinjiang, China, offer a special natural laboratory to resolve this puzzle. Several NWW-SEE-trending linear tectonic units were juxtaposed, roughly from North to South, in the study area.

The Chinese Altai and East Junggar collages occupy the northern part. The Chinese Altay collage, composed of variably deformed and metamorphosed Paleozoic sedimentary, volcanic, and granitic rocks, is interpreted as a Japan-type island arc of Paleozoic to Carboniferous-Permian age. The Ergis unit, which occurs immediately south of the Chinese Altai unit and consists of ophiolitic mélanges and coherent assemblages, contains fragments of Paleozoic accretionary complexes, mostly associated with a major north-dipping subduction zone. The East Junggar collage, characterized by imbricated ophiolitic mélanges, Nb-enriched basalts, adakitic rocks and volcanic rocks, is regarded as a Devonian-Carboniferous intra-oceanic island arc with some Paleozoic ophiolites, superimposed by Permian arc volcanism. A southerly-distributed forearc accretionary complex of the East Junggar collage suggests a general north-ward subduction polarity for the East Junggar collage. The southern part of the study area is the Chinese Eastern Tianshan collage that was characterized by (a) the Harlik-Dananhu subduction system with a S-dipping polarity in the north; (b) a southerly N-dipping subduction system beneath the Yamansu-Central Tianshan arc in the middle; and (c) the north subduction of the South Tianshan ocean against Tarim in the south.

During the Early Paleozoic several intra-oceanic arcs and Japan-type arcs were formed. In the Devonian to Early Carboniferous, N-dipping subductions led to the enlargement of these arcs and their accretionary complexes with general southward growth, which were attached northwards to the Angaran margin, resulting in lateral enlargement of the Angaran continent in the latest Carboniferous to Permian. Final amalgamation of all these collages may have occurred in the Permian to mid-Triassic. During these long-lived, complicated geodynamic processes with multiple subduction systems in this part of the Paloasian Ocean in the Paleozoic, several metallogenic belts were formed.

The Chinese Altai-East Junggar collages are composed of five major types of Middle to Late Paleozoic metal deposits: (1) VMS Cu-Pb-Zn, (2) porphyry Cu-Au, (3) magmatic Cu-Ni-sulfide, (4) skarn Cu-Mo-Fe and (5) orogenic Au. Tectonically, the development of these metal deposits was closely associated with accretionary and convergent processes. The formation of the deposits involved three main stages, including: (i) Late Devonian to Early Carboniferous polymetallic volcanogenic massive sulfide deposits, together with some broadly contemporaneous Fe-Cu skarns, located in the accreted Qiongkuer-Talate Terrane in the western Altai, formed during back-arc extension along the the Chinese Altai-East Junggar collages. (ii) Widespread metalliferous ores of different types such as copper-bearing porphyries and Alaskan-type Cu-Ni-PGE zoned ultramafic bodies developed in arcs in the Buerjin-Ertai and Erqis terranes, and Cu–Fe skarns formed in the Erqis flysch basin, formed in the Carboniferous to Permian terrane accretion and arc magmatism. (iii) Cu-Mo skarns and orogenic-type gold vein systems formed during continuing accretion in the Permian with the development of the Dulate arc in the southern Altai. The Chinese Altai-East Junggar collage typically demonstrates the various classic metalliferous ores formed during the processes of subduction-accretion and arc generation.

The mineralization processes in the Chinese Eastern Tianshan collage were mainly related to an island arc stage (360–320 Ma) with porphyry-type and volcano-sedimentary copper deposits, an accretionary stage (300–280 Ma) with orogenic-type gold deposits, an accretionary to post-accretional stage (280–245 Ma) with mafic–ultramafic coppernickel and epithermal gold deposits, and a post-tectonic extensional stage (240–220 Ma) that gave rise to the Jinwuozi gold deposits, Xiaobaishitou skarn W–Mo deposits, and Baishan porphyry Mo–Re deposits. Section Lectures Solid Earth Sciences Cont'd...

Kamide Lecture **Keisuke YOSHIDA**, Tohoku University



11:30 – 12:00 "Heterogeneities in Stress and Strength in Tohoku and its Relationship with Earthquake Sequences Triggered by the 2011 M9 Tohoku-Oki Earthquake"

Inland Tohoku has been recognized as being under the WNW-ESE compressional stress state before the 2011 M9 Tohoku-Oki earthquake. Earthquakes that occurred there were characterized by reverse faulting with compressional axis oriented almost WNW-ESE direction. The Tohoku-Oki earthquake reduced this WNW-ESE compressional stress and, therefore, should have suppressed the earthquake occurrence. However, several intensive earthquake sequences were triggered in inland Tohoku. In this study, we investigated the triggering mechanism of these remote earthquake sequences in the stress shadow based on the detailed distribution of stress orientations newly determined from pre-mainshock focal mechanism data. The spatial distribution of stress orientations shows that there exist some regions with anomalous stress fields even before the Tohoku-Oki earthquake on the spatial scale of a few tens of kilometers. This spatial heterogeneity in stress field suggests that the differential stress magnitude in inland Tohoku is low (a few tens of MPa). Locations of the earthquake clusters tend to correspond to regions where the principal stress axis orientations of the pre-mainshock period are similar to those of the static stress change by the Tohoku-Oki earthquake. This observation suggests that these earthquake sequences were triggered by local increase in differential stress due to the static stress change. However, a few swarm sequences occurred in central Tohoku with delays ranging from a few days to few weeks after the Tohoku-Oki earthquake despite the reduction in differential stress. These sequences have notable characteristics including upward migration of hypocenters. Such features are similar to the fluid-injection induced seismicity. The source regions of these swarms are located near the ancient caldera structures and geological boundaries. The swarm activities were probably triggered by the upward fluid movement along such pre-existing structures. These observations demonstrate that information about the temporal evolutions of both stress and frictional strength is necessary to understand the triggering mechanism of earthquakes.

SPECIAL LECTURE

Fri – 02 Aug, Nicoll Room, Level 3

2019 Axford Medalist Andrew P. ROBERTS

Professor, Australian National University



13:30 – 14:00 "Sedimentary Paleomagnetism: What is New and Exciting?"

Paleomagnetic analysis provides an understanding of Earth's magnetic field and the deep-Earth dynamo processes that generate the geomagnetic field. Paleomagnetism has made fundamental contributions to Earth science through helping to establish the global plate tectonic paradigm and by providing the geomagnetic polarity timescale for calibrating geological time. This is all possible because nanoparticulate magnetic rock-forming minerals (e.g., magnetite, hematite, maghemite, pyrrhotite, greigite, goethite) occur common-ly in nature within the ideal single domain (SD) grain size range (for magnetite, the SD range is ~30 to 100 nm). The Nobel laureate, Louis Néel, demonstrated that SD materials (in which magnetic particles have homogeneous magnetization) can retain stable magnetizations for periods exceeding the age of the Earth. The long-term stability of these magnetizations provides the basis for the widespread usefulness of paleomagnetism in Earth science. Despite the fact that sedimentary paleomagnetism has a history of more than 65 years of active investigation, we have recently made significant progress in understanding the recording of paleomagnetic signals by sediments. In particular, the widespread role of so-called magnetotactic bacteria in contributing to the magnetization of sediments has come to be recognized over the last decade. These bacteria biomineralize intracellular magnetic minerals in chains with ideal SD properties that they use to orient along geomagnetic field lines to enable them to reduce the dimensions of their search for ideal habitats in highly stratified chemical environments. When they die, their mineral remains can provide ideal paleomagnetic signals if these magnetic particles are preserved over geological timescales. Recent developments enable us to identify such magnetofossils within sediments and we have shown that they dominate the paleomagnetic signature in many ancient sedimentary environments, particularly pelagic marine carbonates. Recognition of the widespread presence of magnetofossils in the geological record is providing a new understanding of the mechanisms by which sediments acquire paleomagnetic signals.

SPECIAL SESSIONS

Lead Organizer Jack A. KAYE, National Aeronautics and Space Administration

Tue - 30 Jul, 13:30 - 15:30 Nicoll 3, Level 3

SS01 - Satellite Observations for Tropical Cyclone Research

Conveners

Tsengdar LEE, National Aeronautics and Space Administration Yukari TAKAYABU, University of Tokyo

Invited Speakers

- 13:30 Assimilation of TC Inner Core Surface Winds by CYGNSS into Forecast Models Chris RUF, University of Michigan
- 13:50 Assimilation of Passive and Active Sensors on Satellites to Improve Tropical Cyclone Forecasts Kozo OKAMOTO, Japan Meteorological Agency
- 14:10 Raindrop Size Distribution Characteristics of Typhoon and Non-typhoon Precipitations Observed over North Taiwan Pay-Liam LIN, National Central University
- 14:30 Future Challenges in Tropical Cyclone Models and the Emphasis on Integrated Digital Systems Ben EVANS, Australian National University

Wed - 31 Jul, 11:00 - 12:30 Nicoll 1, Level 3

SS05 - Space Agency Remote Sensing of the Earth

Conveners

Wenjian ZHANG, World Meteorological Association Richard ECKMAN, National Aeronautics and Space Administration

Invited Speakers

- 11:00 NASA Earth Science Division Satellite Program – Status and Update Jack A. KAYE, National Aeronautics and Space Administration
- 11:20 NOAA's Space-based Remote Sensing Activities Ivan CSISZAR, NOAA National Environmental Satellite, Data, and Information Service
- 11:40 Current and Future Japanese EO Satellite Programs and Related Activities and Issues Teruyuki NAKAJIMA, Japan Aerospace Exploration Agency

Wed - 31 Jul, 13:30 - 15:30 Nicoll 1, Level 3

SS03 - Mineral Desert Dust

Conveners

Sang-Woo KIM, Seoul National University Jack A. KAYE, National Aeronautics and Space Administration Barry LEFER, National Aeronautics and Space Administration

Invited Speakers

13:30 AD-Net, a Lidar Network for Observation of Three Dimensional Distribution of Asian Dust Particles Atsushi SHIMIZU, National Institute for Environmental Studies

- 13:50 Following the Dust: Satellite Perspectives of Dust Sources, Transport, Deposition, and Impacts Hongbin YU, NASA Goddard Space Flight Center
- 14:10 Advancing the Capabilities to Predict the Atmospheric Burdens of Dust and its Impacts on Air Quality, Weather and More Gregory CARMICHAEL, *The University of Iowa*

Thu - 01 Aug, 08:30 - 10:30 MR 301, Level 3

SS04 - Oceans

Conveners

Jack A. KAYE, National Aeronautics and Space Administration Philip Li-Fan LIU, National University of Singapore

Invited Speakers

- 08:30 The North Atlantic Aerosols and Marine Ecosystems Study (NAAMES) Michael BEHRENFELD, Oregon State University
- 08:50 Observations and Model Assimilation Using GCOM-C/SGLI and Himawari-8/AHI in the Western Pacific Ocean Hiroshi MURAKAMI, Japan Aerospace Exploration Agency
- 09:10 Korea's Geostationary Ocean Color Program -Toward Transboundary Collaboration Young-Je PARK, Korea Institute of Ocean Science & Technology
- 09:30 Coral Reef Airborne Laboratory: A New Perspective on Coral Reefs Eric HOCHBERG, Bermuda Institute of Ocean Sciences

Thu - 01 Aug, 16:00 - 18:00 MR 309, Level 3

SS02 - The Brewer-Dobson and Hadley Circulations in a Changing Climate: Evolution and Impacts

Conveners

Richard ECKMAN, National Aeronautics and Space Administration Shigeo YODEN, Kyoto University

Invited Speakers

- 16:00 Widening and Weakening of the Hadley Circulation Under Global Warming Yongyun HU, Peking University
- 16:20 **Tightening of Tropical Ascent and the Implications for Global and Regional Hydrological Cycle** Hui SU, Jet Propulsion Laboratory, California Institute of Technology
- 16:40 Improved Estimates of Recent Tropical Expansion and the Role of Natural Variability Versus Forced Change Sean DAVIS, NOAA Earth System Research Laboratory
- 17:00 **Past and Future Brewer-Dobson Circulation Changes and the Main Drivers** Lei WANG, *Fudan University*
- 17:20 Brewer-Dobson Circulation Diagnosed From Reanalysis Datasets Chiaki KOBAYASHI, Meteorological Research Institute

GEOSCIENCE CHALLENGE

*AOGS-Earth Observatory of Singapore (EOS) International Geoscience Challenge 2019

Mon – 29 Jul, 18:30 – 21:00 Exhibition/Poster Hall

Finalists

Middle School (SEC) Category NSS1 "Investigating the Effectiveness of Green Initiatives in Mitigating the Urban Heat Island Effect in Singapore" Northland Secondary School SKSS1 "Is Flood Risk Higher in an Urban Area or a Rural Area in Singapore?" Sengkang Secondary School SKSS2 "Tree Lodge @Punggol- Has It Served Its Purpose? Sengkang Secondary School SKSS3 "Turbidity of Water in Singapore's Constructed Wetlands' Sengkang Secondary School SKSS4 "Are the Developing Regions of Seng Kang West Experiencing Urban Heat Island Effect?" Sengkang Secondary School SST1 "Investigation of the Effects of Coastal Gradient on the Transverse and Longitudinal Waves" Singapore School of Science & Technology SST2 "Investigation of the Lightning Occurrence in Singapore During the Monsoon Season" Singapore School of Science & Technology SST3 "Investigation of the Solar Flares in the 20MHz Range" Singapore School of Science & Technology SST4 "Investigation of the Sudden Disturbance in the Ionosphere of the Earth" Singapore School of Science & Technology

- **SST5** "Development of a Radio Telescope for VLF Observations" Singapore School of Science & Technology
- ASS1Z "An Investigation of the Microplastic Pollution in Singapore Waters Based on Green-lipped Mussels as Biosensors" Anderson Secondary School

High School (JC) Category

DHS1Z	"Investigation of How Electricity Can Be Generated in an Environmentally Sustainable Manner" Dunman High School
JPJC1	"Thermal Hotspots in School: Finding Areas of Discomfort" Jurong Pioneer Junior College
JPJC2	"Solar Power: Diversifying School's Energy Sources Jurong Pioneer Junior College
RVHS1Z	"Green Technology to Produce Volatile Organic Compounds(VOC)-free Paint By Replacing the Use of Solvent With Environmentally-friendly Silica Nanoparticles" <i>River Valley High School</i>
RVHS2	"Feasibility Study of Solar Power in Singapore" River Valley High School
RVHS3Z	"Investigation of Soil Quality Using Plant Biosen- sors" River Valley High School

VJC2 "Climate Change and Mass Movement in Singapore" Victoria Junior College Judging of Projects- Students will be required to give a short 10 min presentation, followed by Q&A on the 29 July 2019. Teams will present their projects with the aid of their display poster.

- Middle School (SEC) Category-Open to all middle schools or secondary schools (age 13-16)
- High School (JC) Category-Open to all high schools or Junior Colleges (age 17-18)

* The AOGS-EOS International Geoscience Challenge 2019 is part of the organizations' effort to inspire and create greater interest in Geophysical Sciences among middle and high school students. The aim of the Challenge is to give students the experience of conducting an investigative geoscience project and provide students with a platform to exhibit and share their findings with others.

MEMBER EXCLUSIVES

Workshops (AOGS2019 Participants Attend Free!)

Tue - 30 Jul, 14:30 - 18:00 MR 300, Level 3

Leaders

James D. P. MOORE, Nanyang Technological University Eric O. LINDSEY, Nanyang Technological University

WS01 Interpreting Geodetic Data with Physical Models of Lithospheric Deformation

We are entering a new era of "big data" geodesy, with a plethora of observations now available from dense GPS networks and rapid Synthetic Aperture Radar acquisitions (InSAR). Recent advances in modelling, inversion, and theory (Muto et. al. in review, Moore et. al. 2017, Barbot, Moore & Lambert 2017) allow us to exploit these spatially and temporally dense observations to explore complex physical models at greater speed and resolution than ever before.

In this hands-on workshop, we will cover how to build physical models of the lithosphere, either for forward modelling or inversions, using a set of modular libraries to make our lives easier as Earth Scientists. We can incorporate both on-fault and off-fault deformation mechanisms, consider topography, surface loading, gravitational effects, and pressure sources. We will describe from first principles how to simulate a range of real-world deformation data, in particular GPS and InSAR. We will examine several important cases including postseismic deformation, lake loading, and volcano deformation.

We start by discussing the rheological assumptions and our choice of deformation models (Elastic, Rate and State friction, Maxwell, Burgers, power law, or combination). We will then demonstrate how to simulate geodetic time series based on the evolution of stress in the system governed by these rheological assumptions. We will also demonstrate how to create numerical simulations of earthquake cycles, allowing for off-fault ductile deformation, and spontaneous earthquake ruptures governed by rate and state friction. Finally, we will look at inversion methods for fault slip and distributed deformation.

This workshop is aimed at geologists, geodesists, and geophysicists interested in simulating lithospheric deformation and who may have limited experience with physics or programming. The simulations will be carried out using modular code libraries, and the workshop only requires a basic knowledge of computer programming.

Tue - 30 Jul, 16:00 - 18:00 Nicoll 3, Level 3

Leaders

Dave HEATHER, *ESA/ESAC* Pierre HENRI, *LPC2E*, *CNRS* Matthew TAYLOR, *ESA/ESTEC*

WS02 Rosetta Mission Data

The aim of the session is to make the attendees familiar with and as autonomous as possible with Rosetta archive data, so that they can quickly carry out their own cometary science studies. The target audience is cometary and small body scientists, as well as members of the broader space physics and planetary community to make them aware of the data products available in the Rosetta archive, to promote usage of that data. The workshop will begin with a short presentation of the ESA Planetary Science Archive as a whole and on the Rosetta archive in particular. This will be followed by presentations from different instrument teams who will give a brief overview of their archive data, to provide instrument level insights into data access, as well as indicate the possible caveats when using the data. Following this, we aim to have a more interactive section that will focus on a published event, which will allow attendees to gain some practical experience in interacting with the archive data.

Wed - 31 Jul, 13:30 - 18:00

MR 300, Level 3

*Participants will need to bring along their own laptops

Leaders

Pawan GUPTA, Science & Technology Institute (STI), Universities Space Research Association (USRA), NASA Marshall Space Flight Center (MSFC) Robert LEVY, NASA Goddard Space Flight Center (GSFC)

WS03 Satellite Remote Sensing of Aerosols: Data, Tools and Applications

The Moderate Resolution Imaging Spectroradiometer (MODIS) sensors aboard NASA's Earth Observing Satellites (EOS) have been observing the earth-atmosphere system for nearly two decades. Atmospheric aerosols (particulate matter) play an important role in earth radiation budget and contribute to air pollution. Since its launch, the "darktarget" (DT) aerosol retrieval algorithm has been applied to MODIS to retrieve aerosol optical depth (AOD) and other aerosol properties on a global scale. The AOD data product has been extensively used for both climate and air quality applications. More recently, the DT algorithm is being applied to new generation of sensors such as Visible Infrared Imaging Radiometer Suite (VIIRS) on Suomi-NPP, and the Advanced Himawari and Baseline Imagers (AHI and ABI) on Himawari-8 and GOES-R. The application of consistent algorithm on multiple Low Earth Orbiting (LEO) and GEOstationary (GEO) sensors is key for observing aerosols with high temporal and spatial resolution.

The workshop will provide lectures and hands-on exercises. Lectures will be about fundamentals of satellite remote sensing of atmospheric aerosols, the dark target aerosol retrieval method, and best research practices. Hands-on exercises will be geared towards accessing data, reading and mapping the aerosol fields, and validating against ground measurements. All activities will use free or open-source software tools.

Field Trip to Pulau Ubin (Sold Out)

Dates: Wed – 31 Jul, 09:00 - 16:30 Fri – 02 Aug, 09:00 - 16:30

Cost: SGD 105 *Covers field trip bus costs; ferry tickets and lunch Terms & Conditions Apply

To be led by members of the Mangroves Lab, Department of Geography, National University of Singapore

Radhika BHARGAVA, Jared MOORE, Sasha Danielle SOTO

Description & Program

Be transported back in time to 1960s Singapore as you embark on a trip to the nearby island of Pulau Ubin. The name translates to "granite island" in Malay, and was the site of a number of quarries in the early 20th century and home to thousands of people in its heyday. While the industries have stopped, Ubin is now home to one of Singapore's last villages or kampongs. This trip will visit the iconic Chek Jawa wetlands, home to granite cliffs and outcrops and a diverse set of ecosystems including mangroves, seagrasses, mudflats and coastal forests. This important ecological area was slated for reclamation in 2001, though its subsequent protection is credited with creating the modern environmental movement in Singapore.

Timetable (Actual May Vary)

- 09:00 Assemble at SUNTEC Singapore (in front of Big Screen, Level 1)
- 10:00 Arrive Changi Point Ferry Terminal
- 10:30 Arrive Pulau Ubin
- 11:00 Mangrove boardwalk at Chek Jawa (look at mangroves, geomorphology)
- 12:00 Coastal boardwalk at Chek Jawa (look at granite formations)
- 13:30 Return to village for lunch
- 14:00 Lunch and discussion about land reclamation and transboundary sand mining
- 15:00 Leave Pulau Ubin
- 15:30 Arrive Changi Point Ferry Terminal
- 16:30 Arrive SUNTEC Singapore (tour ends)

PROFESSIONAL & SOCIAL NETWORKING

All Happening in the Exhibition/Poster Hall

(unless otherwise stated)

This is where you can meet people, share ideas and have a little fun!

Mon-29 Jul

10:30 - 11:00	AM Coffee/Tea
15:30 - 16:00	PM Coffee/Tea
16:00 - 18:30	AOGS2019 Opening, Axford Lectures, General Assembly (<i>Nicoll</i>)
18:30 - 20:30	Stand-Up Buffet Reception

Tue-30 Jul, Wed-31 Jul, Thu-01 Aug

10:30 - 11:00	AM Coffee/Tea
15:30 - 16:00	PM Coffee/Tea
18:30 - 20:30	Beer Hour

Fri-02 Aug

10:30 - 11:00	AM Coffee/Tea
13:30 - 15:30	AOGS2019 Closing (Nicoll)
15:30 – 16:30	Next Destination Reception
18:30 - 20:30	S.E.A. Aquarium & Dinner (<i>Ticketed Event, Sentosa</i>) Bus Departs SUNTEC 16:30 sharp

Tue-30 Jul 12:30 – 13:30 (Lunch Provided) AOGS Section Meetings

BG (MR300)
IG (MR323)
PS (MR310)
SE (MR329)

Wed-31 Jul 12:30 - 14:00 (Lunch Provided)

Belmont Forum (MR323)

Established in 2009, the Belmont Forum is a partnership of funding organizations, international science councils, and regional consortia committed to the advancement of interdisciplinary and transdisciplinary science. Attend to learn more about the projects and funding opportunities.

Mon-29 Jul to Fri-02 Aug Visit the AOGS Infinity Booth

To learn more and to exchange information on how to strengthen the regional cooperation among different research groups and institutions. Your participation will allow AOGS to promote further the advances of geoscience and technology in our region.

PRESENTER GUIDES

Oral

1. Presentation Guide – How to Read

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

Poster

1. Locate Your Poster Board

Poster presentations will be held from Mon - 29 Jul to Thu - 01 Aug 2019 at the Exhibition/Poster Hall. 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

Day & Date	Sections	Poster Set-up	*Poster O&A	Poster Tear-
		F	~~~	down
Mon	AS1, IG, PS	15:00 -	18:30 -	20:30 -
29 Jul	Geoscience	18:00	20:30	21:00
	Challenge			
Tue 30 Jul	HS and ST			
Wed 31 Jul	AS2 and BG	10:30 - 12:30	13:30 - 15:30	15:30 - 16:00
Thu 01 Aug	OS and SE			

*Poster Q&A (Presenter attendance required)

Submitted digital poster files will be uploaded to the Landscape Touch Screen Panels (Digital Boards) placed around the Exhibition/Poster Hall for visitor viewing throughout the conference but they are <u>not a substitu-</u> tion for the actual poster presentation.

3. Prepare Your Poster

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

• Place your Abstract ID, Abstract Title and Authors' names prominently at the top of the poster to allow viewers to identify your abstract easily.

<u>Presenter's Name must be underlined and in</u> <u>Bold Letterings</u>.

- 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.

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

- 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.

5. 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.

6. Best Student Poster Competition

Eligibility and Entry Requirements

- Only Students are welcome to compete
- All participants are required to submit a digital copy of their poster via MARS by Fri 12 Jul 2019 in order to qualify. Failure to submit by the stipulated deadline will lead to an automatic disqualification.

Winners will be awarded with:

- 1. Certificate signed by AOGS President and Section President
- 2. Complimentary Registration for the following year of AOGS Annual Meeting

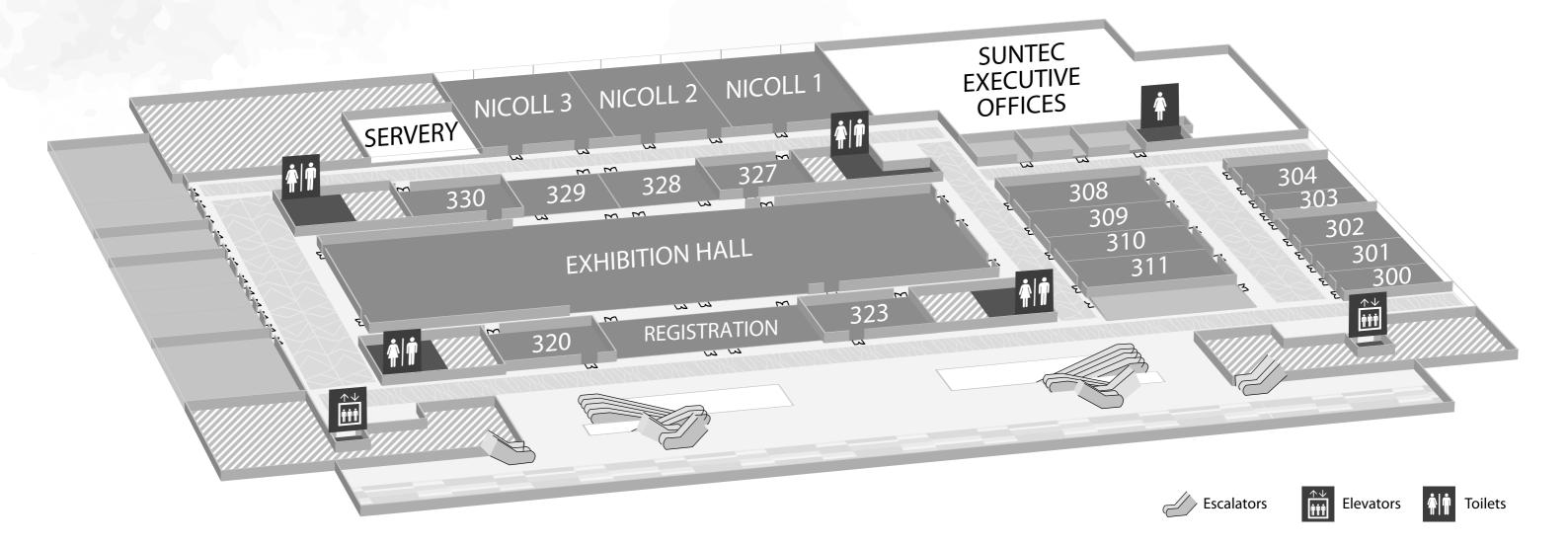
Award Criteria & Competition Rules

- 1. One award minimum per Section, and 1 additional award for every 20 student posters
- 2. Competition Rules
 - The presenting student author must be present throughout the Section's Poster Viewing/ Interactive Forum during the Poster Session. The Best Student Poster award will be awarded to the presenting author only
 - Posters should be prepared according to <u>AOGS Presenter Guide for Posters</u>
- 3. Poster Presentations will be evaluated based on:Scientific quality and novelty
 - Poster design
 - Ability of student presenter to answer question
- 4. Results will be announced during the Closing Ceremony on Fri 02 Aug 2019

SCIENTIFIC PROGRAM

Date,	Time & Room	308	Nicoll 2	304	303	330	329	328	310	311	327	302	301	Nicoll 1	300	309	323	Nicoll 3	Exhibition Hall
	08:30 - 10:30	AS05 p.M5	AS22 p.M5	AS31 p.M6	AS24 p.M6	HS02 p.M7	HS03 p.M7	HS04 <i>p.M7</i>	ST03 <i>p.M8</i>	ST22 p.M8	SE07 p.M9	SE17 p.M9	OS10 p.M10	OS18 p.M10	BG09 p.M11	AS03 p.M11	IG03 p.M12	PS03 p.M12	Build Up
ly 2019	11:00 - 12:30	AS34 p.M13	AS22 p.M13	AS31 p.M14	AS24 p.M14	HS02 p.M14	HS03 p.M15	HS20 p.M15	ST03 p.M15	ST04 p.M16	SE11 p.M16	SE02 p.M16	OS11 <i>p.M17</i>	OS18 p.M17	BG09 p.M18	AS03 p.M18	KL-IG p.F15 DL-IG p.F14	KL-PS p.P17 DL-PS p.P16	08:30 - 14:00
29 July	13:30 - 15:30	AS05 p.M18	AS22 p.M19	AS26 p.M19	AS01 p.M20	HS05 p.M21	HS03 p.M21	HS21 <i>p.</i> M22	ST31 p.M22	ST04 p.M23	SE05 p.M23	SE02 p.M24	OS11 p.M24	OS18 p.M25	BG01 p.M25	AS03 p.M26	IG13 p.M26	PS03 p.M27	Exhibitor Booth Dressing
Mon,	16:00 - 18:30	6:00 - 18:30 Opening, Axford Lectures & General Assembly - Venue: Nicoll <i>p.F9-10</i>												15:00 - 18:00 Exhibition Opens 18:30					
Day 1:	18:30 - 20:30	20:30 Exhibition Opens & Welcome Reception Poster Session: AS1, IG, PS & Geoscience Challenge - Venue: Exhibition Hall <i>p.M28-41, F22</i>																	
Date,	Time & Room	308	327	304	303	300	330	309	310	311	329	328	302	Nicoll 1	323	Nicoll 3	Nicoll 2		Exhibition Hall
2019	08:30 - 10:30	AS05 p.M47	AS09 p.M51	AS26 p.M48	AS36 p.M48	BG03; BG04 p.M53	SE19 p.M49	AS46 p.M53	PS08; PS15 p.M50	PS07 p.M51	SE12 p.M49	SE10 p.M50	OS15 p.M52	OS18 p.M52	IG20 p.M54	HS01 p.M54	ST21 p.M47		Exhibition
July 2	11:00 - 12:30	AS08 p.M55	AS12 p.M58	AS25 p.M55	AS36 p.M55	BG05 p.M59	SE19 p.M56	AS17 p.M59	PS06 p.M57	PS07 p.M57	SE12 p.M56	SE06 p.M56	OS11 p.M58	OS18 p.M59	IG04 p.M60	KL-HS p.F14 DL-HS p.F13	KL-ST p.F18 DL-ST p.F17	-	10:00 - 18:00
30	12:30 - 13:30					SM-BG		SM-AS	SM-PS		SM-SE		SM-OS		SM-IG	SM-HS	SM-ST		
y 2: Tue,	13:30 - 15:30	AS06 p.M60	AS12 p.M65	AS30 p.M61	AS44 p.M61	WS01 14:30 - 18:00	SE01 p.M62	AS17 p.M66	PS18 p.M63	PS02 p.M64	SE12; SE16 p.M62	SE06 p.M63	OS15 p.M65	OS05 p.M66	IG04 p.M66	SS01 p.M67			Poster Session - HS, ST p.M74-90
Da	16:00 - 18:00	AS06 p.M67	AS18 p.M71	AS30 p.M68	AS44 p.M68	p.F22	SE01 p.M69	AS17 p.M72	PS18 p.M70	PS11 p.M70	SE16 p.M69		OS15 p.M71	OS05; OS12 p.M72	IG04 p.M72	WS02			AOGS Beer Hour
Date,	Time & Room	300	308	309	304	329	328	330	310	311	303	327	301	302	323	Nicoll 1	Nicoll 2	Field Trip 1	Exhibition Hall
6	08:30 - 10:30	BG06; BG10 p.M101	ST08 p.M95	ST27 p.M102	ST06 p.M96	HS09 p.M97	HS22 p.M97	HS13 p.M96	PS12 <i>p.M98</i>	SE13 p.M99	SE21 p.M96	SE09 p.M99	OS08 p.M100	OS14; OS17 p.M100	IG12 p.M102	AS03 p.M101	AS19 p.M95	"Pulau Ubin"	
uly 2019	11:00 - 12:30	KL-BG p.F13 DL-BG p.F12	ST08 p.M102	ST16 p.M106	ST06 p.M103	HS09; HS11 p.M104	HS22; HS27 <i>p.M104</i>	HS08 p.M103	PS12 p.M105		SE20 p.M103	SE23 p.M105	OS08 p.M106	OS17 p.M106	IG24 p.M107	SS05 p.M106	KL-AS p.F12 DL-AS p.F11	(09:00 - 16:30) Starts & Ends at	Exhibition 10:00 - 18:00
l, 31 July	12:30 - 13:30														Belmont Forum			SUNTEC.	
: Wed,													OS09; OS19		(Ends 14:00)			By 09:00 - Please assemble at	Poster Session -
Day 3:	13:30 - 15:30	WS03 p.F23	ST18 p.M107	ST26-PS17 p.M112	ST29 p.M108	HS11 p.M109	HS27 p.M110	HS13 p.M109	PS16 p.M110	AS07 p.M111	SE22 p.M108	SE09 p.M111	p.M112	OS02 p.M111		SS03 p.M112	Meet-the-Experts	ground floor (below big screen)	AS2, BG <i>p.M121-131</i>
	16:00 - 18:00		ST18 p.M113	ST26-PS17 p.M119	ST11 p.M114	HS23 p.M115	HS24 p.M116	HS13 p.M115	PS16 p.M116	AS07 p.M117	SE22 p.M114	IG19 p.M117	OS07 p.M118	OS02 p.M118	SE24 p.M120	AS11 p.M119			AOGS Beer Hour
Date,	Time & Room	302	308	309	304	329	328	330	310	311	303	327	Nicoll 3	300 BG07; BG08	323	Nicoll 1	Nicoll 2	301	Exhibition Hall
2019	08:30 - 10:30	AS02 p.M142	ST30 p.M138	ST02 p.M144	ST14 p.M139	HS07 p.M140	HS06 p.M140	HS19 p.M140	PS09 p.M141	AS43 p.M141	AS35 p.M139	AS27 p.M142	AS14 p.M145	p.M144	IG17 p.M145	OS13 p.M143 KL-OS p.F16	SE30 p.M138 KL-SE p.F20	SS04 p.M143	Exhibition 10:00 - 18:00
ıst 20	11:00 - 12:30	AS08 p.M148	ST05 p.M146	ST02 p.M150	ST14 p.M146	HS07 p.M147	HS28 p.M147		PS01 p.M147	AS29 p.M148		AS27 p.M148	AS14 p.M150	BG08 p.M149	IG18 p.M150	DL-OS p.F16	DL-SE p.F19	PS20 p.M149	
01 Augu	13:30 - 15:30	AS08 p.M156	ST24; ST17 p.M151	ST09 p.M158	ST28 p.M151	HS18 p.M153	HS14 p.M154	HS26 p.M153	PS14 p.M154	AS28 p.M155	AS21 p.M152	AS15 p.M155	AS14 p.M159	IG07 p.M157	IG18; IG17 p.M158	OS04 p.M157		ST07; ST01 <i>p.M156</i>	Poster Session - OS, SE p.M168-180
Thu,	16:00 - 18:00	AS47 p.M164	ST19; ST20 p.M159	SS02 p.M166	ST15; ST10 <i>p.M160</i>	HS18 p.M162	HS17 p.M162	HS12 p.M161	PS14 p.M163	AS28 p.M163	AS21 p.M161	AS45 p.M164	AS14 p.M166	IG07 p.M166	Reserved	OS04; OS03 p.M165	SE03 p.M160	ST01; ST07 <i>p.M165</i>	AOGS Beer Hour
Day 4:								AOGS20	22 Venue Proposal I	Presentations: Fuku	oka & Melbourne - V	enue: 323							
D	18:30 - 21:00							Student Volunteer	Night - "Night City '	Tour of Singapore"	- Tour Departs SUN	EC at 18:30 Sharp.							
Date,	Time & Room	302	301	303	329	328	330	308	309	310	Nicoll 1	Nicoll 2	327	300	323	304	311	Field Trip 2	Exhibition Hall
2019	08:30 - 10:30	AS40 p.M189	AS13 p.M189	AS33 p.M185	HS10 p.M186	HS15 p.M187	HS32 p.M186	ST23 p.M184	ST25 p.M190	PS10 p.M187		SE18 p.M184	OS01 p.M188	BG11 p.M190	IG15 p.M191	ST13 p.M185	AS04 p.M188	"Pulau Ubin"	Exhibition
ust	11:00 - 12:30	AS40 p.M195	AS13 p.M196	AS33 p.M193	HS10 p.M193	HS16 p.M194	HS33 p.M193	ST33 p.M191	ST25 p.M197	PS10 p.M194	SE14 p.M196	SE28 p.M192	OS01 p.M195	BG11 p.M196	IG15 p.M197	ST12 p.M192	AS04 p.M195	(09:00 - 16:30) Starts & Ends at	10:00 - 16:00
Image: Special Lecture p.F20 , Awards & Recognition, AOGS2020 Presentation, Announce Election Results - Venue: Nicoll										SUNTEC. By 09:00 - Please assemble at	Farewell Reception 15:30 - 16:30								
Day 5:	16:30 - 21:00						Coac		Convener's Dinner at 16:30 Sharp - Plea		y 1nd floor (below big s	creen)						ground floor (below big screen)	Exhibition Tear Down / Ship-Out By 19:00

VENUE FLOOR PLAN



Day 01 29 Jul, Mon

Day 01 - 29 Jul 2019, Monday Program Overview

	AM1	AM2	PM1	PM2	EVE		
Time / Room	08:30 - 10:30	11:00 - 12:30	13:30 - 15:30	16:00 - 18:00	18:30 - 21:00		
MR308	AS05 p.M5	AS34 p.M13	AS05 p.M18				
MR304	AS31 p.M6	AS31 p.M14	AS26 p.M19				
MR303	AS24 p.M6	AS24 p.M14	AS01 p.M20				
MR330	HS02 <i>p.M7</i>	HS02 p.M14	HS05 p.M21				
MR329	HS03 <i>p.M</i> 7	HS03 <i>p.M15</i>	HS03 <i>p.M21</i>				
MR328	HS04 <i>p.M</i> 7	HS20 p.M15	HS21 p.M22	-			
MR310	ST03 p.M8	ST03 p.M15	ST31 p.M22	-			
MR311	ST22 <i>p.M8</i>	ST04 p.M16	ST04 p.M23				
MR327	SE07 p.M9	SE11 p.M16	SE05 p.M23				
MR302	SE17 p.M9	SE02 p.M16	SE02 p.M24				
MR301	OS10 p.M10	OS11 p.M17	OS11 p.M24				
MR300	BG09 p.M11	BG09 p.M18	BG01 p.M25				
MR309	AS03 p.M11	AS03 p.M18	AS03 p.M26				
MR323	IG03 p.M12	KL-IG p.F15 DL-IG p.F14	IG13 p.M26				
Nicoll 1	OS18 p.M10	OS18 p.M17	OS18 <i>p.M25</i>				
Nicoll 2	AS22 p.M5	AS22 p.M13	AS22 p.M19	Opening p.F9			
Nicoll 3	PS03 p.M12	KL-PS <i>p.F17</i> DL-PS <i>p.F16</i>	PS03 p.M27				
EXHIBITION HALL					AS1 Posters <i>p.M28</i> IG Posters <i>p.M32</i> PS Posters <i>p.M36</i> Geoscience Challenge <i>p.F22</i>		

Sessions & Conveners

* Main Convener

AS01-Aerosol and Cloud Observations from Geostationary Platforms - Breaking the Temporal Barriers

*Pawan GUPTA Universities Space Research Association, Jhoon KIM Yonsei University, Robert LEVY NASA Goddard Space Flight Center, Steven PLATNICK NASA Goddard Space Flight Center

AS03-Monsoon Climates Over South, East and Southeast Asia in a Warming Environment

*Ramesh KRIPALANI Indian Institute of Tropical Meteorology, Kyung-Ja HA Pusan National University, Jaiho OH Pukyong National University, Venkatraman PRASANNA Meteorological Service Singapore, Renguang WU Zhejiang University

AS05-Mesoscale Meteorology and High-impact Weather

*Kevin CHEUNG Macquarie University, Tieh-Yong KOH Singapore University of Social Sciences, Ryo OYAMA Japan Meteorological Agency, Chee-Kiat TEO Centre for Climate Research Singapore, Cheng-Ku YU National Taiwan University

AS22-Middle Atmosphere Science

*Zeyu CHEN Chinese Academy of Sciences, Hye-Yeong CHUN Yonsei University, S. K. DHAKA University of Delhi, Shigeo YODEN Kyoto University

AS24-Role of Urbanization on Weather and Climate of Cities *Anurag DIPANKAR Meteorological Service Singapore, Winston CHOW National University of Singapore, Hiroyuki KUSAKA University of Tsukuba

AS26-Regional Climate Downscaling and Cordex: Challenges and Prospects

*Dong-Hyun CHA Ulsan National Institute of Science and Technology, Koji DAIRAKU National Research Institute for Earth Science and Disaster Resilience, Jason EVANS University of New South Wales, Xuejie GAO Chinese Academy of Sciences, Shuyu WANG Nanjing University

AS31-Haze: Chemistry, Physics, Meteorology, Emissions, Climate, Processing, Fog, and More. Looking Across Spatial Scales from Regional to Global

*Jason COHEN Sun Yat-sen University, Charles ICHOKU NASA Goddard Space Flight Center, Daniel NG TMSI, Arnico PANDAY International Centre for Integrated Mountain Development (ICIMOD), Yun QIAN Pacific Northwest National Laboratory

AS34-Aviation Weather Forecasting and Impact of Climate Change

*Jung-Hoon KIM Seoul National University, Hye-Yeong CHUN Yonsei University, Todd LANE The University of Melbourne

BG01-Understanding Carbon and Nitrogen Cycling- from Land to the Sea

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

BG09-Biogeochemistry of Contaminants in Terrestrial and Aquatic Ecosystems

*Bhoopesh MISHRA University of Leeds, Jiubin CHEN Tianjin University, Qiaoyun HUANG Huazhong Agricultural University, Man Jae KWON Korea University

HS02-Hydrology for Human-nature Coupled Systems

*Kyungrock PAIK Korea University, Ting Fong May CHUI The University of Hong Kong, Jian-Ping SUEN National Cheng Kung University, Gene Jiing-Yun YOU National Taiwan University

HS03-Challenges in Hydrologic Modeling

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

HS04-Dealing with Hydrological Extremes: Theory, Simulation, and Practice

*Ke-Sheng CHENG National Taiwan University, Hidetaka CHIKAMORI Okayama University

HS05-Hydrological Processes in Agricultural Lands

*Jun NIU China Agricultural University, Ji CHEN The University of Hong Kong, Bellie SIVAKUMAR University of New South Wales, Yiping WU Xi'an Jiaotong University

HS20-Monthly to Seasonal Projection of Climatic/hydrological Extremes

*Ji CHEN The University of Hong Kong, Hung Soo KIM Inha University, Bellie SIVAKUMAR University of New South Wales

HS21-Hydrometeorological Analysis of Natural Hazards

*Hung Soo KIM Inha University, Ji CHEN The University of Hong Kong, Soojun KIM Inha University, Bellie SIVAKUMAR University of New South Wales

IG03-Near Surface Investigation and Modeling for Groundwater Resources Assessment

*Jet-Chau WEN National Yunlin University of Science and Technology, Ping-Yu CHANG National Central University, Yue LIANG Chongqing Jiaotong University, Jui-Pin TSAI National Cheng Kung University, Hwa-Lung YU National Taiwan University

IG13-General Session

*Fiona WILLIAMSON Singapore Management University, Mylene G. CAYETANO University of the Philippines-Diliman Institute of Environmental Science and Meteorology, Kazuhisa GOTO The University of Tokyo, Tang-Huang LIN National Central University, Xuan Anh NGUYEN Vietnam Academy of Science and Technology

OS10-River-influenced Coastal Ecosystems Under the Threat of Anthropogenic Activity and Global Climate Change *Jie XU South China Sea Institute of Oceanology, Chinese Academy

of Sciences, Jianfang CHEN State Oceanic Administration, Chang-Keun KANG Gwangju Institute of Science and Technology, Hongbin LIU The Hong Kong University of Science and Technology

OS11-Ocean Circulation and Air-sea Interaction Over the Maritime Continent and Surrounding Waters

*Lei ZHOU Shanghai Jiao Tong University, R. Dwi SUSANTO University of Maryland, Dongxiao WANG Chinese Academy of Sciences, Kunio YONEYAMA Japan Agency for Marine-Earth Science and Technology, Wen ZHOU City University of Hong Kong

OS18-Coastal Hazards: Impacts of Tropical Storms and Tsunamis

*Philip Li-Fan LIU National University of Singapore, Linlin LI National University of Singapore, Shie-Yui LIONG National University of Singapore, Nobuhito MORI Kyoto University, Xiping YU Tsinghua University

PS03-Exploration of Mars: New Results, Current Missions and Future Plans

*Joseph MICHALSKI The University of Hong Kong, Jun HUANG China University of Geosciences

ST03-Magnetosphere-ionosphere Coupling at Earth and Other Planets: Aurorae and the Magnetospheric/ionosphere Dynamics

*Anthony LUI The Johns Hopkins University, Quanqi SHI Shandong University, Z. H. YAO University of Liege, Qiugang ZONG Peking University

ST04-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

ST22-Space Weather Research and Operation in Asia Oceania

*Mamoru ISHII National Institute of Information and Communications Technology, JS CHOI RRA, I-Te LEE Meteorological Information Center, CWB, Pornchai SUPNITI KMITL, Clara YATINI Indonesian National Institute of Aeronautics and Space (LAPAN)

ST31-Dynamical Processes in the High-latitude Ionosphere and Magnetosphere-ionosphere Coupling

*Qing-He ZHANG Shandong University, Jing LIU National Center for Atmospheric Research, Yongliang ZHANG The Johns Hopkins University Applied Physics Laboratory

SE02-Earthquakes, Volcanoes, and Active Faults in East Asia

*Jianshe LEI China Earthquake Administration, Yinshuang AI Chinese Academy of Sciences, Chuntao LIANG Chengdu University of Technology, O P MISHRA Ministry of Earth Sciences, Xiwei XU China Earthquake Administration

SE05-Mountain Building Processes with Associated Geohazards and Resources: Integrated Observations and Models

*Chih-Tung CHEN National Central University, Kazuaki OKAMOTO Saitama University, Xi-Bin TAN Institute of Geology, China Earthquake Administration, Hai Thanh TRAN Hanoi University of Mining and Geology

SE07-Active Geodynamics, Deformation, Anisotropy And Growth of Eastern Himalaya

*Debasis D. MOHANTY North East Institute of Science and Technology, Ritima DAS University of Cambridge

SE11-Geophysical Investigation and Structures of the Orogenic Belt and Numerical Modeling

*Xiaoyu GUO Sun Yat-sen University, Rui GAO Sun Yat-sen University, Lun LI Sun Yat-sen University, Jie LIAO Sun Yat-Sen University, School of Earth Sciences and Engineering, Xiao XU Sun Yat-sen University

SE17-Hydrological Signals in Geodetic Observations: from Space to Ground

*Wei FENG Chinese Academy of Sciences, Annette EICKER HafenCity University Hamburg, Laurent LONGUEVERGNE University of Rennes 1, Pat YEH Monash University

AS05 / Mesoscale Meteorology and High-impact Weather

Mon - 29 Jul | MR308

 Time
 08:30-10:30

 Chair(s)
 Chee-Kiat TEO, Centre for Climate Research Singapore

AS05-D1-AM1-308-001 | AS05-A011

Improvements of Heavy Rainfall and Typhoon Forecasts Reproduced by Super-computer 'K' Hiromu SEKO^{1*+}, Masaru KUNII¹, Yohei SAWADA¹, Kozo OKAMOTO¹, Kosuke ITO², Kazuki SHIMOJI¹ ¹Japan Meteorological Agency, ²University of the Ryukyus

AS05-D1-AM1-308-002 | AS05-A036

A Storm-scale Ensemble Forecast System with Convection-allowing Model Grid for High Impact Weather Prediction in Southern China Fanyou KONG^{1#+}, Deli WANG², Xunlai CHEN² ¹University of Oklahoma, ²Shenzhen Meteorological Bureau

AS05-D1-AM1-308-003 | AS05-A016 (Invited)

Convection-scale Numerical Weather Prediction System for Singapore

Xiang-Yu HUANG^{1‡+}, Dale BARKER², Stuart WEBSTER², Anurag DIPANKAR³, Marion MITTERMAIER², Xiangming SUN¹, Rachel NORTH², Rob DARVELL², Douglas BOYD², Jeff LO¹, Jianyu LIU¹, Bruce MACPHERSON², Boon Chong Peter HENG³, Adam MAYCOCK², Laura PITCHER², Graeme KELLY², Bob TUBBS², Martin MCMILLAN², Sijin ZHANG¹, Susanna HAGELIN², Aurore PORSON², Song GUITING¹, Becky BECKETT², Wee Kiong CHEONG¹, Allison SEMPLE², Chris GORDON¹

¹Centre for Climate Research Singapore, ²Met Office, ³Meteorological Service Singapore

AS05-D1-AM1-308-004 | AS05-A020 (Invited)

Can Limited-area Mesoscale Models Forecast Tropical Cyclones?

Michael FIORINO^{1#+}, Richard ANTHES², Poushali GHOSH³ ¹University of Colorado Boulder, ²University Corporation for Atmospheric Research, ³Millersville State University

AS05-D1-AM1-308-005 | AS05-A012

Quantitative Estimation of Gusty Winds in a Densely-built, Urban District During Typhoon Jebi (2018) by Merging Mesoscale Meteorological and Large Eddy Simulations Tetsuya TAKEMI¹⁵⁺, Toshiya YOSHIDA¹, Shota YAMASAKI¹, Kentaro HASE¹

¹Kyoto University

AS05-D1-AM1-308-006 | AS05-A031

The Effect of Ocean Waves on an Explosive Cyclone Development: Investigation with a Coupled Model Yuki KITA^{1±+}, Takuji WASEDA¹

¹The University of Tokyo

AS05-D1-AM1-308-007 | AS05-A035

Impact of DWR Data Assimilation on the Simulation of MCS Events Related with Lightning

Mohan Kumar DAS^{1#+}, S DAS², S KARMAKAR³, AKM S ISLAM¹, Fatima AKTER⁴

¹Bangladesh University of Engineering and Technology, ²Central University of Rajasthan, ³National Oceanographic and Maritime Institute, ⁴University of Dhaka

AS22 / Middle Atmosphere Science

Mon - 29 Jul | Nicoll 2

<i>Time</i> 08:30-10:30

Chair(s) Zeyu CHEN, Chinese Academy of Sciences Hye-Yeong CHUN, Yonsei University

AS22-D1-AM1-Nicoll 2-001 | AS22-A040 (Invited)

Stratospheric Ozone-induced Cloud Radiative Effects on Antarctic Sea Ice Yongyun HU^{1‡+}, Yan XIA¹ ¹Peking University

AS22-D1-AM1-Nicoll 2-002 | AS22-A011 (Invited)

Influence of Tropical Lower Stratospheric Cooling on Extreme Deep Convective Activity and Tropical Cyclones Kunihiko KODERA¹⁵⁺, Nawo EGUCHI², Rei UEYAMA³, Beatriz FUNATSU⁴, Chantal CLAUD⁵ ¹Japan Meteorological Agency, ²Kyushu University, ³NASA Ames Research Center, ⁴Université de Nantes, ⁵Ecole Polytechnique

AS22-D1-AM1-Nicoll 2-003 | AS22-A006 (Invited)

SSW Influence on the Tropical Troposphere with High Resolution Large Ensemble Simulations Kohei YOSHIDA^{1#+}, Ryo MIZUTA¹ ¹Japan Meteorological Agency

AS22-D1-AM1-Nicoll 2-004 | AS22-A022

Correlations Between QBO Phases and Long-term Variations of 6.5DWs and 2DWs Yingying HUANG^{1#+} ¹Sun Yat-sen University

AS22-D1-AM1-Nicoll 2-005 | AS22-A026

Downward Propagation of Planetary Wave Packets from the Stratosphere to the Troposphere During Northern Hemisphere Winter Toshihiko HIROOKA^{1f+}, Yuya MATSUYAMA¹ ¹Kyushu University

Kyusnu University

AS22-D1-AM1-Nicoll 2-006 | AS22-A018

Stratospheric Harbingers of the Wintertime Intraseasonal Cold Events over the North America Xiaocen SHEN¹⁺, Lin WANG^{2±} ¹Institute of Atmospheric Physics, Chinese Academy of Sciences, ²Chinese Academy of Sciences

AS22-D1-AM1-Nicoll 2-007 | AS22-A023

Relation of the Interannual Variability of the Stratospheric Wave Forcing and Zonal Mean Fields Suggesting an Interhemispheric Link in the Stratosphere Yuki MATSUSHITA¹⁵⁺, Daiki KADO¹, Masashi KOHMA¹, Kaoru SATO¹

¹The University of Tokyo

AS22-D1-AM1-Nicoll 2-008 | AS22-A014

QBO-like Oscillation in a Three-dimensional Minimal Model Framework of the Stratosphere-Troposphere Coupled System Shigeo YODEN¹⁵⁺, Hai BUI², Eriko NISHIMOTO³

¹Kyoto University, ²University of Bergen, ³Japan Agency for Marine-Earth Science and Technology

AS31 / Haze: Chemistry, Physics, Meteorology, Emissions, Climate, Processing, Fog, and More. Looking Across Spatial Scales from Regional to Global

Mon - 29 Jul | MR304

Time 08:30-10:30

Chair(s) Chien WANG, National Center for Scientific Research/ Université Toulouse III Jianping GUO, Chinese Academy of Meteorological Sciences

AS31-D1-AM1-304-001 | AS31-A020

Comparison and Evaluation of the Impacts of Anthropogenic Sulphate Aerosols on Precipitation and Intensity of Tropical Cyclones

Ruimin LI¹⁺⁺, Daniel Hui Loong NG^{1,2}, Jina HUR¹, Srivatsan VIJAYARAGHAVAN¹, Shie-Yui LIONG¹ ¹National University of Singapore, ²Tropical Marine Science Institute

AS31-D1-AM1-304-002 | AS31-A005

Impact of Meteorology and Climate Change on Ozone Pollution in China Zhongjing JIANG¹⁺, Jing LI^{1#} ¹Peking University

AS31-D1-AM1-304-003 | AS31-A014

The Impact of Biomass Burning Aerosols on Convective Systems in Southeast Asia Hsiang-He LEE^{1*+}, Chien WANG² ¹Lawrence Livermore National Laboratory, ²National Center for Scientific Research/ Université Toulouse III

AS31-D1-AM1-304-004 | AS31-A011

Synergetic Impact of the Thermal Anomalies of Tibetan Plateau and Arctic on Haze Pollution in Eastern China Xiaoyun SUN¹⁵⁺, Tianliang ZHAO¹, Xiangde XU², Sunling GONG², Xiaodan MA¹

¹Nanjing University of Information Science & Technology, ²Chinese Academy of Meteorological Sciences

AS31-D1-AM1-304-005 | AS31-A018

Impacts of Biomass Burning Aerosols on Precipitation over Southeast Asia Daniel Hui Loong NG^{1,2#+}, Ruimin LI¹, Srivatsan VIJAYARAGHAVAN¹, Shie-Yui LIONG¹

¹National University of Singapore, ²Tropical Marine Science Institute

AS31-D1-AM1-304-006 | AS31-A010

A Study on Haze Transport in Vertically Sensitive Regions Globally Chuyong LIN¹⁺, Jason COHEN^{1#} ¹Sun Yat-sen University

AS31-D1-AM1-304-007 | AS31-A015

Development of Fog Detection Algorithm Throught Correlation Analysis by Himawari-8 Data and Ground Observation

Hanbyul LEE¹⁺, Junhyung HEO¹, Eunha SOHN¹⁺, Jaedong JANG¹ ¹Korea Meteorological Administration

AS24 / Role of Urbanization on Weather and Climate of Cities

Mon - 29 Jul | MR303

Time	08:30-10:30
Chair(s)	Anurag DIPANKAR, Meteorological Service Singapore Hiroyuki KUSAKA, University of Tsukuba

AS24-D1-AM1-303-001 | AS24-A003

Heat Stress Quantification in Urban Micro Scale – Applications of RayMan and SkyHelios Model Andreas MATZARAKIS^{1#+} ¹German Meteorological Service

AS24-D1-AM1-303-002 | AS24-A007

Past and Future Urbanization of Southeast Asian Capital-cities and its Impacts on the Local Climate Hiroyuki KUSAKA¹⁺⁺, Quang-Van DOAN², Lidia VITANOVA¹ ¹University of Tsukuba, ²Centre for Climate Research Singapore

AS24-D1-AM1-303-003 | AS24-A008

Urban Heat Islands Shield Residents from Extreme Cold Jiachuan YANG^{1*+}, Elie BOU-ZEID², Leiqiu HU³ ¹The Hong Kong University of Science and Technology, ²Princeton University, ³The University of Alabama in Huntsville

AS24-D1-AM1-303-004 | AS24-A011

Asian Megacity Heat Stress Under Future Climate Scenarios: Impacts of Air-conditioning Feedbacks Yuya TAKANE^{1#+}, Yukitaka OHASHI², Sue GRIMMOND³, Masayuki HARA⁴, Yukihiro KIKEGAWA⁵ ¹National Institute of Advanced Industrial Science and Technology, ²Okayama University of Science, ³University of Reading, ⁴Center for Environmental Science in Saitama, ⁵Meisei University

AS24-D1-AM1-303-005 | AS24-A012

Urban Thermal Influence on the Background Environment of Convective Precipitation

Hirofumi SUGAWARA^{1#+}, Ryoko ODA², Naoko SEINO³ ¹National Defense Academy of Japan, ²Chiba Institute of Technology, ³Japan Meteorological Agency

AS24-D1-AM1-303-006 | AS24-A019

Evaluation of the Impact of Urban Morphology, Geography and Background Climate on the Urban Heat Island in 28 Mega Cities Makoto NAKAYOSHI¹⁵⁺, Mayu ASAMI¹, Varuquez ALVIN

Makoto NAKA YOSHI^{1,**}, Mayu ASAMI¹, Varuquez ALVIN C.G.², Manabu KANDA² ¹Tokyo University of Science, ²Tokyo Institute of Technology

AS24-D1-AM1-303-007 | AS24-A022

Estimation of Urban Energy Balance Components over Indian Metropolitan Cities Using Satellite Remote Sensing Techniques Satyanarayana A.N.V^{1#+}, Sabiha SULTANA¹ ¹Indian Institute of Technology Kharagpur

AS24-D1-AM1-303-008 | AS24-A024

A Comprehensive, High-resolution Anthropogenic Heat Flux Database for Singapore Wenhui HE^{1#+}, Xianxiang LI¹, Leslie NORFORD² ¹Singapore-MIT Alliance for Research and Technology, ²Massachusetts Institute of Technology

HS02 / Hydrology for Human-nature Coupled Systems

Mon - 29 Jul | MR330

 Time
 08:30-10:30

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

HS02-D1-AM1-330-001 | HS02-A010

The Strategy of Environmental Flow Management with Drought Indicators Yusyuan CAI¹⁺, Jian-Ping SUEN^{1#} ¹National Cheng Kung University

HS02-D1-AM1-330-002 | HS02-A014 (Invited)

Climate or Land Use Change? Salinity and Decreasing Discharge in the Goulburn River Ian WHITE^{1#+}, Julia IMRIE¹, Peter SOMERVILLE¹, Tingbao XU¹ ¹Australian National University

HS02-D1-AM1-330-003 | HS02-A013

Surface Water Demand, Supply, and Connectivity Across Watersheds in the United States Kai DUAN^{1#+}, Peter CALDWELL², Ge SUN² ¹Sun Yat-sen University, ²USDA Forest Service

HS02-D1-AM1-330-004 | HS02-A015

Promotion of Water Resources Carrying Capacity and Water Resources Joint Allocation in Xiong'an New Area, China Baodeng HOU^{1#+}

¹China Institute of Water Resources and Hydropower Research

HS02-D1-AM1-330-005 | HS02-A007

On the Value of ENSO State for Urban Water Supply System Operators: Opportunities, Trade-offs, and Challenges Christoph LIBISCH-LEHNER^{1,2}, Hung NGUYEN³⁺, Riccardo TAORMINA³, Hans-Peter NACHTNEBEL², Stefano GALELLI^{3#} ¹Pöyry Austria GmbH, ²University of Natural Resources and Life Sciences, ³Singapore University of Technology and Design

HS02-D1-AM1-330-006 | HS02-A011

Input-output Analysis of Taiwan's Food-energy-water Risk Chu-Chun YAO^{1#+}, Gene Jiing-Yun YOU¹ ¹National Taiwan University

HS02-D1-AM1-330-007 | HS02-A002

Spatial Variation of Vegetation Index in Asia and Australia Indicates Strong Influence of Climatic and Topographic Settings Kwanghun CHOI^{1#+}, Kyungrock PAIK¹

¹Korea University

HS03 / Challenges in Hydrologic Modeling

Mon - 29 Jul | MR329

 Time
 08:30-10:30

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

HS03-D1-AM1-329-001 | HS03-A012

Evaluation of Flood Prediction Capability of the Distributed Grid-Xinanjiang Model Driven by WRF Precipitation Cheng YAO^{1#+} ¹Hohai University

HS03-D1-AM1-329-002 | HS03-A003

The Influence Mechanism of Nonlinear System on Precipitation Infiltration Yujiang HE^{1#+} ¹Institute of Hydrogeology and Environmental Geology

HS03-D1-AM1-329-003 | HS03-A008

Complex Networks for Temporal Streamflow Dynamics: Network Construction Using Chaos Theory Bellie SIVAKUMAR^{1,2#+}, Nazly YASMIN¹, Jun NIU³ ¹University of New South Wales, ²Indian Institute of Technology Bombay, ³China Agricultural University

HS03-D1-AM1-329-004 | HS03-A024

Long Term Discharge Estimation for Tropical Watershed, Indonesia Marliana Tri WIDYASTUTI^{1‡+}, Muh TAUFIK² ¹Bogor Agricultural University, ²IPB University

HS04 / Dealing with Hydrological Extremes: Theory, Simulation, and Practice

Mon - 29 Jul | MR328

 Time
 08:30-10:30

 Chair(s)
 Ke-Sheng CHENG, National Taiwan University

HS04-D1-AM1-328-001 | HS04-A011

Runoff Analysis Under the Conception of Uncertainty Based on the Theory of Stochastic Differential Equation Daiwei CHENG^{1*+}, Tadashi YAMADA¹, Tomohito J. YAMADA² ¹Chuo University, ²Hokkaido University

HS04-D1-AM1-328-002 | HS04-A012

Stochastic Simulation of Peak Flows for Flood Risk Assessment in Yom River Basin Cholticha ARSSIRI¹, Piyatida RUANGRASSAMEE^{1#+} ¹Chulalongkorn University

HS04-D1-AM1-328-003 | HS04-A001

On the Statistical Distribution of Occurrences of Over-dispersed Durational Events Ke-Sheng CHENG^{1#+}, Bo-Yu CHEN¹ ¹National Taiwan University

HS04-D1-AM1-328-004 | HS04-A009

Temporal Changes in Geomorphic Effectiveness of Floods in Regulated River Basins Chandan PRADHAN^{1#+}, Sangita PANI², Subashisa DUTTA¹, Rishikesh BHARTI³ ¹Indian Institute of Technology Guwahati, ²STUDENT, ³ASSISTANT PROFESSOR

HS04-D1-AM1-328-005 | HS04-A013

Flood Simulations in Mid-latitude Agricultural Land Using Current and Future Extreme Weathers Nobuaki KIMURA^{1#+}, Hirohide KIRI¹ ¹National Agriculture and Food Research Organization

HS04-D1-AM1-328-006 | HS04-A014

Characterizations of Annual Maximum Flood Peaks over China Long YANG^{1#+}, Jie GAO², Xiang LI³, Aizhong HOU⁴, La-Chun WANG⁵

¹Nanjing University, ²China Renewable Energy Engineering Institute, ³Institute of Water Resources and Hydropower Research, ⁴Ministry of Water Resources, ⁵The Key Laboratory of Coast & Island Development

HS04-D1-AM1-328-007 | HS04-A010

A Proposal of Hydrological Frequency Analysis Based on Confidence Interval and Prediction Interval Keita SHIMIZU^{1#+}, Tadashi YAMADA¹, Tomohito J. YAMADA² ¹Chuo University, ²Hokkaido University

HS04-D1-AM1-328-008 | HS04-A007

Statistical Evaluation of Outliers of Extreme Values in Daily Rainfall Records in Japan by Using Regional Frequency Analysis Hidetaka CHIKAMORI^{1#+} ¹Okayama University

ST03 / Magnetosphere-ionosphere Coupling at Earth and Other Planets: Aurorae and the Magnetospheric/ionosphere Dynamics

Mon - 29 Jul | MR310

Time 08:30-10:30

Chair(s) Anthony LUI, The Johns Hopkins University Quanqi SHI, Shandong University

ST03-D1-AM1-310-001 | ST03-A002

The Effects of Solar Wind Dynamic Pressure Changes on the Substorm Auroras and Energetic Electron Injections Liuyuan LI^{1#+}, Zhi-Qiang WANG²

¹Beihang University, ²Nanjing University of Aeronautics and Astronautics

ST03-D1-AM1-310-002 | ST03-A001 (Invited)

Energetic Particle Precipitation into Earth's Atmosphere: Spatial Structure and Magnetospheric Energy Input to the Ionosphere Drew TURNER¹⁵⁺

¹The Aerospace Corporation

ST03-D1-AM1-310-003 | ST03-A005

Quantitative Study of Periodic Auroral Fingers Wenrui WANG^{1,2*+}, Jian YANG², Yongfu WANG³, Quanqi SHI⁴,

Jun CUI^{1,5} ¹Sun Yat-sen University, ²Southern University of Science and

Technology, ³Peking University, ⁴Shandong University, ⁵Chinese Academy of Sciences

ST03-D1-AM1-310-004 | ST03-A006

Generation of Electron Acoustic Waves in the Topside Ionosphere from Coupling with Kinetic Alfven Waves Run SHI^{1#+}

¹Wuhan University

ST03-D1-AM1-310-005 | ST03-A003 (Invited)

New Auroral Features Revealed by the High-resolution Camera Onboard the Chinese Fengyun Satellite

Fei HE1+, Xiao-Xin ZHANG2#, Yong WEI1, Zuyin PU3, Weixing WAN1

¹Chinese Academy of Sciences, ²National Center for Space Weather, China Meteorological Administration, ³Peking University

ST03-D1-AM1-310-006 | ST03-A012

An Auroral Streamer that Emerged Between the Auroral Poleward Boundary and Onset Arc Before Substorm Initial Brightening

Yukinaga MIYASHITA^{1#+}, Akimasa IEDA², Shinobu MACHIDA², Vassilis ANGELOPOULOS³ ¹Korea Astronomy and Space Science Institute, ²Nagoya University, ³University of California, Los Angeles

ST03-D1-AM1-310-007 | ST03-A011

Shear-flow Driven Aurora Jay JOHNSON^{1‡+}, Simon WING², Peter DELAMERE³ ¹Andrews University, ²The Johns Hopkins University, ³University of Alaska Fairbanks

ST22 / Space Weather Research and Operation in Asia Oceania

Mon - 29 Jul | MR311

Time 08:30-10:30

Chair(s) Mamoru ISHII, National Institute of Information and Communications Technology

ST22-D1-AM1-311-001 | ST22-A009

The Recent Activities of R2O Transition in Korean Space Weather Operation

Seung Jun OH^{1#+}, Kyu-Cheol CHOI¹, Jeong-Deok LEE¹, Sangwoo LEE¹

¹SELab, Inc

ST22-D1-AM1-311-002 | ST22-A005

Current Status of Ionospheric Space Weather Products in Taiwan

I-Te LEE^{1,2*+}, Mark CHENG¹, Jyun-Ying HUANG¹, Hsu-Hui HO¹ ¹Central Weather Bureau, ²National Central University

ST22-D1-AM1-311-003 | ST22-A011

NICT Ionospheric Observations in Japan and Southeast Asia Takuya TSUGAWA^{1#+}, Kornyanat HOZUMI¹, Hideo MAENO¹, Michi NISHIOKA¹, Mamoru ISHII¹ ¹National Institute of Information and Communications Technology

ST22-D1-AM1-311-004 | ST22-A007

Radio Propagation Simulator to Translate Ionospheric Effect on High Frequency Waves

Kornyanat HOZUMI^{15*}, Hiroyuki NAKATA², Susumu SAITO³, Takuya TSUGAWA¹, Mamoru ISHII¹

¹National Institute of Information and Communications Technology, ²Chiba University, ³Electronic Navigation Research Institute

ST22-D1-AM1-311-005 | ST22-A004

The Relationship Between Equatorial Plasma Bubble and Evening Counter Electrojet Current Measured in West of Southeast Asia

Nurul Shazana ABDUL HAMID¹⁵⁺, Siti Fatimah Azzahrah AHMAD NOH¹, Mardina ABDULLAH¹, Suhaila M. BUHARI², IdahWati SARUDIN¹, Wan Nur Izzaty ISMAIL¹, Akimasa YOSHIKAWA³

¹Universiti Kebangsaan Malaysia, ²Universiti Teknologi Malaysia, ³Kyushu University

ST22-D1-AM1-311-006 | ST22-A003

ROTI Map Generation over Thailand Pornchai SUPNITHI¹³⁺, Sukit SOPHAN¹

¹King Mongkut's Institute of Technology Ladkrabang

ST22-D1-AM1-311-007 | ST22-A002

Low-latitude Ionospheric Irregularities in June Solstice Observed by Equatorial Atmosphere Radar and GPS Receivers Prayitno ABADI^{1‡+}, Yuichi OTSUKA², Slamet SUPRIYADI¹, Clara YATINI¹, Mamoru YAMAMOTO³, Musthofa LATHIF¹ ¹Indonesian National Institute of Aeronautics and Space (LAPAN), ²Nagoya University, ³Kyoto University

ST22-D1-AM1-311-008 | ST22-A001

Equatorial Ionosphere Disturbance Index Based on BDS-GEO Data

Artem PADOKHIN^{1#+}, Yulia TUMANOVA¹, Nikita TERESHIN¹ ¹Lomonosov Moscow State University

SE07 / Active Geodynamics, Deformation, Anisotropy And Growth of Eastern Himalaya

Mon - 29 Jul | MR327

Time 08:30-10:30

Chair(s) Debasis D. MOHANTY, North East Institute of Science and Technology

SE07-D1-AM1-327-001 | SE07-A004 (Invited)

The Ailao Shan-Red River Shear Zone Revisited: Timing and Tectonic Implications

Junlai LIU^{1#+}, Xiaoyu CHEN¹, Yuan TANG², Zhijie SONG¹ ¹China University of Geosciences (Beijing), ²Chengdu Institute of Geology and Mineral Resources

SE07-D1-AM1-327-002 | SE07-A013

Eocene-oligocene Transition of the Imphal Valley in the Tectonic Evolution of the Eastern Himalaya and the Indo-Myanmar Ranges S.Ranjeeta DEVI^{1s+} ¹Manipur University

SE07-D1-AM1-327-003 | SE07-A012

Sub-surface Imaging and Site Characterization of Shillong City, Meghalaya by Multichannel Analysis of Surface Waves (MASW) and Non Linear Earthquake Site Response Analysis (NERA)

Goutam Kashyap BORUAH^{1,2*+}, Saurabh BARUAH¹, Anurup GOHAIN BARUA²

¹CSIR-North-East Institute of Science and Technology, ²Gauhati University

SE07-D1-AM1-327-004 | SE07-A015

Pleistocene Rapid Decrease in Extensional Exhumation Implies Tectonic Changes in SE Tibet

Xuhua SHI^{1,2#+}, Chun FAN³, Paula FIGUEIREDO⁴, Dewen ZHENG⁵, Rong YANG¹, Rafael ALMEIDA⁶, Lewis A. OWEN⁴, Erchie WANG⁵, Zhigang LI⁷, Gang WANG⁸, Ray WELDON⁹ ¹Zhejiang University, ²Nanyang Technological University, ³China University of Geosciences (Beijing), ⁴University of Cincinnati, ⁵Chinese Academy of Sciences, ⁶Yachay Tech University, ⁷Sun Yat-sen University, ⁸Chengdu University of Technology, ⁹University of Oregon

SE07-D1-AM1-327-005 | SE07-A006

Variations in Anisotropic Behaviour Under Northeast Indian Lithosphere Inferred from Core Refracted Phases Debasis D. MOHANTY^{1,2#}, Poulommi MONDAL¹

¹North East Institute of Science and Technology, ²Academy of Scientific and Industrial Research (AcSIR)

SE17 / Hydrological Signals in Geodetic Observations: from Space to Ground

Mon - 29 Jul | MR302

Time	08:30-10:30
Chair(s)	Wei FENG, Chinese Academy of Sciences

SE17-D1-AM1-302-001 | SE17-A004 (Invited)

Estimating Aquifer Specific Yields from Gravity Surveys in Taiwan

Cheinway HWANG¹⁺⁺, Kuan-Hung CHEN¹, Liang CHANG¹ ¹National Chiao Tung University

SE17-D1-AM1-302-002 | SE17-A014

Monitoring and Potential Downscaling of Aquifer Groundwater Storage Changes Using Space Gravimetry C. K. SHUM^{1,2*+}, Yu ZHANG¹, Chaoyang ZHANG¹, Orhan AKYILMAZ³, Wei FENG², Ehsan FOROOTAN⁴, Junyi GUO¹, Chung-Yen KUO⁵, Maike SCHUMACHER⁴

¹The Ohio State University, ²Chinese Academy of Sciences, ³Istanbul Technical University, ⁴University of Hohenheim, ⁵National Cheng Kung University

SE17-D1-AM1-302-003 | SE17-A001

Geodetic and Hydrological Measurements Reveal the Recent Acceleration of Groundwater Depletion in North China Plain Bao ZHANG^{1±+}, Yibin YAO¹, Linyang XIN¹, Qian ZHAO² ¹Wuhan University, ²China Earthquake Administration

SE17-D1-AM1-302-004 | SE17-A002 (Invited)

ENSO Modulation of Global Sea Level Variations Through Land Hydrological Processes

Min-Hui LO^{1‡+}, Li-Wei CHAO¹, John REAGER², Yoshihide WADA^{3,4}, Vincent HUMPHREY⁵, Hrishi CHANDANPURKAR², Chia-Wei HSU⁶, Ben HAMLINGTON²

¹National Taiwan University, ²NASA Jet Propulsion Laboratory, ³NASA Goddard Institute for Space Studies/ Columbia University, ⁴Utrecht University, ⁵ETH Zürich, ⁶University of California Irvine

SE17-D1-AM1-302-005 | SE17-A009

Validation of Grace Terrestrial Water Storage Estimates by in Situ Observations and the Combined Land-atmosphere Water Budget Analysis in Illinois Pat YEH^{1F+}, Rachel KOH², Zhiyong HUANG³

¹ Monash University, ²Singapore University of Technology and Design, ³The University of Hong Kong

SE17-D1-AM1-302-006 | SE17-A012

Inter-annual Terrestrial Water Storage Changes in the Lake Baikal Region from Satellite Gravimetry

Jin LI^{1#+}, Jianli CHEN², Songyun WANG¹, Lu TANG¹, Xiaogong HU¹

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

SE17-D1-AM1-302-007 | SE17-A011

Total Water Storage Change in Global Outflow River Basins and its Contribution to Sea Level Change by Grace Xiaolong LI^{1#+}, Taoyong JIN¹ ¹Wuhan University

SE17-D1-AM1-302-008 | SE17-A005

Substantial Meltwater Contribution to the Brahmaputra Revealed by Satellite Gravimetry Shuang YI¹³⁺, Kosuke HEKI², Chunqiao SONG³, Shichang KANG³

¹University of Stuttgart, ²Hokkaido University, ³Chinese Academy of Sciences

OS10 / River-influenced Coastal Ecosystems Under the Threat of Anthropogenic Activity and Global Climate Change

Mon - 29 Jul | MR301

Time 08:30-10:30

Chair(s) Jie XU, South China Sea Institute of Oceanology, Chinese Academy of Sciences

OS10-D1-AM1-301-001 | OS10-A002 (Invited)

Long-term Changes of Nutrient Regime and Ecological Effects in the Bohai Sea

Baodong WANG1#+, Ming XIN2

¹The First Institute of Oceanography, Ministry of Natural Resources, ²Ministry of Natural Resources

OS10-D1-AM1-301-002 | OS10-A007 (Invited)

Comparative Trophic Structures Between Two Contrasting Estuarine Ecosystems with and Without a Sea Dike Hyun Je PARK^{1#+}, Jung Hyun KWAK¹, Young-Jae LEE², Hee Yoon KANG², Eun Jung CHOY³, Chang-Keun KANG² ¹Gangneung-Wonju National University, ²Gwangju Institute of Science and Technology, ³Korea Polar Research Institute

OS10-D1-AM1-301-003 | OS10-A003 (Invited)

Modeled Phytoplankton Response to the Offshore Transport of the Pearl River Plume Peng XIU¹⁵⁺, Bingxu GENG¹, Fei CHAI² ¹Chinese Academy of Sciences, ²Second Institute of Oceanography

OS10-D1-AM1-301-004 | OS10-A005

Numerical Estimation of Hydraulic and Ecological Changes Under Climate Changes in Saemangeum Basin, South Korea Hyung-Ju YOO¹⁺, Dong Hyun KIM¹, Hong-Teak KIM¹, Seungoh LEE^{1#}

¹Hongik University

OS10-D1-AM1-301-005 | OS10-A001

Biogeochemical Role of Urea in the South China Sea Ling CHEN^{1#+} ¹Xiamen University

OS10-D1-AM1-301-006 | OS10-A011

Pelagic and Benthic Microalgal Production Fuel the Nektonic Food Web in a Temperate Estuarine and Coastal System Exposed to Low-turbid Riverine Discharge in Korea Goutam Kumar KUNDU¹⁺, Yoonja KANG^{1#}, Hyun-Jung KIM², Hee Yoon KANG¹, Chang-Ho MOON³, Chang-Keun KANG¹, Young-Jae LEE¹

¹Gwangju Institute of Science and Technology, ²Marine Eco-Technology Institute, ³Pukyung National University

OS10-D1-AM1-301-007 | OS10-A008

Seasonal Variation of Biogenic Elements and Phytoplankton Biomass in a Temperate Bay of Korea Subjected to Low-turbidity River Water Discharge Riaz BIBI^{1#+}, Yoonja KANG¹, Young-Jae LEE¹, Hee Yoon KANG¹, Dongyoung KIM¹, Jaebin JANG¹, Chang-Keun KANG¹

OS10-D1-AM1-301-008 | OS10-A014

¹Gwangju Institute of Science and Technology

Spatiotemporal Variability in Phosphorus Species in the Pearl River Estuary: Influence of the River Discharge Ruihuan LI¹⁺, Jie XU^{2‡}, Xiangfu LI¹, Zhen SHI¹, Paul J. HARRISON³ ¹Chinese Academy of Sciences, ²South China Sea Institute of

Oceanology, Chinese Academy of Sciences, ³University of British

OS18 / Coastal Hazards: Impacts of Tropical Storms and Tsunamis

Mon - 29 Jul | Nicoll 1

Time08:30-10:30Chair(s)Philip Li-Fan LIU, National University of Singapore

OS18-D1-AM1-Nicoll 1-001 | OS18-A003 (Invited)

A Note on Effect of Dynamic Rupture Process in Strike Direction of a Long Fault on Tsunami Propagation Hua LIU^{1#+}, Zhiyuan REN²

¹Shanghai Jiao Tong University, ²National Marine Environmental Forecasting Center

OS18-D1-AM1-Nicoll 1-002 | OS18-A009

Propagation of Undular Bores Around a Conical Island Zhisong LI¹⁺, Hua LIU^{1#} ¹Shanghai Jiao Tong University

OS18-D1-AM1-Nicoll 1-003 | OS18-A024

Resonance Characteristics of Tsunami Wave Around Circular Islands Xingyu GAO¹⁺, Xiaojing NIU^{1#} ¹Tsinghua University

OS18-D1-AM1-Nicoll 1-004 | OS18-A059

Observe Tsunami Signatures in Space Using the Total Electron Content Derived from Existing Ground-based GPS Receivers Jann-Yenq (Tiger) LIU^{1‡+}, Chi-Yen LIN¹, Yu-Lin TSAI¹, Tien-Chi LIU¹, Katsumi HATTORI², Y. SUN³, Tso-Ren WU¹ ¹National Central University, ²Chiba University, ³Kyushu University

OS18-D1-AM1-Nicoll 1-005 | OS18-A014

Prediction of Tsunami Waves by Uniform Slip Models Chao AN^{1‡+}, Hua LIU¹, Zhiyuan REN² ¹Shanghai Jiao Tong University, ²National Marine Environmental Forecasting Center

OS18-D1-AM1-Nicoll 1-006 | OS18-A015

Simulation of the 2007 Chehalis Lake Landslide-generated Tsunami with SPH Alex GHAÏTANELLIS^{1#+}, Damien VIOLEAU², Philip Li-Fan LIU¹, Agnès LEROY², Martin FERRAND³ ¹National University of Singapore, ²EDF R&D and Saint-Venant Laboratory for Hydraulics, ³EDF R&D

OS18-D1-AM1-Nicoll 1-007 | OS18-A005

A General Frictional-collisional Model for Dry Granular Flows of Small and Large Particles Kang HE1+, Xiping YU1# ¹Tsinghua University

OS18-D1-AM1-Nicoll 1-008 | OS18-A052

Tsunami Hazard Assessments with Consideration of Uncertain Bathymetry

Ignacio SEPULVEDA1#+, Jennifer HAASE2, Philip Li-Fan LIU3, Mircea GRIGORIU4

¹University of California, San Diego, ²Scripps Institution of Oceanography, ³National University of Singapore, ⁴Cornell University

BG09 / Biogeochemistry of Contaminants in **Terrestrial and Aquatic Ecosystems**

Mon - 29 Jul | MR300

Time 08:30-10:30 Chair(s) Bhoopesh MISHRA, University of Leeds

BG09-D1-AM1-300-001 | BG09-A018 (Invited)

Tracking a Bloom of Large Marine Centric Planktonic Diatom in the Coastal Bay of Bengal- Integrating Microscopy with Molecular Tools Punyasloke BHADURY1#+ ¹Indian Institute of Science Education and Research Kolkata

BG09-D1-AM1-300-002 | BG09-A005

Nitrogen Migration and Transformation Mechanism in River **Courses Restored by Reclaimed Water** Hongmei BU1#+, Xianfang SONG1 ¹Chinese Academy of Sciences

BG09-D1-AM1-300-003 | BG09-A002

Marine Microplastics: A Transport Vector for Non-native Cyanobacteria Emily CURREN1#+ ¹National University of Singapore

BG09-D1-AM1-300-004 | BG09-A001

Performance Evaluation of Sequential Constructed Wetland **Microbial Fuel Cells for Wastewater Flow** Somil THAKUR1#+, Muthyala SAI CHAITHANYA1, Bhaskar DAS1 ¹VIT University

BG09-D1-AM1-300-005 | BG09-A012

Biota-sediment Accumulation and Translocation of Heavy Metals in Corbicula Fluminea from Laguna de Bay, Philippines Marlon ELVIRA1#+, Decibel FAUSTINO-ESLAVA1, Mayuko FUKUYAMA², Emmanuel Ryan DE CHAVEZ¹, Lorele TRINIDAD1

¹University of the Philippines Los Baños, ²Akita University

BG09-D1-AM1-300-006 | BG09-A006 (Invited)

Zn Speciation and Transformation in Soils and Sediments Along the Ground Transportation Route of Zn Ore to a Refinery

Man Jae KWON1#+, Maxim BOYANOV², Kenneth KEMNER³, Edward O'LOUGHLIN3, Bhoopesh MISHRA4, Soo-kyung JEON5, Seunghak LEE⁵

¹Korea University, ²Bulgarian Academy of Sciences, ³Argonne National Laboratory, ⁴University of Leeds, ⁵Korea Institute of Science and Technology

BG09-D1-AM1-300-007 | BG09-A011 (Invited)

Marriage of X-ray Spectroscopy and Microscopy for Trace Element Analysis in Biological and Environmental Systems Bhoopesh MISHRA1#+ ¹University of Leeds

AS03 / Monsoon Climates Over South, East and Southeast Asia in a Warming Environment Mon - 29 Jul | MR309

Time	08:30-10:30

Chair(s) Ramesh KRIPALANI, Indian Institute of Tropical Meteorology

AS03-D1-AM1-309-001 | AS03-A029

Formation of the North-South Contrasting Pattern of Summer **Rainfall Changes over Eastern China** Renguang WU1#+ ¹Zhejiang University

AS03-D1-AM1-309-002 | AS03-A031

Re-examination of the Decadal Change in the Relationship Between the East Asian Summer Monsoon and Indian Ocean Kyung-Ja HA1#+, Seogyeong KIM1, Jianping LI2, Ruiqiang DING3 ¹Pusan National University, ²Beijing Normal University, ³Chinese Academy of Sciences

AS03-D1-AM1-309-003 | AS03-A005

Quantitative Analysis of Water Vapor Transport During Mei-yu Front Rainstorms Period over the Tibetan Plateau and Downstream Regions Hao YANG1#4 ¹Wuhan Institute of Heavy Rain

AS03-D1-AM1-309-004 | AS03-A056

Delayed Impacts of the IOD: Seasonal Relationships Between the IOD, Tibetan Plateau Snow, and Summer Precipitation over the Yangtze-Huaihe River Region Yue ZHANG1#+, Wen ZHOU1 ¹City University of Hong Kong

AS03-D1-AM1-309-005 | AS03-A006

A Bias-corrected Projection for the Changes in East Asian Summer Monsoon Rainfall Under Global Warming Shijie ZHOU1+, Gang HUANG1, Ping HUANG1# ¹Chinese Academy of Sciences

AS03-D1-AM1-309-006 | AS03-A033

Projected Near Term Changes in the East Asia Summer Monsoon Fangxing TIAN^{1,2#+}, Buwen DONG², Jon ROBSON², Rowan SUTTON², Simon TETT³ ¹National Centre for Atmospheric Science, ²University of Reading, ³The University of Edinburgh

AS03-D1-AM1-309-007 | AS03-A038

Dynamical Downscaling of Broad Scale Monsoon Rainfall Yoshiyuki KAJIKAWA1#+, Tsuyoshi YAMAURA2 ¹Kobe University, ²RIKEN Advanced Institute for Computational Science

IG03 / Near Surface Investigation and Modeling for **Groundwater Resources Assessment**

Mon - 29 Jul | MR323

Time 08:30-10:30

Ping-Yu CHANG, National Central University Chair(s) Jui-Pin TSAI, National Cheng Kung University

IG03-D1-AM1-323-001 | IG03-A006 (Invited)

Exploitation of Pump-and-treat Remediation Systems for Characterization of Hydraulic Heterogeneity Yuanyuan ZHA1#+, Tian-Chyi YEH2, Jui-Pin TSAI3 ¹Wuhan University, ²University of Arizona, ³National Cheng Kung University

IG03-D1-AM1-323-002 | IG03-A008

Using Conditional Approach to Reduce the Uncertainty in Stochastic Subsidence Modeling Shih-Jung WANG1#+ ¹National Central University

IG03-D1-AM1-323-003 | IG03-A003

Characterizing and Reproducing the Natural Pattern of CO2 Gas Concentration in the Vadose Zone Well Before CO2 Injecting in K-COSEM Research Site, Korea Won-Tak JOUN1+, Seung-Wook HA1, Sanghoon LEE1, In-Woo PARK¹, Kang-Kun LEE^{1#} ¹Seoul National University

IG03-D1-AM1-323-004 | IG03-A011

Using Time-lapse 2D Electrical Resistivity Imaging for Estimating the Specific Yield of the Unconfined Gravel Aquifers

Ping-Yu CHANG1#+, Hsin-Ju YAO1, Jordi Mahardika PUNTU1 ¹National Central University

IG03-D1-AM1-323-005 | IG03-A001

Evaluation Method for Hyporheic Zone Influenced by a Series of Rainfall Events Suning LIU1#+, Haiyun SHI1 ¹Southern University of Science and Technology

IG03-D1-AM1-323-006 | IG03-A012

A Comparative Assessment of Infiltration Characteristics **Obtained Using Two Disc Infiltrometers** Aparimita Priyadarshini NAIK1#+, Sreeja PEKKAT1 ¹Indian Institute of Technology Guwahati

IG03-D1-AM1-323-007 | IG03-A014

Estimating the Available Amount of Groundwater Resource Based on the Risk of Geological Disasters - Using Taipei Basin as an Example Hua-Ting TSENG1+, Hwa-Lung YU1# ¹National Taiwan University

IG03-D1-AM1-323-008 | IG03-A015

Estimation of Regional Scale Effective Infiltration Using an **Open Source Hydrogeological Balance Model and Free Open** Data Mauro ROSSI1#+, Marco DONNINI1

¹National Research Council (CNR)

PS03 / Exploration of Mars: New Results, Current Missions and Future Plans

Mon - 29 Jul | Nicoll 3

Time	08:30-10:30
Chair(s)	Joseph MICHALSKI, The University of Hong Kong

PS03-D1-AM1-Nicoll 3-001 | PS03-A021

Martian Moon eXploration MMX: Science Objectives and **Current Status**

Shingo KAMEDA1#+, Kiyoshi KURAMOTO2, Yasuhiro KAWAKATU3, Masaki FUJIMOTO3, Jean-Pierre BIBRING4, David LAWRENCE5, Hidenori GENDA6, Naru HIRATA7, Takeshi IMAMURA8, Koji MATSUMOTO9, Hideaki MIYAMOTO⁸, Tomokatsu MOROTA¹⁰, Hiroshi NAGAOKA³, Hiromu NAKAGAWA11, Tomoki NAKAMURA11, Kazunori OGAWA12, Hisashi OTAKE3, Masanobu OZAKI3, Sho SASAKI13, Hiroki SENSHU14, Shogo TACHIBANA8, Naoki TERADA11, Tomohiro USUI6, Koji WADA14

¹Rikkyo University, ²Hokkaido University, ³Japan Aerospace Exploration Agency, ⁴University of Paris-Sud, ⁵Johns Hopkins University, 6 Tokyo Institute of Technology, 7 The University of Aizu, ⁸The University of Tokyo, ⁹National Astronomical Observatory of Japan, ¹⁰Nagoya University, ¹¹Tohoku University, ¹²Kobe University, ¹³Osaka University, ¹⁴Chiba Institute of Technology

PS03-D1-AM1-Nicoll 3-002 | PS03-A013

Future Plans for Measurements of Electromagnetic Radiation on the Surface of Mars

Ondrej SANTOLIK^{1,2#+}, Ivana KOLMASOVA^{1,2}, Alexandre A. SKALSKY3

¹Czech Academy of Sciences, ²Charles University, ³Institute of Space Research

PS03-D1-AM1-Nicoll 3-003 | PS03-A018

Correlating Frequency of Ice Sheet Growth Recorded on Mons Pavonis and Mons Arsia, Mars Tomohiro KANZAKI1#+, Reid PARSONS2, Ryodo HEMMI1, Hideaki MIYAMOTO1

¹The University of Tokyo, ²Fitchburg State University

PS03-D1-AM1-Nicoll 3-004 | PS03-A001

Hydration State of the Martian Lithosphere Constrained from Gravity and Topography

James Daniel Paul MOORE1#+, Jon WADE2, Tony WATTS2, Richard PALIN³, Lars HANSEN², Brendan DYCK⁴, Jun MUTO⁵, Andrew SMYE⁶, Adam SWITZER¹

¹Nanyang Technological University, ²University of Oxford, ³Colorado School of Mines, 4Simon Fraser University, 5Tohoku University, ⁶Pennsylvania State University

PS03-D1-AM1-Nicoll 3-005 | PS03-A005

Insight Magnetic Field Measurements: Initial Results Matthew FILLINGIM1#+, Steven JOY2, Chris RUSSELL2, Yanan YU², Kathryn ROWE², Catherine JOHNSON³, Anna MITTELHOLZ³, Benoit LANGLAIS⁴, Peter CHI², Janet LUHMANN¹, Jasper HALEKAS⁵, Suzanne SMREKAR⁶, Bruce BANERDT⁶

¹University of California, Berkeley, ²University of California, Los Angeles, ³University of British Columbia, ⁴University of Nantes, ⁵The University of Iowa, 6 Jet Propulsion Laboratory

PS03-D1-AM1-Nicoll 3-006 | PS03-A022

An Ultraviolet Perspective of the Dynamic Atmosphere of Mars: Highlights from Four Years of Observations from the MAVEN Imaging UltraViolet Spectrograph

Daniel LO¹⁺, Nick SCHNEIDER^{2#}, Justin DEIGHAN², Sonal JAIN², Joseph EVANS³, Michael STEVENS⁴, Matteo CRISMANI², Michael CHAFFIN², Andrea HUGHES⁵, John CLARKE⁶, Majd MAYYASI⁶, Ian STEWART², Roger YELLE¹, Franck MONTMESSIN⁷, Franck LEFÈVRE⁸, William MCCLINTOCK², Gregory HOLSCLAW², Bruce JAKOSKY²

¹The University of Arizona, ²University of Colorado Boulder, ³Computational Physics, Inc., ⁴Naval Research Laboratory,

⁵Embry-Riddle Aeronautical University, ⁶Boston University, ⁷National Center for Scientific Research (CNRS)/ Institut Pierre Simon Laplace (IPSL)/ Université de Versailles Saint-Quentin-en-Yvelines (UVSQ) / University Pierre et Marie Curie (UPMC), ⁸University Pierre et Marie Curie

PS03-D1-AM1-Nicoll 3-007 | PS03-A020

Automated Mapping and Tracking of Recurring Slope Lineaes at Valles Marineris Yu TAO¹⁵⁺, Jan-Peter MULLER¹

¹University College London

AS34 / Aviation Weather Forecasting and Impact of Climate Change

Mon - 29 Jul | MR308

Time 11:00-12:30

Chair(s) Hye-Yeong CHUN, Yonsei University Todd LANE, The University of Melbourne Jung-Hoon KIM, Seoul National University

AS34-D1-AM2-308-001 | AS34-A009 (Invited)

Modelling the Climate Impact of Aircraft Contrails in a High-density Airspace with Uncertainty Analysis Roger TEOH¹⁵⁺, Marc STETTLER¹ ¹Imperial College London

AS34-D1-AM2-308-002 | AS34-A003

Time and Space Variations in Upper Level Turbulence Events from the Global Aircraft Data Set (GADS) Archive Joel TENENBAUM^{1#+} ¹State University of New York at Purchase

AS34-D1-AM2-308-003 | AS34-A005

Impact of Large-scale Variabilities on Flight Routes and Clear-Air Turbulence (CAT) Encounters Jung-Hoon KIM^{1,2*+} ¹Seoul National University, ²NOAA National Centers for Environmental Prediction/ Colorado State University

AS34-D1-AM2-308-004 | AS34-A006

Analyses on Turbulence Indicator Obtained from the Aircraft Meteorological Data Relay (AMDAR) Data

Soo-Hyun KIM1+, Hye-Yeong CHUN1#, Jung-Hoon KIM2.3, Robert SHARMAN4, Matt STRAHAN5

¹Yonsei University, ²Seoul National University, ³NOAA National Centers for Environmental Prediction/ Colorado State University, ⁴National Center for Atmospheric Research, ⁵NOAA/Aviation Weather Center

AS34-D1-AM2-308-005 | AS34-A008

Multi-model-based Deterministic and Probabilistic Clear-Air Turbulence (CAT) Forecasts Using Ellrod-Knox Index Dan-Bi LEE¹⁺, Hye-Yeong CHUN¹⁺, Jung-Hoon KIM^{2,3} ¹Yonsei University, ²Seoul National University, ³NOAA National Centers for Environmental Prediction/ Colorado State University

AS34-D1-AM2-308-006 | AS34-A007

Characteristics of Atmospheric Turbulence Retrieved from High Vertical-resolution Radiosonde Data in the US and Comparison with Observed Aviation Turbulence Han-Chang KO¹, Hye-Yeong CHUN¹⁵⁺, Robert SHARMAN² ¹Yonsei University, ²National Center for Atmospheric Research

AS22 / Middle Atmosphere Science

Mon - 29 Jul | Nicoll 2

Time	11:00-12:30
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Chair(s) Zeyu CHEN, Chinese Academy of Sciences

AS22-D1-AM2-Nicoll 2-001 | AS22-A021 (Invited)

VHF Radar Measurements of Momentum Flux at High Latitudes

Iain REID^{1,2#}, Ruediger RUESTER³, Peter CZECHOWSKY³, Andrew SPARGO²

¹ATRAD Pty Ltd, ²University of Adelaide, ³Max Planck Institute for Solar System Research

AS22-D1-AM2-Nicoll 2-002 | AS22-A028 (Invited)

Latest Findings on Atomic Oxygen in the Mesopause Region Martin KAUFMANN^{1*+}, Yajun ZHU¹, Qiuyu CHEN¹, Martin RIESE¹

¹Forschungszentrum Jülich GmbH

AS22-D1-AM2-Nicoll 2-003 | AS22-A032

Beijing MST Radar Detection of the Lower, Middle and Upper Atmosphere Yufang TIAN^{1,2‡+}, Daren LYU^{1,2}

¹Institute of Atmospheric Physics, Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

AS22-D1-AM2-Nicoll 2-004 | AS22-A013

Short Term Variability in Sun Synchronous and Non Sun Synchronous Tides in the Middle Atmosphere from FORMOSAT-3/COSMIC Data Uma DAS¹⁺, William WARD², Sanat Kumar DAS³, Chen Jeih

Uma DAS¹⁺⁺, William WARD², Sanat Kumar DAS², Chen Jein PAN⁴

¹Indian Institute of Information Technology Kalyani, ²University of New Brunswick, ³Bose Institute, ⁴National Central University

AS22-D1-AM2-Nicoll 2-005 | AS22-A027

The Northern Polar Vortex Affected by Particle Precipitation, QBO Phase and Sudden Stratospheric Warmings Kalevi MURSULA^{1#+}, Timo ASIKAINEN¹, Ville MALINIEMI¹, Antti SALMINEN¹ ¹University of Oulu

AS31 / Haze: Chemistry, Physics, Meteorology, Emissions, Climate, Processing, Fog, and More. Looking Across Spatial Scales from Regional to Global

Mon - 29 Jul | MR304

Time11:00-12:30Chair(s)Jason COHEN, Sun Yat-sen University

AS31-D1-AM2-304-001 | AS31-A009 (Invited)

Exploring Deep Learning Algorithms in Forecasting the Occurrence of Severe Haze Events in Southeast Asia Chien WANG^{1#+}

¹National Center for Scientific Research/ Université Toulouse III

AS31-D1-AM2-304-002 | AS31-A004

Significance of Biogenic Volatile Organic Compounds and Biomass Burning Emissions to Global Aerosol Burden Under Future Changes in Climate and Land Use Alan LIM¹⁵⁺, Amos TAI¹, Maria VAL MARTIN² ¹The Chinese University of Hong Kong, ²Sheffield University

AS31-D1-AM2-304-003 | AS31-A013 (Invited)

A Unique Perspective on the Temporal Shift of Boundary Layer Height Trend in China from Radiosonde Measurements Jianping GUO¹⁺⁺ ¹Chinese Academy of Meteorological Sciences

AS31-D1-AM2-304-004 | AS31-A012

Quantifying the Spatial and Temporal Vertical Distribution of Aerosols Due to Biomass Burning and Urbanization Using WRF-CHEM, A Plume Rise Model, and Remotely Sensed Measurements SHUO WANG¹⁺, Jason COHEN^{1‡}

¹Sun Yat-sen University

AS31-D1-AM2-304-005 | AS31-A017 (Invited)

Aerosol Assimilation and Prediction Experiment Based on Laser Radar Data in North China Zengliang ZANG^{1±+}, Xiaobin PAN¹, Yanfei LIANG¹, Wei YOU¹ ¹National University of Defense Technology

AS24 / Role of Urbanization on Weather and Climate of Cities

Mon - 29 Jul | MR303

Time	11:00-12:30
Chair(s)	Hiroyuki KUSAKA, University of Tsukuba
	Anurag DIPANKAR, Meteorological Service Singapore

AS24-D1-AM2-303-001 | AS24-A009

Wind Environment over Urban Areas – A Comparison of Laboratory and Mathematical Modeling Results Chun-Ho LIU^{1#+}, Zhangquan WU¹, Yongfeng MA¹ ¹The University of Hong Kong

AS24-D1-AM2-303-002 | AS24-A029

Numerical Simulation of Urban-boundary Layer with Explicitly Resolving Buildings Structures Atsushi INAGAKI¹⁺⁺, Meral YUCEL¹, Manabu KANDA¹ ¹Tokyo Institute of Technology

AS24-D1-AM2-303-003 | AS24-A031

Downscaling Studies Up to the Neighbourhood Scale with Obstacle Resolving Microscale Models Bertrand CARISSIMO^{1‡+}, Cedric FLAGEUL¹, Raphael BRESSON¹, Martin FERRAND² ¹CEREA-Ecole des Ponts ParisTech / EDF R&D, ²EDF R&D

AS24-D1-AM2-303-004 | AS24-A015

Simulation of Convective Precipitation over Singapore Using an Ensemble Approach Andres SIMON-MORAL^{1#+}, Anurag DIPANKAR², Quang-Van DOAN³, Claudio SANCHEZ⁴, Matthias ROTH¹, Xiang-Yu HUANG³ ¹National University of Singapore, ²Meteorological Service Singapore, ³Centre for Climate Research Singapore, ⁴UK Met Office

AS24-D1-AM2-303-005 | AS24-A014

Characterizing Effect of Land Cover Conversion on Thermal Environment and Convective Heavy Rainfall in Urban Areas Jehn-Yih JUANG^{1#+} ¹National Taiwan University

AS24-D1-AM2-303-006 | AS24-A004

Appropriate Thermal Indices for Applications in Human Biometeorological and Urban Studies Andreas MATZARAKIS¹⁸⁺ ¹German Meteorological Service

HS02 / Hydrology for Human-nature Coupled Systems

Mon - 29 Jul | MR330

Time 11:00-12:30

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

HS02-D1-AM2-330-001 | HS02-A001 (Invited)

Sediment Balance from Mountains to Coasts in Japan: Huge Impact of Past River Mining Keiko UDO^{1#+}, Yuriko TAKEDA¹, Yoshiyuki YOKOO²

¹Tohoku University, ²Fukushima University

HS02-D1-AM2-330-002 | HS02-A004

Model Linking Landslides and River Evolution of Incisional Channel Created by River Erosion Chia-Ting KAO¹⁺, Gene Jiing-Yun YOU^{1‡} ¹National Taiwan University

HS02-D1-AM2-330-003 | HS02-A009

Mangrove Competition in Different Land Reclamation Scenarios in a Semi-enclosed Subtropical Bay Shuxin LUO¹, Ting Fong May CHUI^{1#+} ¹The University of Hong Kong

HS02-D1-AM2-330-004 | HS02-A006

Numerical Analysis of Submerged Turbulent Buoyant Jet in River Mouth

Yen-Chen MOU^{1#+}, Gene Jiing-Yun YOU¹, Chih-Chieh YOUNG² ¹National Taiwan University, ²National Taiwan Ocean University

HS02-D1-AM2-330-005 | HS02-A016

Changes in Fluid Regime in the Estuarine Turbidity Maxima of Yangtze River Analyzing by Texture Features in Satellite Remote Sensing Images Lizhi TENG¹⁺, Heqin CHENG¹⁺, Ge YAN¹ ¹East China Normal University

HS03 / Challenges in Hydrologic Modeling

Mon - 29 Jul | MR329

 Time
 11:00-12:30

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

HS03-D1-AM2-329-001 | HS03-A036 (Invited)

Wavelet Decomposition as a Data Pre-processing Technique in Artificial Neural Networks A.W. JAYAWARDENA^{1#+} ¹The University of Hong Kong

HS03-D1-AM2-329-002 | HS03-A010

Watershed Modelling of the Buayan Basin in the Philippines Using the Soil Water Assessment Tool (SWAT) for Sustainable Water Resource Management Ismail GUIAMEL¹⁺, Han Soo LEE^{1‡} ¹Hiroshima University

HS03-D1-AM2-329-003 | HS03-A002

A Three-dimensional Hydrogeological Analysis Method for Estimating Tunnel Inflow Wen Han TSAI^{1#+}, Fu Yuan HSIAO¹ ¹Sinotech Engineering Consultants, Inc

HS03-D1-AM2-329-004 | HS03-A031

Comparison of Spatial Interpolation Methods for the Estimation of Precipitation Distribution at Different Time Scales to Improve the Accuracy of Hydrological Model Dedi LIU^{1#+}

¹Wuhan University

HS03-D1-AM2-329-005 | HS03-A037

Improving Probabilistic Hydrologic Predictions Through High-resolution Convection-permitting Climate Modeling Shuo WANG¹⁺⁺

¹The Hong Kong Polytechnic University

HS03-D1-AM2-329-006 | HS03-A027

Extraction of Soil Moisture Information from the Dynamic Budyko Model

Aruna Kumar NAYAK^{1#+}, Basudev BISWAL², K.P. SUDHEER¹ ¹Indian Institute of Technology Madras, ²Indian Institute of Technology Hyderabad

HS20 / Monthly to Seasonal Projection of Climatic/hydrological Extremes

Mon - 29 Jul | MR328

Time11:00-12:30Chair(s)Ji CHEN, The University of Hong Kong

HS20-D1-AM2-328-001 | HS20-A003

A Stochastic Programming Approach to Optimal Reservoir Operation Using Probabilistic Seasonal Streamflow Forecasts Gulten GOKAYAZ^{1*+}, Stefano GALELLI¹, Selin Damla AHIPASAOGLU¹ ¹Singapore University of Technology and Design

HS20-D1-AM2-328-002 | HS20-A004

Development of Rating-curve Considering the Influence of Tide Effect Younghoon YOU¹⁺, Myungjin LEE¹, Jonghun LIM¹, Junhyeong LEE¹, Soojun KIM¹, Hung Soo KIM^{1‡} ¹Inha University

HS20-D1-AM2-328-003 | HS20-A007

An Analysis of the Impacts of Seasonal Weather Forecast Seon-Ho KIM¹⁺, Woo Sung NAM², Deg-Hyo BAE^{1‡} ¹Sejong University, ²National Drought Information Analysis Center

HS20-D1-AM2-328-004 | HS20-A005

Teleconnection Analysis Between Droughts in Korea and Global Climate Factors Taewoo LEE¹⁺, Hong Jun JOO¹, Soojun KIM^{1‡}, JongSo LEE², Jae Won JUNG¹, Hung Soo KIM¹ ¹Inha University, ²Korea Research Institute for Human Settlements

HS20-D1-AM2-328-005 | HS20-A002

Changes of Hydrologic Risk for Future Droughts in South Korea According to RCP Climate Change Scenarios Jiyeon PARK¹⁺, Ji-Eun KIM¹, Jae Hee RYU¹, Jae-Hyun AHN², Tae-Woong KIM^{1‡} ¹Hanyang University, ²Seokyeong University

HS20-D1-AM2-328-006 | HS20-A008

Study on the Change of Precipitation Pattern in Southwest China Under Global Climate Change Ji CHEN^{1#+}, Jiaye LI^{1,2} ¹The University of Hong Kong, ²Tsinghua University

ST03 / Magnetosphere-ionosphere Coupling at Earth and Other Planets: Aurorae and the Magnetospheric/ionosphere Dynamics

Mon - 29 Jul | MR310

Time11:00-12:30Chair(s)Quanqi SHI, Shandong University

ST03-D1-AM2-310-001 | ST03-A015 (Invited)

Magnetospheric Convection in Association with Field-aligned Ion Flows and Currents in Earth's Ionosphere and Magnetosphere Robert RANKIN¹⁵⁺, Dmytro SYDORENKO¹

¹University of Alberta

ST03-D1-AM2-310-002 | ST03-A019

Turbulence Observations in the Polar/Cusp Ionosphere Francesca DI MARE^{1#+}, Jøran MOEN¹, Lasse CLAUSEN¹, Andres SPICHER¹ ¹University of Oslo

ST03-D1-AM2-310-003 | ST03-A020

PARM-HEP Observation of Precipitating High Energy Electrons over Pulsating Aurora Taku NAMEKAWA^{1,2*+}, Takefumi MITANI², Kazushi ASAMURA², Yoshifumi SAITO² ¹The University of Tokyo, ²Japan Aerospace Exploration Agency

ST03-D1-AM2-310-004 | ST03-A021 (Invited)

Direct Evidence for Throat Aurora Being the Ionospheric Signature of Magnetopause Transient and Reflecting Localized Magnetopause Indentations Desheng HAN^{1±+} ¹Tongji University

ST04 / Particle Acceleration and Transport at the Sun and in the Heliosphere

Mon - 29 Jul | MR311

 Time
 11:00-12:30

 Chair(s)
 Linghua WANG, Peking University

 Kyoko WATANABE, National Defense Academy of Japan

ST04-D1-AM2-311-001 | ST04-A018

Cosmic-ray Anisotropy Observed with the Tibet AS+MD Array Munehiro OHNISHI^{1#+} ¹The University of Tokyo

ST04-D1-AM2-311-002 | ST04-A021

Global Magnetohydrodynamics Simulation of EUV Waves and Shocks from the X8.2 Eruptive Flare on 2017 September 10 Meng JIN^{1,2#+}, Wei LIU^{3,4}, Mark CHEUNG³, Nariaki NITTA³, Ward MANCHESTER⁵, Leon OFMAN^{6,7}, Cooper DOWNS⁸, Vahe PETROSIAN⁴, Nicola OMODEI⁴

¹Lockheed Martin ATC, ²SETI Institute, ³Lockheed Martin Solar and Astrophysics Laboratory, ⁴Stanford University, ⁵University of Michigan, ⁶Catholic University of America, ⁷NASA Goddard Space Flight Center, ⁸Predictive Science Inc.

ST04-D1-AM2-311-003 | ST04-A006 (Invited)

Comparative Study of Energetic Particle Acceleration in Solar Corona and Earth's Magnetosphere Shinsuke IMADA^{1#+} ¹Nagoya University

ST04-D1-AM2-311-004 | ST04-A011

Suprathermal Electrons Near Earth Bow Shock Zixuan LIU¹⁺, Linghua WANG^{1‡}, Quanqi SHI², Mitsuo OKA³, Jiansen HE¹, Hui TIAN¹, Bale STUART³, Drew TURNER⁴ ¹Peking University, ²Shandong University, ³University of California, Berkeley, ⁴The Aerospace Corporation

ST04-D1-AM2-311-005 | ST04-A020

Particle Acceleration in Coalescent and Squashed Magnetic Islands of Reconnecting Current Sheets Valentina ZHARKOVA^{1#+}, Qian XIA¹ ¹Northumbria University

SE11 / Geophysical Investigation and Structures of the Orogenic Belt and Numerical Modeling

Mon - 29 Jul | MR327

Time 11:00-12:30 *Chair(s)* Cong PENG, *CAGS*

SE11-D1-AM2-327-001 | SE11-A002

Crustal Structure Beneath the Southwestern Xing'an-Mongolia Orogenic Belt Revealed by Receiver Function Analysis Qi-Fu CHEN^{1#+}, KaiWen ZHANG¹ ¹Chinese Academy of Sciences

SE11-D1-AM2-327-002 | SE11-A004

Deep Structure, Paleo- and Modern Geodynamics of the Sikhote-Alin Orogenic Belt Aleksei DIDENKO^{1±+}, Mikhail NOSYREV¹ ¹Far Eastern Branch of the Russian Academy of Sciences

SE11-D1-AM2-327-003 | SE11-A005

High-resolution Crust Image from an Active-source Deep Seismic Reflection Profile Across the Kalatongke Orefield in the Northeastern Margin of the Junggar Basin, Northwest China: Implications to Regional Metallogenic Process Lian-Feng ZHAO¹⁵⁺, Xiao-Bi XIE², Lei ZHANG¹, Geng YANG¹, Zhen-Xing YAO¹ ¹Chinese Academy of Sciences, ²University of California, Santa Cruz

SE11-D1-AM2-327-004 | SE11-A003

A Density Model of Crust and Upper Mantle in Tibet from the Joint Inversion of Gravity Data and Surface Wave Dispersion Jiakuan WAN¹⁺, Zhicai LUO^{1‡}, Chuang XU¹ ¹Huazhong University of Science and Technology

SE11-D1-AM2-327-005 | SE11-A007

Mechanics and Paleo Structure of the Platform Margin of Dengying Formation in the Jiulongshan Field, Sichuan Basin, China Lining WANG¹⁵⁺ ¹PetroChina

SE11-D1-AM2-327-006 | SE11-A008

Geodynamic Modeling on the Continuous Process: From Oceanic Subduction to Continental Subduction Rui QI¹⁵⁺ ¹Sun Yat-sen University

SE02 / Earthquakes, Volcanoes, and Active Faults in East Asia

Mon - 29 Jul | MR302

Time 11:00-12:30

Chair(s) Xiwei XU, China Earthquake Administration Yinshuang AI, Chinese Academy of Sciences Jianshe LEI, China Earthquake Administration

SE02-D1-AM2-302-001 | SE02-A039

Seismic Azimuthal Anisotropy and Mantle Flow Beneath the Southeastern Tibetan Plateau and Indochina Peninsula Kelly LIU^{1‡+}, Fansheng KONG², Youqiang YU³, Stephen GAO¹ ¹Missouri University of Science and Technology, ²Ministry of Natural Resources, ³Tongji University

SE02-D1-AM2-302-002 | SE02-A004

Is There a Big Mantle Wedge Under Eastern Tibet? Jianshe LEI^{1‡+}, Dapeng ZHAO², Xiwei XU¹, Mofei DU¹ ¹China Earthquake Administration, ²Tohoku University

SE02-D1-AM2-302-003 | SE02-A005

Preliminary Analysis of Seismic Fault Zone Waves at the Longmenshan Central Fault Zone from Dense Arrays Yafen HUANG^{1#+}, Hongyi LI¹, Yuting ZHANG¹, Min LIU¹ ¹China University of Geosciences

SE02-D1-AM2-302-004 | SE02-A006

3D Shallow Shear-wave Velocity Structure from Ambient-noise Tomography and HVSR Beneath the Longmen-shan Fault Yuting ZHANG^{1*+}, Hongyi LI¹, Yafen HUANG¹, Min LIU¹ ¹China University of Geosciences

SE02-D1-AM2-302-005 | SE02-A021 (Invited)

Joint Inversion of Teleseismic, Strong Motion, and Geodetic Data for the Rupture Processes of the 2008 Wenchuan and 2015 Gorkha Earthquakes

Kazuki KOKETSU^{1#+}, Kazutoshi TAKANO¹, Hiroaki KOBAYASHI²

¹The University of Tokyo, ²Kobori Research Complex

SE02-D1-AM2-302-006 | SE02-A029

Seismic Versus Geodetic Moments in the Garhwal-Kumaun Himalaya: A Tool for a Rapid Understanding of Earthquake Potential

Yogendra SHARMA^{1#+}, Sumanta PASARI¹, Kuo-En CHING², Onkar DIKSHIT³

¹BITS Pilani, ²National Cheng Kung University, ³Indian Institute of Technology Kanpur

OS11 / Ocean Circulation and Air-sea Interaction Over the Maritime Continent and Surrounding Waters

Mon - 29 Jul | MR301

Time11:00-12:30Chair(s)Lei ZHOU, Shanghai Jiao Tong University

OS11-D1-AM2-301-001 | OS11-A030 (Invited)

Critical Role of Maritime Continent Water Cycle on the Indonesian Throughflow

Lee TONG^{1#+}, Arnold L. GORDON², Janet SPRINTALL³, Severine FOURNIER¹

¹Jet Propulsion Laboratory, California Institute of Technology, ²Columbia University, ³Scripps Institution of Oceanography

OS11-D1-AM2-301-002 | OS11-A002 (Invited)

The Fate of Freshwater in the Indonesian Seas Shinichiro KIDA^{1#+}, Hideharu SASAKI², Kelvin RICHARDS³ ¹Kyushu University, ²Japan Agency for Marine-Earth Science and Technology, ³University of Hawaii at Manoa

OS11-D1-AM2-301-003 | OS11-A026 (Invited)

¹Sriwijaya University

La Niña Modoki Enhanced Summer-fall Precipitation over the Maritime Continent Iskhaq ISKANDAR^{1#+}, Deni Okta LESTARI¹

OS11-D1-AM2-301-004 | OS11-A015

Vertical Profile of Indonesian Throughflow at Makassar Strait Jun WEI^{1#+}, Mingting LI^{2,3} ¹Sun Yat-sen University, ²Peking University, ³Columbia University

OS11-D1-AM2-301-005 | OS11-A001

The Intermediate Water in the Philippines Sea Nan ZANG^{1#+} ¹*Chinese Academy of Sciences*

OS11-D1-AM2-301-006 | OS11-A018

The Central Indian Ocean Mode Simulation and Prediction in the S2S Database Jianhuang QIN^{1#+}, Lei ZHOU¹ ¹Shanghai Jiao Tong University

OS18 / Coastal Hazards: Impacts of Tropical Storms and Tsunamis

Mon - 29 Jul | Nicoll 1

Time11:00-12:30Chair(s)Linlin LI, National University of Singapore

OS18-D1-AM2-Nicoll 1-001 | OS18-A053 (Invited)

Assessment of Impacts of Sunda Strait Tsunami 2018 on Coastal Area in Banten and Lampung of Indonesia Syamsidik SYAMSIDIK^{1±+}, Benazir BENAZIR¹, Mumtaz LUTHFI¹ ¹Universitas Syiah Kuala

OS18-D1-AM2-Nicoll 1-002 | OS18-A046

The Damage of a Stage House Caused by Sunda Strait Tsunami on 22 December 2018 Kuswandi KUSWANDI¹⁺, Any NURHASANAH², Radianta TRIATMADJA³, Naoimi YOBELITA², Ike. P. KESUMA², M. Archie ALVERINALDO², A. Andika WIBISONO², Wayan S. ARIMBAWA²

¹Institut Teknologi Medan, ²Universitas Bandar Lampung, ³Universitas Gadjah Mada

OS18-D1-AM2-Nicoll 1-003 | OS18-A028

Field Observations of the 28 September 2018 Palu Tsunami Adi PRASETYO¹⁴⁺, Leo ELIASTA¹, Ma'ruf HADI SUSANTO¹, Cahyo NUR RAHMAT NUGROHO¹, Hamzah LATIEF², Nobuhito MORI³, Tomohiro YASUDA⁴, Katsuchiro GODA⁵, Daiki TSUJIO⁶

¹Ministry of Public Works and Housing, ²Institut Teknologi Bandung, ³Kyoto University, ⁴Kansai University, ⁵Western University, ⁶Pacific Consultants Co. Ltd

OS18-D1-AM2-Nicoll 1-004 | OS18-A045

Tsunami Deposits of the 2018 Palu Earthquake Reflect Low Power and Short-term Tsunami Inundation and Limited Availability of Nearshore Source Sediments Adam SWITZER^{1#+}, Jedrzej MAJEWSKI¹, Rachel GUAN¹, Benazir BENAZIR², Ella MEILIANDA³, Peter PARHAM¹, Jessica PILARCZYK⁴, Hermann FRITZ⁵, Robert WEISS⁶, Benjamin HORTON^{1,7}

¹Nanyang Technological University, ²Universitas Syiah Kuala, ³Tsunami and Disaster Mitigation Research Center, ⁴Simon Fraser University, ⁵Georgia Institute of Technology, ⁶Virginia Tech, ⁷Rutgers University

OS18-D1-AM2-Nicoll 1-005 | OS18-A023 (Invited)

Was 2018 Sulawesi Tsunami a Double Event or Not?

Tso-Ren WU^{1+*}, Meng-Ju CHUNG¹, Tien-Chi LIU¹, Yu-Lin TSAI¹, Jun-Wei LIN¹, Mei-Hui CHUANG¹, Kuo-Fong MA¹, Shiann-Jong LEE²

¹National Central University, ²Academia Sinica

OS18-D1-AM2-Nicoll 1-006 | OS18-A057

Development of Coastal Inundation Early Warning System in Indonesia

Nelly Florida RIAMA^{1#+}, Riri Fitri SARI², Andri RAMDHANI¹, Bayu EDO¹

¹Meteorology, Climatology, and Geophysical Agency, ²University of Indonesia

BG09 / Biogeochemistry of Contaminants in Terrestrial and Aquatic Ecosystems

Mon - 29 Jul | MR300

Time11:00-12:30Chair(s)Man Jae KWON, Korea University

BG09-D1-AM2-300-001 | BG09-A014

Mercury Transformations in Contaminated Soil at a Former Wood Preservation Site

Flora BROCZA^{1#+}, Harald BIESTER², Jan-Helge RICHARD³, Bhoopesh MISHRA¹, Jan WIEDERHOLD⁴ ¹University of Leeds, ²Technical University of Braunschweig, ³Institute for Hygiene and Environment, ⁴University of Vienna

BG09-D1-AM2-300-002 | BG09-A013

Organochlorines and Mercury in the Terrestrial Environment Around an Indian Research Station in Antarctica Asif QURESHI^{1±+}, Subhavana KATAKAM¹, Anoop TIWARI², Paromita CHAKRABORTY³ ¹Indian Institute of Technology Hyderabad, ²National Centre for Antarctic and Ocean Research, ³SRM University

BG09-D1-AM2-300-003 | BG09-A007

Biogeochemical Characteristics of Antimony (Sb)-contaminated Soils from a Refinery and a Military Shooting Range Soo-Chan PARK¹, Maxim BOYANOV², Kenneth KEMNER³,

Edward O'LOUGHLIN³, Man Jae KWON^{1#+} ¹Korea University, ²Bulgarian Academy of Sciences, ³Argonne National Laboratory

BG09-D1-AM2-300-004 | BG09-A009

The Wharf Roach, a Novel Environmental Indicator of Polycyclic Aromatic Hydrocarbon Contamination in Coastal Areas

Masato HONDA¹⁺, Yuji OSHIMA^{2‡}, Xuchun QIU², Seiichi UNO³, Suzanne L. UNDAP⁴, Yohei SHIMASAKI²

¹Kanazawa University, ²Kyushu University, ³Kagoshima University, ⁴Sam Ratulangi University

AS03 / Monsoon Climates Over South, East and Southeast Asia in a Warming Environment

Mon - 29 Jul | MR309

Chair(s) Renguang WU, Zhejiang University Jun MATSUMOTO, Tokyo Metropolitan University / JAMSTEC

AS03-D1-AM2-309-001 | AS03-A048 (Invited)

Aphrodite-2: Release of EOD Adjustment Product and its Usage for Improving Asian Monsoon Forecasts Akiyo YATAGAI¹⁺, Natsuko YASUTOMI², Mio MAEDA¹, Hitoshi HIROSE³, Sunil KHADGARAI⁴ ¹Hirosaki University, ²Kyoto University, ³Chiba University, ⁴National Atmospheric Research Laboratory (Ex)

AS03-D1-AM2-309-002 | AS03-A010

Why Northeast China Has a Cooling Trend Under the Global Warming Background? Hui GAO^{1#+}, Ting DING¹ ¹China Meteorological Administration

AS03-D1-AM2-309-003 | AS03-A041

Spatial-temporal Analysis of Changes in Temperature Extremes in the Non-monsoon Region of China from 1961 to 2016 Yuyang WANG¹⁺, Zhiyong DING², Yaoming MA^{1‡} ¹Chinese Academy of Sciences, ²Beijing Normal University

AS03-D1-AM2-309-004 | AS03-A023

Associated Large-scale Atmospheric Circulations and Water Vapor Transport with the Interannual Variation of Intense Snowfall in Northern China Zunya WANG^{1#+} ¹China Meteorological Administration

AS03-D1-AM2-309-005 | AS03-A058

Changes in the Influence of the Western Pacific Subtropical High on Asian Summer Monsoon Rainfall in the Late 1990s Yanyan HUANG¹⁸⁺

¹Nanjing University of Information Science & Technology

AS05 / Mesoscale Meteorology and High-impact Weather

Mon - 29 Jul | MR308

 Time
 13:30-15:30

 Chair(s)
 Kevin CHEUNG, Macquarie University

AS05-D1-PM1-308-001 | AS05-A027

Convective Echoes Embedded in Widespread Stratiform Echoes Observed by Kobe PAWR in July 2018 Shinsuke SATOH^{1#+}, Tetsuya SANO¹, Hanado HIROSHI¹, Yasumitsu MAEJIMA², Shigenori OTSUKA³, Takemasa MIYOSHI^{3,4}

¹National Institute of Information and Communications Technology, ²RIKEN Advanced Institute for Computational Science, ³RIKEN Center for Computational Science, ⁴University of Maryland

AS05-D1-PM1-308-002 | AS05-A034

Preferred Environmental Conditions of Precipitation Systems Around Bangladesh Observed by Ground-based Radars Fumie MURATA^{1#+}, Shuhei AZUMA¹, Toru TERAO², Quamrul HASSAN³ ¹Kochi University, ²Kagawa University, ³Bangladesh Meteorological

Department

AS05-D1-PM1-308-003 | AS05-A033 (Invited) **Aeolus – First Doppler Wind Lidar in Space** Erland KALLEN^{1#+} ¹Centre for Climate Research Singapore

AS05-D1-PM1-308-004 | AS05-A010 (Invited)

Tsukuba Tornado with Fujita Scale 3 Reproduced by Super-computer 'K' Hiromu SEKO¹⁵⁺, Wataru MASHIKO¹, Sho YOKOTA¹, Tetsurou TAMURA², Hiroshi NIINO³ ¹Japan Meteorological Agency, ²Tokyo Institute of Technology, ³The University of Tokyo

AS05-D1-PM1-308-005 | AS05-A030

Typhoon-induced Precipitations over Western Japan in Present and Future Climate Sridhara NAYAK¹⁵⁺, Tetsuya TAKEMI¹ ¹Kyoto University

AS05-D1-PM1-308-006 | AS05-A022

Meteorological Analysis of the 20th December 2018 Hailstorm over the Sydney Metropolitan Area Kevin CHEUNG^{1F*}, Kellie COOK¹ ¹Macquarie University

AS05-D1-PM1-308-007 | AS05-A003

Benchmark Rainfall Verification of Access-TC Operational Landfall Forecasts over China Zifeng YU^{1#+} ¹China Meteorological Administration

AS22 / Middle Atmosphere Science

Mon - 29 Jul | Nicoll 2

Time13:30-15:30Chair(s)Shigeo YODEN, Kyoto University

AS22-D1-PM1-Nicoll 2-001 | AS22-A009 (Invited)

Understanding the Variation of Stratosphere–Troposphere Coupling During Stratospheric Northern Annular Mode Events from a Mass Circulation Perspective Rongcai REN^{1#+}, Yueyue YU²

Kongear KEN²², Tueyue TO-

¹Chinese Academy of Sciences, ²Nanjing University of Information Science & Technology

AS22-D1-PM1-Nicoll 2-002 | AS22-A020

Estimation of QBO Forcing by the Equatorial Waves Using Satellite Observations and High Resolution Radiosoundings Zeyu CHEN^{1#+}

¹Chinese Academy of Sciences

AS22-D1-PM1-Nicoll 2-003 | AS22-A005 (Invited)

Satellite Observations and Modeling of Stratospheric Gravity Waves Associated with the Intensification of Tropical Cyclones Lars HOFFMANN^{1#+}, Xue WU², M Joan ALEXANDER³ ¹Forschungszentrum Juelich GmbH, ²Chinese Academy of Sciences, ³NorthWest Research Associates

AS22-D1-PM1-Nicoll 2-004 | AS22-A010 (Invited)

Dynamic Initialization for Whole Atmosphere Modeling and Real-case Simulations for Gravity Waves Excited from Balanced Flows In-Sun SONG^{1*+} ¹Korea Polar Research Institute

AS22-D1-PM1-Nicoll 2-005 | AS22-A012

The Role of Gravity Waves in the Evolution of the Vortex-splitting Stratospheric Sudden Warming in January 2009 Hye-Yeong CHUN^{1#+}, Byeong-Gwon SONG², In-Sun SONG² ¹Yonsei University, ²Korea Polar Research Institute

AS22-D1-PM1-Nicoll 2-006 | AS22-A033

Disentangling the Drivers of Interannual Variability in Trace Gases in the Upper Troposphere / Lower Stratosphere Using the Community Earth System Model and 15 Years of Measurements from the Aura Microwave Limb Sounder Jessica NEU^{1#+}, Michelle SANTEE¹, Douglas KINNISON² ¹Jet Propulsion Laboratory, California Institute of Technology, ²National Center for Atmospheric Research

AS22-D1-PM1-Nicoll 2-007 | AS22-A036

Recent Lower Stratospheric Ozone Trends in Satellite Data and Specified Dynamics Model Simulations Sean DAVIS¹⁷⁺ ¹NOAA Earth System Research Laboratory

AS22-D1-PM1-Nicoll 2-008 | AS22-A002

The Stratospheric Changes Inferred from 10 Years of AIRS and AMSU-A Radiances

Fang PAN¹, Xianglei HUANG^{1#+}, Stephen LEROY², Pu LIN³, Larrabee STROW⁴, Yi MING³, Venkatachalam RAMASWAMY³ ¹University of Michigan, ²AER, Inc., ³National Oceanic and Atmospheric Administration, ⁴University of Maryland, Baltimore County

AS26 / Regional Climate Downscaling and Cordex: Challenges and Prospects

Mon - 29 Jul | MR304

Chair(s) Dong-Hyun CHA, Ulsan National Institute of Science and Technology

AS26-D1-PM1-304-001 | AS26-A005 (Invited)

Future Changes of Thermal Comfort Conditions over China Based on Multi-RegCM4 Simulations Xuejie GAO^{1#+} ¹Chinese Academy of Sciences

AS26-D1-PM1-304-002 | AS26-A020

The Effect of Nudging Parameters on Dynamical Downscaling over CORDEX East Asia Phase II Domain Linyun YANG¹, Shuyu WANG^{1#+}, Jianping TANG¹, Xiaorui NIU¹ ¹Nanjing University

AS26-D1-PM1-304-003 | AS26-A003

Evaluation of Current and Future Temperature Simulations of HadGEM3-RA According to Boundary Conditions Tae Jun KIM^{1‡+}, Seok-Woo SHIN², Jinuk KIM², Seon-Yong LEE¹, Jinwon KIM³, Young-Hwa BYUN² ¹National Institute of Meteorological Sciences, ²Korea Meteorological Administration, ³Chapman University

AS26-D1-PM1-304-004 | AS26-A013

Systematic Biases of Regional Climate Simulations Using the HadGEM3-RA in the CORDEX-East Asia 2 Experiment Jinuk KIM^{1#+}, Seok-Woo SHIN¹, Tae Jun KIM², Seon-Yong LEE², Jinwon KIM², Young-Hwa BYUN¹ ¹Korea Meteorological Administration, ²National Institute of Meteorological Sciences

AS26-D1-PM1-304-005 | AS26-A012

Effect of Bias Correction Methods on the Reduction of Precipitation Uncertainties Simulated by Multi-RCMs Gayoung KIM¹, Dong-Hyun CHA^{1#+}, Gil LEE¹, Changyong PARK¹ ¹Ulsan National Institute of Science and Technology

AS26-D1-PM1-304-006 | AS26-A006

Future Changes of Homogeneous Precipitation Zone Using Bias-corrected Multi-RCMs over East Asia Changyong PARK^{1#+}, Dong-Hyun CHA¹, Gil LEE¹, Gayoung KIM¹ ¹Ulsan National Institute of Science and Technology

AS26-D1-PM1-304-007 | AS26-A011

Asian Summer Monsoon Changes Under Paris Agreement Target Temperatures: Transient vs. Equilibrium Conditions Donghyun LEE^{1±+}, Seung-Ki MIN¹ ¹Pohang University of Science and Technology

AS26-D1-PM1-304-008 | AS26-A010

Changes of the Convective Rain Ratio over Northeast Asia in Future Climate Scenario Projections Dong Hyun JANG^{1*+}, Eun-Chul CHANG¹ ¹Kongju National University

AS26-D1-PM1-304-009 | AS26-A016

Regional Climate of East Asia in the Atmospheric Ocean Coupled Model Ui-Yong BYUN^{1‡+}, Eun-Chul CHANG¹ ¹Kongju National University

AS01 / Aerosol and Cloud Observations from Geostationary Platforms - Breaking the Temporal Barriers

Mon - 29 Jul | MR303

Time 13:30-15:30

Chair(s) Robert LEVY, NASA Goddard Space Flight Center Pawan GUPTA, Universities Space Research Association

AS01-D1-PM1-303-001 | AS01-A008

Retrieval of Atmospheric Aerosol Properties for Geostationary and Polar-orbital Satellite Imaging Sensors Mayumi YOSHIDA^{1‡+}, Maki KIKUCHI¹, Takashi M. NAGAO¹, Hiroshi MURAKAMI¹, Keiya YUMIMOTO² ¹Japan Aerospace Exploration Agency, ²Kyushu University

AS01-D1-PM1-303-002 | AS01-A018

Retrieval of Aerosol Properties and Applications in Air Quality Monitoring from Geostationary Orbit Using AHI and GOCI Jhoon KIM^{1#+}, Hyunkwang LIM¹, Seoyoung LEE¹, Sujung GO¹, Myungje CHOI²

¹Yonsei University, ²Jet Propulsion Laboratory, California Institute of Technology

AS01-D1-PM1-303-003 | AS01-A019

Integrating Aerosols Observations from LEO and GEO: Capturing Global Diurnal Cycle

Pawan GUPTA^{1,2#+}, Robert LEVY², Shana MATTOO³, Lorraine REMER^{4,5}

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

AS01-D1-PM1-303-004 | AS01-A011 (Invited)

Adapting MAIAC Algorithm for Geostationary Satellite Data Processing Alexei LYAPUSTIN^{1#+} ¹NASA Goddard Space Flight Center

AS01-D1-PM1-303-005 | AS01-A016

The Potential of Deep Convective Cloud as a Calibration Target for Geostationary Environment Monitoring Spectrometer (GEMS) Yeeun LEE¹⁵⁺, Myoung-Hwan AHN¹, Mina KANG¹ ¹Ewha Womans University

AS01-D1-PM1-303-006 | AS01-A007

Retrieving Aerosol Height over Land via the O2A & B Bands from EPIC Jun WANG^{1#+}, Xiaoguang XU²

¹The University of Iowa, ²University of Maryland, Baltimore County

AS01-D1-PM1-303-007 | AS01-A023

COMS/GOCI Marine Fog Detection Algorithm Combined with Himawari-8/AHI Donghee KIM^{1#+}, Myung-Sook PARK¹, Young-Je PARK¹, Wonkook KIM¹ ¹Korea Institute of Ocean Science and Technology

AS01-D1-PM1-303-008 | AS01-A024

Cloud Optical Depth from Geostationary and Low Earth Orbit Satellites Evaluated During an Intensive Campaign Alessandro DAMIANI¹⁵⁺, Hitoshi IRIE¹, Takashi HORIO¹, Tamio TAKAMURA¹, Rei KUDO², Pradeep KHATRI³, Hironobu IWABUCHI³, Ryosuke MASUDA³, Takashi M. NAGAO⁴ ¹Chiba University, ²Japan Meteorological Agency, ³Tohoku University, ⁴Japan Aerospace Exploration Agency

HS05 / Hydrological Processes in Agricultural Lands

Mon - 29 Jul | MR330

Time	13:30-15:30
Chair(s)	Jun NIU, China Agricultural University
	Yiping WU, Xi'an Jiaotong University

HS05-D1-PM1-330-001 | HS05-A001

Tracking the Dynamics of Distribution and Phenology of Winter Wheat-summer Maize Cropping System in the North China Plain During 2001-2018 Huimin LEI^{1‡+}, Jiadi LI¹ ¹Tsinghua University

HS05-D1-PM1-330-002 | HS05-A005

AHC: An Integrated Numerical Model for Simulating Agroecosystem Processes-model Description and Application Xu XU^{1±+}, Chen SUN², Fengtian NENG¹, Jing FU¹, Guanhua HUANG¹

¹China Agricultural University, ²Institute of Environment and Sustainable Development in Agriculture, Chinese Academy of Agricultural Sciences

HS05-D1-PM1-330-003 | HS05-A007

Assessing the Hydrologic and Water Quality Impacts Using SWAT and APEX-paddy Integrated Model in Paddy-dominant Agricultural Watershed Donghyun KIM¹⁺, Taeil JANG^{1‡} ¹Chonbuk National University

HS05-D1-PM1-330-004 | HS05-A011

Hydro-biogeochemical Impacts of Future Climate Change in a Typical Loess Hilly-gully Watershed on the Loess Plateau, China Fubo ZHAO¹⁵⁺, Yiping WU¹ ¹Xi'an Jiaotong University

HS05-D1-PM1-330-005 | HS05-A009

Estimation of Water Supply in Agricultural Reservoirs Using Empirical Formula Hansol KANG^{1#+}, Hyunuk AN¹, Yeonsu KIM² ¹Chungnam National University, ²K-water Research Institute

HS05-D1-PM1-330-006 | HS05-A002

Development of a Distributed Agricultural Drought Prediction Model Yuqing SUN¹⁺, Jun NIU^{1#} ¹China Agricultural University

HS05-D1-PM1-330-007 | HS05-A004

A VIC-based Cooling Effects Study for Agricultural Lands in Northwest China Jun NIU^{1#+}, Shaozhong KANG¹ ¹China Agricultural University

HS03 / Challenges in Hydrologic Modeling Mon - 29 Jul | MR329

 Time
 13:30-15:30

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

HS03-D1-PM1-329-001 | HS03-A023

Lasso as an Exploratory Tool in Hydroclimatic Forecasting: Case Study of Waitaki River Catchment, New Zealand Varvara VETROVA^{1^{s+}}, Earl BARDSLEY² ¹University of Canterbury, ²The University of Waikato

HS03-D1-PM1-329-002 | HS03-A007 (Invited)

An Efficient Approach to Parametric Uncertainty Quantification of a Continental-scale Land Surface Model Based on a Spatial Sampling Strategy Qingyun DUAN^{1,2#+}, Xueli HUO², Wei GONG² ¹Hohai University, ²Beijing Normal University

HS03-D1-PM1-329-003 | HS03-A016

Integrated Study of Freshwater Discharges from the Pearl River Basin to Estuary Based on Outlet Diversion Ratios Xiao FENG¹⁺⁺, Ji CHEN¹, Zhongming LU² ¹The University of Hong Kong, ²Guangzhou HKUST Fok Ying Tung Research Institute

HS03-D1-PM1-329-004 | HS03-A028

Deriving Flow Scenarios for a Tributary from a Large Watershed Model in SWAT Pulendra DUTTA^{1#}, Gilbert HINGE¹⁺, Arup Kumar SARMA¹ ¹Indian Institute of Technology Guwahati

HS03-D1-PM1-329-005 | HS03-A018 (Invited)

Changes in Surface Soil Moisture and Water Availability Simulated by Various Models: Consistency and Discrepancy Jianfeng LI^{1#+}, Yongqin David CHEN^{2,3}, Xihui GU⁴ ¹Hong Kong Baptist University, ²The Chinese University of Hong Kong, Shenzhen, ³The Chinese University of Hong Kong, ⁴China University of Geosciences

HS03-D1-PM1-329-006 | HS03-A022

An Interactive Multi-objective Calibration Toolbox for Computationally Expensive SWAT Models Christine SHOEMAKER¹, Taimoor AKHTAR^{1#+} ¹National University of Singapore

HS03-D1-PM1-329-007 | HS03-A030

High Resolution Atmospheric Forcing Data and Seasonal Calibration Scheme Improve Large Scale Streamflow Simulation Across China Jiaojiao GOU¹⁺, Chiyuan MIAO^{1‡}, Qingyun DUAN^{1,2}, Haiyan ZHENG¹ ¹Beijing Normal University, ²Hohai University

¹Beijing Normal University, ²Honai Universi

HS03-D1-PM1-329-008 | HS03-A026

An Information Entropy Perspective on Solute Transport (Water Quality) System in Rivers Jiping JIANG^{1‡}, Tianrui PANG²⁺, Song WEI¹, Yi ZHENG¹, Peng WANG²

¹Southern University of Science and Technology, ²Harbin Institute of Technology

HS21 / Hydrometeorological Analysis of Natural Hazards

Mon - 29 Jul | MR328

Time	13:30-15:30
Chair(s)	Ji CHEN, The University of Hong Kong Soojun KIM, Inha University

HS21-D1-PM1-328-001 | HS21-A011

Impact of Climatic Shift and Dispersion on Analyzing the Climate Change with Crisp Seasonal Boundaries Amrutha SURESH^{1#+}, Sreeja PEKKAT¹ ¹Indian Institute of Technology Guwahati

HS21-D1-PM1-328-002 | HS21-A003

Disaster Risk Assessment Using Bayesian Network-based Weights

Ji-Eun KIM¹⁺, Ji Yeon PARK¹, Joo Heon LEE², Tae-Woong KIM^{1‡} ¹Hanyang University, ²Joongbu University

HS21-D1-PM1-328-003 | HS21-A005

Dryness Evaluation of a Mountain Wetland Using Drought Index

Jonghun LIM¹⁺, Jungwook KIM¹, Younghoon YOU¹, Taewoo LEE¹, JongSo LEE², Hung Soo KIM^{1#} ¹Inha University, ²Korea Research Institute for Human Settlements

HS21-D1-PM1-328-004 | HS21-A009

Fuel for Wildfires in California During 2001-2017 Linghua QIU^{1#+}, Ji CHEN¹, Haiyun SHI², Liqun SUN³, Jun NIU⁴ ¹The University of Hong Kong, ²Southern University of Science and Technology, ³Chinese Academy of Sciences, ⁴China Agricultural University

HS21-D1-PM1-328-005 | HS21-A012

Numerical Simulation of Baeksan Flood Event Using HEC-RAS 1D-2D Coupling Model Lea DASALLAS^{1,2#+}, Hyunuk AN¹, Yeonsu KIM³

¹Chungnam National University, ²University of the Philippines Resilience Institute, ³K-water Research Institute

HS21-D1-PM1-328-006 | HS21-A007

Development of Loss Functions for the Road Facilities Based on Drainage Basin Sang Ho KIM^{1‡}, Shinbum HWANG¹⁺, Junhyuk SIM¹, Chang Hee LEE²

¹Sangji University, ²Jungwon University

HS21-D1-PM1-328-007 | HS21-A008

Quantitative Analysis of Heavy Rain Damage Reduction by Recovery Cost Investment

Junhyeong LEE¹⁺, Changhyun CHOI¹, Jongsung KIM¹, Donghyun KIM², JongSo LEE³, Hung Soo KIM^{1#} ¹Inha University, ²Center for Hydrology and Ecology, ³Korea Research Institute for Human Settlements

ST31 / Dynamical Processes in the High-latitude Ionosphere and Magnetosphere-ionosphere Coupling

Mon - 29 Jul | MR310

Time	13:30-15:30
Chair(s)	Qing-He ZHANG, Shandong University Jing LIU, National Center for Atmospheric Research

ST31-D1-PM1-310-001 | ST31-A014 (Invited)

Investigation of F-region Irregularities by Grand Challenge Initiative Cusp Sounding Rockets Joran MOEN^{1‡+}, Andres SPICHER¹, Douglas ROWLAND², Craig KLETZING³, Jim LABELLE⁴ ¹University of Oslo, ²NASA Goddard Space Flight Center, ³The University of Iowa, ⁴Dartmouth College

ST31-D1-PM1-310-002 | ST31-A003 (Invited)

Introduction to the Wide-field Auroral Imager (WAI) Onboard the Chinese Fengyun Satellite

Xiao-Xin ZHANG^{1#+}, Fei HE², Bo CHEN², Jia-Wei LI³, Chao YU³ ¹National Center for Space Weather, China Meteorological Administration, ²Chinese Academy of Sciences, ³China Meteorological Administration

ST31-D1-PM1-310-003 | ST31-A009

Observations and Validation of the Wide-field Aurora Imager Onboard Fengyun Satellite

Jia-Wei Ll^{1#+}, Guang-xing DING², Xiao-Xin ZHANG³, Fei HE², Chao YU¹, Bo CHEN²

¹China Meteorological Administration, ²Chinese Academy of Sciences, ³National Center for Space Weather, China Meteorological Administration

ST31-D1-PM1-310-004 | ST31-A007 (Invited)

Polar Cap Patch Formation Detected by SuperDARN and Resolute Bay Incoherent Scatter Radars Toshi NISHIMURA^{1*}, Boyi WANG¹⁺, Qing-He ZHANG² ¹Boston University, ²Shandong University

ST31-D1-PM1-310-005 | ST31-A001 (Invited)

Polar Cap Scintillation Producing Irregularities Associated with Patches and Auroral Forms P. T. JAYACHANDRAN^{1#+} ¹University of New Brunswick

ST31-D1-PM1-310-006 | ST31-A005

Formation and Evolution of Polar Cap Ionospheric Patches and Their Associated Upflows and Scintillations: A Review Qing-He ZHANG¹²⁺, Zanyang XING¹, Yong WANG¹, Yu-Zhang MA¹

¹Shandong University

ST31-D1-PM1-310-007 | ST31-A002 (Invited)

The Dynamic Variations of Subauroral Polarization Streams (SAPS) with Solar Wind Driving Conditions Wenbin WANG¹⁵⁺, Dong LIN², Jing LIU¹, Alan G. BURNS¹ ¹National Center for Atmospheric Research, ²Virginia Tech

ST31-D1-PM1-310-008 | ST31-A010

Stormtime Modeling of the Ionosphere/Thermosphere/Plasmasphere System with SAMI3/GITM/RCM

Joseph HUBA^{1‡+}, Jon KRALL², Aaron RIDLEY³, Stanislaus SAZYKIN⁴

¹Syntek Technologies, ²Naval Research Laboratory, ³University of Michigan, ⁴Rice University

ST04 / Particle Acceleration and Transport at the Sun and in the Heliosphere

Mon - 29 Jul | MR311

 Time
 13:30-15:30

 Chair(s)
 Linghua WANG, Peking University

ST04-D1-PM1-311-001 | ST04-A017

The Acceleration of Energetic Particles at Coronal Shocks and Emergence of a Double Power Law Feature in Particle Energy Spectra

Xiangliang KONG^{1#+}, Fan GUO², Yao CHEN¹, Joseph GIACALONE³

¹Shandong University, ²Los Alamos National Laboratory, ³The University of Arizona

ST04-D1-PM1-311-002 | ST04-A004

Sunward Transport of High-energy Protons from Interplanetary Shocks Inferred from Sustained Gamma-ray Emission from the Sun

Nat GOPALSWAMY^{1#+}, Pertti MAKELA², Seiji YASHIRO², Alejandro LARA³, Hong XIE⁴, Sachiko AKIYAMA^{1,2}

¹NASA Goddard Space Flight Center, ²The Catholic University of America, ³National Autonomous University of Mexico, ⁴National Aeronautics and Space Administration

ST04-D1-PM1-311-003 | ST04-A005

Using Modeling to Infer Shock Sources of Heavy Ions in Sep Events

Janet LUHMANN^{1‡+}, Y. LI¹, M. Leila MAYS², Dusan ODSTRCIL³, Christina COHEN⁴

¹University of California, Berkeley, ²Catholic University of America, ³George Mason University, ⁴California Institute of Technology

ST04-D1-PM1-311-004 | ST04-A013 (Invited)

Integrated Science Investigation of the Sun (ISOIS): Overview and Initial Results

Ralph MCNUTT^{1#+}, David MCCOMAS², Eric CHRISTIAN³, Mark WIEDENBECK⁴, Nathan SCHWADRON⁵

¹Johns Hopkins Applied Physics Laboratory, ²Princeton University, ³NASA Goddard Space Flight Center, ⁴Jet Propulsion Laboratory, California Institute of Technology, ⁵University of New Hampshire

ST04-D1-PM1-311-005 | ST04-A003 (Invited)

Advances in Sep Understanding with the Parker Solar Probe Mihir DESAI^{1*+} ¹Southwest Research Institute

ST04-D1-PM1-311-006 | ST04-A019

The Origin of Electrons in Solar Energetic Particle Events in Relation to Protons

Nariaki NITTA^{1*+}, Linghua WANG², Raul GOMEZ-HERRERO³ ¹Lockheed Martin Solar and Astrophysics Laboratory, ²Peking University, ³University of Alcala

ST04-D1-PM1-311-007 | ST04-A007

Solar Energetic Electron Events with Associated Hard X-ray Flares

Wen WANG^{1#+}, Linghua WANG¹, Sam KRUCKER², Glenn MASON³, Hui TIAN¹, Jiansen HE¹, Chuanyi TU¹, Stuart BALE⁴ ¹Peking University, ²FHNW, ³The Johns Hopkins University Applied Physics Laboratory, ⁴University of California, Berkeley

ST04-D1-PM1-311-008 | ST04-A015 (Invited)

3He-rich Solar Energetic Particle Events in Solar Cycle 24 George HO1 $^{\sharp \ast}$

¹The Johns Hopkins University Applied Physics Laboratory

SE05 / Mountain Building Processes with Associated Geohazards and Resources: Integrated Observations and Models

Mon - 29 Jul | MR327

Time 13:30-15:30

Chair(s) Chih-Tung CHEN, National Central University Kazuaki OKAMOTO, Saitama University

SE05-D1-PM1-327-001 | SE05-A003 (Invited)

Processes of Subduction Initiation Revealed by P-T Paths of Amp and BS Tectonic Blocks in Serpentinite Mélange, Northern Japan

Toru TAKESHITA^{1*+}, Ayumi S. OKAMOTO¹, Wonji SHIN¹, Mizuho ANDO¹, Yuto KIMURA¹ ¹Hokkaido university

SE05-D1-PM1-327-002 | SE05-A005

Metamorphic Olivine After Dehydration Embrittlement in Serpentinite in the Sanbagawa High P/T Metamorphic Belt Kazuaki OKAMOTO^{1,2#+}, Masaru TERABAYASHI³

¹Saitama University, ²Tokyo Gakugei University, ³Kagawa University

SE05-D1-PM1-327-003 | SE05-A002

Absolute Age Determination of Seismic Faulting and Implications on Tectonic Evolution of the Underthrust Continental Margin in the Active Taiwan Mountain Belt Chih-Tung CHEN^{1±+}, Ching-Hua LO², Chieh-Yu WU², Hao-Tsu CHU³

¹National Central University, ²National Taiwan University, ³Central Geological Survey

SE05-D1-PM1-327-004 | SE05-A006

Parallelism Between the Maximum Exhumation Belt and the Moho Ramp Along the Eastern Tibetan Plateau Margin: Coincidence or Consequence? Xi-Bin TAN^{1#+} ¹Institute of Geology, China Earthquake Administration

SE05-D1-PM1-327-005 | SE05-A012

Numerical Simulation of 3D Dynamic Growth and Extention of North-east Tibetan Plateau Caibo HU^{1#+} ¹University of Chinese Academy of Sciences

SE05-D1-PM1-327-006 | SE05-A004

Thermal Evolutions Since the Middle-late Triassic and its Profound Influence on Hydrocarbon Accumulation, Sichuan Basin, China Lining WANG^{1#+} ¹PetroChina

SE05-D1-PM1-327-007 | SE05-A001

Deformation Patterns in the Fansipan Mountain Range, the Highest Topography in Northern Vietnam Thi-Hue DINH^{1,2+}, Yu-Chang CHAN^{1‡}, Chung-Pai CHANG², Yi-Chun HSU² ¹Academia Sinica, ²National Central University

SE05-D1-PM1-327-008 | SE05-A010

Thermal-metamorphic Structure of the Slate Terrain in the Active Taiwan Mountain Belt: Inversion of Marginal Basins During Arc-continent Collision Chih-Tung CHEN^{1#+}, Hao-Cheng SUN¹, Yu WU¹ ¹National Central University

SE02 / Earthquakes, Volcanoes, and Active Faults in East Asia

Mon - 29 Jul | MR302

 Time
 13:30-15:30

 Chair(s)
 Jianshe LEI, China Earthquake Administration

 O P MISHRA, Ministry of Earth Sciences

 Chuntao LIANG, Chengdu University of Technology

SE02-D1-PM1-302-001 | SE02-A034 (Invited)

Spatial Variation of Stress Field Associated with Volcano-hydrothermal Inflation at the Tatun Volcano Group, Northern Taiwan

Hsin-Chieh PU^{1#+}, Cheng-Horng LIN², Ya-Ju HSU² ¹Central Weather Bureau, ²Academia Sinica

SE02-D1-PM1-302-002 | SE02-A011

Seismic Crustal Structure Beneath Jeju Volcanic Island, South Korea

Hyunsun KANG¹⁺, Young-Hee KIM^{1#}, Junkee RHIE¹, Tae-Seob KANG²

¹Seoul National University, ²Pukyong National University

SE02-D1-PM1-302-003 | SE02-A037

A Dense Temporary Seismic Network Deployment Around Agung Volcano, Bali, Indonesia

Zulfakriza ZULFAKRIZA¹^{**}, David P. SAHARA¹, Andri D. NUGRAHA¹, Sri WIDIYANTORO¹, Nanang T PUSPITO¹, Awali PRIYONO¹, Devy Kamil SYAHBANA², Phil CUMMINS³ ¹Bandung Institute of Technology, ²Center for Volcanology and

Geological Hazard Mitigation, ³Australian National University

SE02-D1-PM1-302-004 | SE02-A038

SO2 Emission of Mayon Volcano During 2018 Eruption Deborah FERNANDEZ¹⁵⁺, Raul Ryan REBADULLA¹, Maria Concepcion BARAIRO¹, Eric Lino ARCONADO¹, Rose MACAGGA¹, Eduardo LAGUERTA¹, Mariton BORNAS¹, Renato SOLIDUM¹, Charlotte BARRINGTON², Fidel COSTA², Benoit TAISNE²

¹Philippine Institute of Volcanology and Seismology, ²Nanyang Technological University SE02-D1-PM1-302-005 | SE02-A035 (Invited)

A Preliminary Analysis of the Seismic Crisis Prior to November 2017 Mt. Agung Explosive Eruption David P. SAHARA^{1‡+}, Ghilman A. FATIH¹, Andri D. NUGRAHA¹, Sri WIDIYANTORO¹, Jeremy PESICEK², Zulfakriza ZULFAKRIZA¹, I.G.B. Eddy SUCIPTA¹, M. Taufik GUNAWAN³, Daryono DARYONO³, Ridwan KUSNANDAR³, Pepen SUPENDI³, Devy Kamil SYAHBANA⁴ ¹Bandung Institute of Technology, ²U.S. Geological Survey, ³Meteorological, Climatological and Geophysical Agency (BMKG), ⁴Center for Volcanology and Geological Hazard Mitigation

SE02-D1-PM1-302-006 | SE02-A032 (Invited)

Seismic Imaging for High-resolution Crust Structures with Dense Seismic Array and Passive Sources Zhiwei Ll¹⁺⁺, Feng BAO², Xuelei Ll², Xin XIA², Wen TIAN², Kaiqi CHEN² ¹Institute of Geodesy and Geophysics, Chinese Academy of Sciences, ²Chinese Academy of Sciences

SE02-D1-PM1-302-007 | SE02-A033

Coulombanalysis: Program for Flexibly Calculating Coulomb Stress Changes on Receiver Faults with Any Orientation and Nonvertical Profiles with Any Trend Jianjun WANG^{1#+} ¹Wuhan University

SE02-D1-PM1-302-008 | SE02-A030

Seismic Safety Analysis of Buried Pipeline Under the Thrust Fault Movement Aiwen LIU^{1#+} ¹China Earthquake Administration

OS11 / Ocean Circulation and Air-sea Interaction Over the Maritime Continent and Surrounding Waters

Mon - 29 Jul | MR301

Time 13:30-15:30

Chair(s) Kunio YONEYAMA, Japan Agency for Marine-Earth Science and Technology Wen ZHOU, City University of Hong Kong

OS11-D1-PM1-301-001 | OS11-A009 (Invited)

Ocean Response to Atmospheric Variability in the Maritime Continent and Eastern Indian Ocean Region Kelvin RICHARDS^{1‡+}, Yanli JIA¹, Wei-Ching HSU¹, Takanori HORII², Qoosaku MOTEKI², Satoru YOKOI²

¹University of Hawaii at Manoa, ²Japan Agency for Marine-Earth Science and Technology

OS11-D1-PM1-301-002 | OS11-A008 (Invited)

Role of the Ocean in the Barrier Effect of the Maritime Continent on MJO Propagation Chidong ZHANG^{1#+}, Jian LING²

¹National Oceanic and Atmospheric Administration, ²Chinese Academy of Sciences

OS11-D1-PM1-301-003 | OS11-A017 (Invited)

Role of Oceanic Processes in MJO Detour Across the Maritime Continent

Raghu MURTUGUDDE^{1#+}, Lei ZHOU², Jianhuang QIN² ¹University of Maryland, ²Shanghai Jiao Tong University

OS11-D1-PM1-301-004 | OS11-A021

Preliminary Results of Study on a Relationship Between Convective Activity and Meso-scale SST Gradient Based on In-situ Measurements Kunio YONEYAMA^{1#+}, Mikiko FUJITA¹, Qoosaku MOTEKI¹, Satoru YOKOI¹, Ryuichi SHIROOKA¹ ¹Japan Agency for Marine-Earth Science and Technology

OS11-D1-PM1-301-005 | OS11-A019

Observed Intraseasonal Variability of the Upper-layer Temperature in the Eastern Banda Sea Agus ATMADIPOERA¹⁵⁺ ¹Bogor Agricultural University

OS11-D1-PM1-301-006 | OS11-A004

Effect of the Diurnal Cycle of Convection on Sea Surface Heat Flux Off the West Coast of Sumatra Island Pei-Ming WU^{1‡+} ¹Japan Agency for Marine-Earth Science and Technology

OS11-D1-PM1-301-007 | OS11-A014

Simulations of Diurnal Variability SST and Upper Ocean Structure in the ACCESS-S1 Model During the Suppressed Phase of MJO

Je-Yuan HSU^{1‡+}, Ming FENG¹, Harry HENDON² ¹Commonwealth Scientific and Industrial Research Organisation, ²Bureau of Meteorology

OS18 / Coastal Hazards: Impacts of Tropical Storms and Tsunamis

Mon - 29 Jul | Nicoll 1

 Time
 13:30-15:30

 Chair(s)
 Nobuhito MORI, Kyoto University

OS18-D1-PM1-Nicoll 1-001 | OS18-A011

Projection of Vulnerability Due to Total Sea Level Rise - A Case Study in Fiji Audrius SABUNAS^{1#+}, Nobuhito MORI¹ ¹Kyoto University

OS18-D1-PM1-Nicoll 1-002 | OS18-A037

Numerical Simulation of Tsunami Runup Considering Breakwater Damage by a High Precision Tsunami Runup Calculation Method Coupled with Structure Analysis Syaoyue CHEN¹⁵⁺ ¹Chuo University

OS18-D1-PM1-Nicoll 1-003 | OS18-A010

On the Interactions Between Water Waves and Mangrove Trees: Physical Modeling in Two Scales Che-Wei CHANG^{1#+}, Nobuhito MORI¹, Naoki TSURUTA², Kojiro SUZUKI² ¹Kyoto University, ²Port and Airport Research Institute

OS18-D1-PM1-Nicoll 1-004 | OS18-A039

Consideration Regarding Tsunami Evacuation Sign Using Augmented Reality Masato YAMAMOTO^{1#+}, Taro ARIKAWA¹

¹Chuo University

OS18-D1-PM1-Nicoll 1-005 | OS18-A038

Super Typhoon Maria (2018) over the East China Sea Jie YANG^{1#+}, Linlin LI¹, Haijiang LIU², Tso-Ren WU³, Benxia LI⁴, Peitao WANG⁴, Philip Li-Fan LIU¹

¹National University of Singapore, ²Zhejiang University, ³National Central University, ⁴National Marine Environmental Forecasting Center

OS18-D1-PM1-Nicoll 1-006 | OS18-A021

Inundation Estimation in the Southern Coast of Thailand During the Tropical Storm Pabuk Event 2019 Kachapond CHETTANAWANIT¹⁵⁺, Watin THANATHANPHON², Narongrit LUANGDILOK², Piyamarn SISOMPHON² ¹Hydro - Informatics Institute (Public Organization), ²Hydro and Agro Informatics Institute

OS18-D1-PM1-Nicoll 1-007 | OS18-A022

Storm Surge Early Warning System in the Gulf of Thailand During the Tropical Storm Pabuk Event 2019 Kachapond CHETTANAWANIT¹⁺⁺, Watin THANATHANPHON², Narongrit LUANGDILOK², Piyamarn SISOMPHON² ¹Hydro - Informatics Institute (Public Organization), ²Hydro and Agro Informatics Institute

OS18-D1-PM1-Nicoll 1-008 | OS18-A034

Case Study of 2019 Tropical Storm Pabuk in the Gulf of Thailand and its Affection of Asymmetric Wind Fields to Storm Surge

Yu-Lin TSAI^{1#+}, Tso-Ren WU¹, Simon C. LIN², Veerachai TANPIPAT³, Eric YEN², Chuan-Yao LIN⁴ ¹National Central University, ²Academia Sinica Grid Computing, ³Hydro and Agro Informatics Institute, ⁴Academia Sinica

BG01 / Understanding Carbon and Nitrogen Cycling- from Land to the Sea

Mon - 29 Jul | MR300

Time 13:30-15:30

Chair(s) Punyasloke BHADURY, Indian Institute of Science Education and Research Kolkata Ajcharaporn PIUMSOMBOON, Chulalongkorn University

BG01-D1-PM1-300-001 | BG01-A001 (Invited)

Wetland-Atmosphere Methane Exchange in Northeast China: A Comparison of Permafrost Peatland and Freshwater Wetland Li SUN¹⁵⁺

¹Northeast Institute of Geography

BG01-D1-PM1-300-002 | BG01-A002

Spatial Heterogeneity of Organic Carbon Cycling in the Northern Yap Trench Dong LI¹⁵⁺

¹Second Institute of Oceanography, Ministry of Natural Resources of the People's Republic of China

BG01-D1-PM1-300-003 | BG01-A004 (Invited)

Transport of Particulate Organic Matter in Kumaki River by Rain Event of Typhoon Talim Seiya NAGAO^{1#+}, Ryuunosuke TAHARA¹, Shinya OCHIAI¹, Akkiko GOTO¹, Takashi HASEGAWA¹ ¹Kanazawa University

BG01-D1-PM1-300-004 | BG01-A005

Impacts of Anthropogenic Inputs on Carbon Dynamics in the Pearl River Estuary Yingxin YE^{1#+}, Bo LIANG¹, Jia-Tang HU¹, Shiyu LI¹ ¹Sun Yat-sen University

BG01-D1-PM1-300-005 | BG01-A013 (Invited)

Background Characteristics of Atmospheric CO2 and the Potential Source Regions at Pearl River Delta (PRD), China Boru $MAI^{1\sharp+}$

¹China Meteorological Administration

BG01-D1-PM1-300-006 | BG01-A003

Origin and Transport of Carbon from Riverine Mangroves in the Panay Island (Philippines)

Raghab RAY1^{#+}, Atsushi WATANABE², Toshihiro MIYAJIMA¹, Iris ORIZAR³, M.L SAN DIEGO-MCGLONE³, Charissa FERERRA³, Masaya YOSHIKAI⁴, Kazuo NADAOKA⁴ ¹The University of Tokyo, ²The Sasakawa Peace Foundation, ³University of the Philippines, ⁴Tokyo Institute of Technology

AS03 / Monsoon Climates Over South, East and Southeast Asia in a Warming Environment

Mon - 29 Jul | MR309

Chair(s) Bakshi Hardeep VAID, Nanjing University of Information Science & Technology Fei LIU, Nanjing University of Information Science & Technology Thanh LE, Sejong University

AS03-D1-PM1-309-001 | AS03-A016 (Invited)

Increasing Autumn Heavy Rainfall Trend in South Central Vietnam and its Relationship with Local Sea Surface Temperature

Jun MATSUMOTO^{1,2#+}, Long TRINH-TUAN³, Rakesh TEJA CONDURE³, Tomoshige INOUE³, Thanh NGO-DUC⁴, Lyndon Mark OLAGUERA³

¹Tokyo Metropolitan University / JAMSTEC, ²Japan Agency for Marine-Earth Science and Technology, ³Tokyo Metropolitan University, ⁴Vietnam National University

AS03-D1-PM1-309-002 | AS03-A015 (Invited)

Understanding and Predicting the Seesaw Between the Somali and Maritime Continent Cross-equatorial Flows

Jing-Jia LUO^{1#+}, Chen LI², Shuanglin LI³ ¹Nanjing University of Information Science & Technology, ²Monash

University, ³China University of Geosciences

AS03-D1-PM1-309-003 | AS03-A013

Growing Midlatitude Forcing on Early-summer South Asian High in the Mid-1990s

Chi-Hua WU^{1#+}, Pei-Chia TSAI¹, Nicolas FREYCHET² ¹Academia Sinica, ²University of Edinburgh

AS03-D1-PM1-309-004 | AS03-A046

Trends in Monsoon Precipitation over the Myanmar Coast Xiao YAN^{1**}, Yibin YAO¹ ¹Wuhan University

AS03-D1-PM1-309-005 | AS03-A002

Ocean Salinity as a Precursor of Summer Rainfall over the East Asian Monsoon Region

Biao CHEN^{1,2+}, Huiling QIN³, Guixing CHEN³, Huijie XUE^{1#} ¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences, ³Sun Yat-sen University

AS03-D1-PM1-309-006 | AS03-A011

Cloud Vertical Structures Associated with Northward Advance of the East Asian Summer Monsoon Yunying LI^{1#+}, Yun JIA¹, Wenjing ZHANG¹ ¹National University of Defense Technology

AS03-D1-PM1-309-007 | AS03-A032

East Asia Monsoon Fronts and Associated Precipitation: Impact of Horizontal Model Resolution in the UK Met Office Unified Model

Amulya CHEVUTURI^{1,2*+}, Nicholas KLINGAMAN^{2,3}, Andrew TURNER^{2,3}, Kevin HODGES², Reinhard SCHIEMANN^{2,3}, Liang GUO^{2,3}, Julia CURIO²

¹National Centre for Atmospheric Science, University of Reading, ²University of Reading, ³National Centre for Atmospheric Science

IG13 / General Session

Mon - 29 Jul | MR323

Time 13:30-15:30

Chair(s) Mylene G. CAYETANO, University of the Philippines-Diliman Institute of Environmental Science and Meteorology Fiona WILLIAMSON, Singapore Management University

IG13-D1-PM1-323-001 | IG13-A007

Mesozoic-Cenozoic Evolution of the East Baghdad Lineament (Central Iraq) Based on Seismic Data: Insights for Basin Evolution of Mesopotamia

Hua BAI¹⁺⁺, Jianguo ZHANG¹, Hehua WANG², Shugen LIU³ ¹China ZhenHua Oil Company, ²Chengdu North Petroleum Exploration and Development Technology Company Limited, ³Chengdu University of Technology

IG13-D1-PM1-323-002 | IG13-A014

The Effect of Hydrogen Peroxide Method in the Preparation Sample of Ancient Very Fine Sandstone That Using and Not Using Sodium Hydroxide Granules on Foraminifera Morphology Appearance Ria FITRIANY^{1#+}, Anisa Ulfatu HASANAH^{1,2}, Dayat WIHARYAT¹

¹Padjadjaran University, ²Institute of Technology Bandung

IG13-D1-PM1-323-003 | IG13-A015

Miocene Calcareous Nannoplanktons of Volcanic Rock in Menganti, Karangbolong Area, Indonesia Zulfiah ZULFIAH¹⁷⁺, Angga JATI WIDIATAMA¹, Lia FITRIA RAHMATILLAH¹, Wildan HAMZAH¹, Dina GUNARSIH¹, Mirzam ABDURRACHMAN¹, Rubiyanto KAPID¹ ¹Bandung Institute of Technology

IG13-D1-PM1-323-004 | IG13-A019

An Experimental Investigation of the Source of Sediment at the Jiangsu Coastal Shelf, China

Xi Ll¹, Su-Xiang ZHANG², Zhen-Chun JIANG³, Yong-Yuan SUN⁴, Zhen-Rong ZHU⁵, Yun-Cheng WEN⁵, Vincent H. CHU⁶, Soon Keat TAN^{7#+}

¹Hohai University, ²Nanjing University of Information Science & Technology, ³China Navy, ⁴Jiangsu Provincial Hydrology and Survey Bureau, ⁵Nanjing Hydraulic Research Institute, ⁶McGill University, ⁷Nanyang Technological University

IG13-D1-PM1-323-005 | IG13-A012

Year-round Airborne Observation in Korea During 2018 by National Institute of Meteorological Sciences Ji-Hyoung KIM^{1#+}, Chulkyu LEE¹, Sueng-Pil JUNG¹, Hyo Jin YANG¹, Hee Jong KO¹, Jong-Hwan YUN¹ ¹National Institute of Meteorological Sciences

IG13-D1-PM1-323-006 | IG13-A026

Integration of Satellite Data and In Situ Measurements for Fitting the Aerosol Extinction Profile Tang-Huang LIN^{1‡}, Liu GIN-RONG¹, Chian-Yi LIU¹, Kuo-En CHANG¹ ¹National Central University

PS03 / Exploration of Mars: New Results, Current Missions and Future Plans

Mon - 29 Jul | Nicoll 3

 Time
 13:30-15:30

 Chair(s)
 Joseph MICHALSKI, The University of Hong Kong

PS03-D1-PM1-Nicoll 3-001 | PS03-A012

The Latest Mars Climate Database (MCD Version 6.0) Ehouarn MILLOUR^{1‡+}, Francois FORGET², Aymeric SPIGA¹, Margaux VALS³, Vladimir ZAKHAROV³, Luca MONTABONE⁴ ¹Sorbonne Universite, ²University Pierre et Marie Curie, ³Laboratoire de Meteorologie Dynamique, ⁴Space Science Institute

PS03-D1-PM1-Nicoll 3-002 | PS03-A004 (Invited)

The CO2 Inventory on Mars Bruce JAKOSKY^{1#+} ¹University of Colorado Boulder

PS03-D1-PM1-Nicoll 3-003 | PS03-A003

Large Localized Carbonate Exposures in Northeast Tyrrhena Terra, Mars, and Possible Formation Mechanisms Yang LIU^{1#+}, Timothy GOUDGE², Mark SALVATORE³ ¹National Space Science Center, ²The University of Texas at Austin, ³Northern Arizona University

PS03-D1-PM1-Nicoll 3-004 | PS03-A008

The Geology and Astrobiology of Mclaughlin Crater, Mars Joseph MICHALSKI^{1#+} ¹The University of Hong Kong

PS03-D1-PM1-Nicoll 3-005 | PS03-A015

Acidic, Anoxic to Oxic Weathering Processes for Thick Clays Profiles at the Mawth Vallis Region, Mars: Insights from its Spectral Comparison with Basaltic Weathering Profile at Hainan Island, China

Jiacheng LIU¹⁺, Joseph MICHALSKI^{1#}, Wei TAN², Hongping HE², Long XIAO³, Binlong YE¹

¹The University of Hong Kong, ²Chinese Academy of Sciences, ³China University of Geosciences

PS03-D1-PM1-Nicoll 3-006 | PS03-A010

Analogous Basaltic Impactites and Alteration Products to Prepare for Mars Exploration Shawn WRIGHT^{1#+}, Joseph MICHALSKI¹

¹The University of Hong Kong

AS1 Poster Presentations

Mon - 29 Jul, 18:30 - 21:00 | EXHIBITION HALL

AS01-D1-EVE-P-001 | AS01-A006

The Dark Target Aerosol Algorithm Applied to Himawari-8 Advanced Himawari Imager (AHI) and GOES16 and GOES17 Advanced Baseline Imager (ABI)

Shana MATTOO1*+, Pawan GUPTA2.3, Robert LEVY3, Lorraine REMER4.5

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

AS01-D1-EVE-P-002 | AS01-A009

Preliminary Study on Aerosol Type Classification and Radiative Forcing Characteristics in China Lu ZHANG^{1#+}, Jing LI¹ ¹Peking University

AS01-D1-EVE-P-003 | AS01-A010

Diurnal Variability of Total Cloud Cover Using Kalpana1 Satellite Dataset over Indian Summer Monsoon Region Soumi DUTTA^{1#+}, Sagnik DEY¹ ¹Indian Institute of Technology Delhi

AS01-D1-EVE-P-004 | AS01-A012

Developing an Integrated LEO-GEO Climatology of Aerosol Properties with the Dark Target Algorithm: A Status Report Robert LEVY^{1±+}, Shana MATTOO², Pawan GUPTA^{1,3}, Lorraine REMER^{4,5}, Robert HOLZ⁶, Jennifer WEI⁷

¹NASA Goddard Space Flight Center, ²Science Systems and Applications, Inc./ NASA Goddard Space Flight Center,

³Universities Space Research Association, ⁴University of Maryland, Baltimore County, ⁵Airphoton LLC, ⁶University of Wisconsin, ⁷NASA Goddard Earth Sciences Data and Information Services Center

AS01-D1-EVE-P-005 | AS01-A013

Development of Fog Detection Algorithm at Daytime Using Himawari-8/AHI and Ground Data

Na-Young ROH¹⁺, Ha-Yeong YU¹, Ji-Hye HAN¹, Myoung-Seok SUH^{1‡}

¹Kongju National University

AS01-D1-EVE-P-006 | AS01-A017

A Study on Synergistic Use of Meteorological Imager for Improving Aerosol Type Classification and Aerosol Retrieval Algorithm of GEMS

Sujung GO¹⁺, Jhoon KIM^{1#}, Mijin KIM¹, Sang Seo PARK², Hyunkwang LIM¹, Seoyoung LEE¹, Ja-Ho KOO¹ ¹Yonsei University, ²Seoul National University

AS01-D1-EVE-P-007 | AS01-A020

Development of Quality Control Method of Visibility Meter Data and Detailed Analysis of Fog Occurrence over South Korea

Yu-Joo OH¹⁺, Tae-Ho KANG¹, Myoung-Seok SUH^{1#} ¹Kongju National University

AS01-D1-EVE-P-008 | AS01-A022

Satellite Observations of Pollutants: Towards a Next Generation Global Observing System

Dejian FU^{1‡+}, Jessica NEU¹, William JOHNSON¹, Daniel WILSON¹, Hui-Hsin HSIAO², Shanshan YU¹, Xiong LIU³, Jun WANG⁴, Jonathan JIANG¹, Thomas PONGETTI¹, Gerard VAN HARTEN¹, Timothy CRAWFORD¹, Myungje CHOI¹, Stanley SANDER⁵, David DINER¹, Annmarie ELDERING¹, Russell CHIPMAN⁶, Jason HYON¹, Greg OSTERMAN¹, Michael R. GUNSON¹

¹Jet Propulsion Laboratory, California Institute of Technology, ²National Taiwan Normal University, ³Harvard University, ⁴The University of Iowa, ⁵California Institute of Technology, ⁶University of Arizona

AS01-D1-EVE-P-009 | AS01-A026

The Performance Characteristics of MODIs AOD Against AERONET AOD over Pune, India

Gajanan AHER¹⁵⁺, Amol KOLHE², Sandeep VARPE³, Pawan GUPTA^{4,5}

¹Sanghvi Keshri College, ²Nowrosjee Wadia College, ³International Institute of Information Technology, ⁴Universities Space Research Association, ⁵NASA Goddard Space Flight Center

AS06-D1-EVE-P-010 | AS06-A006

Heating Characteristics over the Eastern Tibetan Plateau in Boreal Summer Based on Objective Analysis Data

Junjun LI¹⁺, Jinghua CHEN¹, Chunsong LU¹⁺, Xiaoqing WU² ¹Nanjing University of Information Science & Technology, ²Iowa State University

AS06-D1-EVE-P-016 | AS06-A023

Cloud Response to SST Change in the Western Tropical Pacific in COMS and MODIS Data

Yoon-Kyoung LEE¹⁺, Jiwon HWANG¹, Yong-Sang CHOI^{1#} ¹Ewha Womans University

AS06-D1-EVE-P-017 | AS06-A025

Origins and Radiative Impacts of Differences in Tropical High Clouds Among Reanalyses Jonathon WRIGHT^{1‡+}, Xiaoyi SUN¹ ¹Tsinghua University

AS07-D1-EVE-P-018 | AS07-A006

Long-term Trend of O3 in a Mega City (Shanghai), China: Characteristics, Causes, and Interactions with Precursors Wei $GAO^{1^{\sharp+}}$

¹Yangtze River Delta Center for Environmental Meteorology Prediction and Warning

AS07-D1-EVE-P-019 | AS07-A008

Distribution of Oxygenated and Biogenic Volatile Organic Compounds in Guanzhong Basin and Their Impacts on Ozone Formation Wenting DAI¹⁵⁺ ¹Chinese Academy of Sciences

AS07-D1-EVE-P-021 | AS07-A010

Short-term Weather Patterns Modulate Air Quality in Eastern China During 2015–2016 Winter

Shuyu ZHAO^{1#}, Tian FENG¹, Xuexi TIE², Wenting DAI¹⁺, Jiamao ZHOU¹, Xin LONG¹, Guohui LI¹, Junji CAO¹ ¹Chinese Academy of Sciences, ²National Center for Atmospheric Research

AS07-D1-EVE-P-022 | AS07-A011

Morphologies and Elemental Compositions of Local Biomass Burning Particles at Urban and Glacier Sites in Southeastern Tibetan Plateau

Tafeng HU^{1#+}, Junji CAO¹, Daizhou ZHANG² ¹Chinese Academy of Sciences, ²Prefectural University of Kumamoto

AS07-D1-EVE-P-024 | AS07-A017

Impact of Synoptic Pattern and Meteorological Elements on the Wintertime Air Quality in Beijing-Tianjin-Hebei in Recent 5 Years Naifang BEI^{1#+}, Xiaopei LI¹ ¹Xi'an Jiaotong University

AS07-D1-EVE-P-025 | AS07-A018

The Spatial-temporal Variability of Ground-level Ozone Pollution in Eastern China and its Relationship with Meteorological Factors Yueming DONG¹⁺, Jing LI^{1#} ¹Peking University

AS07-D1-EVE-P-026 | AS07-A019

The Effects of Aerosol-radiation Feedback on Meteorology and Air Quality Under Four Different Synoptic Situations over the Guanzhong Basin Luying YAN¹⁺, Naifang BEI^{1#} ¹Xi'an Jiaotong University

AS07-D1-EVE-P-027 | AS07-A025

Impacts of Short-term Mitigation Measures on PM2.5 and Radiative Effects: A Case Study at a Regional Background Site Near Beijing, China Qiyuan WANG^{1*+} ¹Institute of Earth Environment, Chinese Academy of Sciences

AS07-D1-EVE-P-029 | AS07-A027

Spatial Variability and Climatological Trends in Aerosol Optical Depth over the Fenwei Plain, China Inferred from MODIS Collection 6.1 Aerosol Products Xiaoli SU^{1\$+}

¹Institute of Earth Environment, Chinese Academy of Sciences

AS09-D1-EVE-P-030 | AS09-A003

Microwave Radiative Transfer in Rain Cells: Implication for Radar Sounding and Radiometry

Yaroslaw ILYSHIN^{1,2#+}, Boris KUTUZA³

¹Moscow State University, ²Kotlenikov Radio Engineering Institute, Moscow, Russia, ³Kotelnikov Institute of Radioengineering and Electronics of Russian Academy of Sciences

AS09-D1-EVE-P-031 | AS09-A004

NICAM Results of the Project DYAMOND for Global Storm-resolving Model Intercomparison

Masaki SATOH¹⁺⁺, Ryosuke SHIBUYA², Chihiro KODAMA² ¹The University of Tokyo, ²Japan Agency for Marine-Earth Science and Technology

AS09-D1-EVE-P-032 | AS09-A005 (Invited)

Stratospheric Influence on the Aggregation of Tropical Moist Convective Systems Shigeo YODEN^{1#+}, Hai BUI², Takahiro BANNO¹ ¹Kyoto University, ²University of Bergen

AS09-D1-EVE-P-033 | AS09-A006 (Invited)

Changes of Clouds and Large-scale Circulations Due to Global Warming in Multi-decadal Global Nonhydrostatic Simulations

Akira NODA^{1#+}, Chihiro KODAMA¹, Yohei YAMADA¹, Masaki SATOH², Tomoo OGURA³, Tomoki OHNO¹ ¹Japan Agency for Marine-Earth Science and Technology, ²The University of Tokyo, ³National Institute for Environmental Studies

AS09-D1-EVE-P-034 | AS09-A010

Numerical Investigation of Dynamic and Thermodynamic Effects on Formation of Convective Lines off the Eastern Coast of Taiwan Pay-Liam LIN^{1#+}, Chien-Chuan CHAN¹ ¹National Central University

AS09-D1-EVE-P-035 | AS09-A011

Resolution Dependencies of Tropical Convection in Global Cloud/Cloud-system Resolving NICAM Tomoki MIYAKAWA^{1#+}, Hiroaki MIURA¹ ¹The University of Tokyo

AS11-D1-EVE-P-036 | AS11-A001

Study of Vertical Wavenumber Spectra During Sudden Stratospheric Warmings over India Priyanka GHOSH¹, Som Kumar SHARMA^{1‡+} ¹Physical Research Laboratory

AS11-D1-EVE-P-037 | AS11-A002

Satellite Remote Sensing of the Earth's Atmosphere and Surface Using Hyperspectral Observations Xu LIU¹²⁺

¹NASA Langley Research Center

AS11-D1-EVE-P-038 | AS11-A004

Vertical Profiles of Particle Light Extinction Coefficient in the Low Troposphere in Shanghai in Winter Based on Tethered Balloon Measurements Qingqing WANG¹⁺, Dongfang WANG², Yong YANG², Guangli XIU³, Qingyan FU², Yele SUN⁴ ¹Institute of Atmospheric Physics, Chinese Academy of Sciences, ²Shanghai Environmental Monitoring Center, ³East China

University of Science and Technology, 4Chinese Academy of Sciences

AS11-D1-EVE-P-039 | AS11-A012

Impact of Rossby Wave Breaking on the Lower Tropospheric Ozone over Central Himalayan Region Niranjan Kumar KONDAPALLI^{1#+}, D. V. PHANIKUMAR², Manish NAJA², Som Kumar SHARMA¹, TBMJ OUARDA³ ¹Physical Research Laboratory, ²Aryabhatta Research Institute of Observational Sciences, ³National Institute for Scientific Research

AS11-D1-EVE-P-040 | AS11-A016

Potential Changes of Summertime Surface Air Temperature and Precipitation in China During the Near-future Period: Projections and Uncertainties Jie ZHANG^{1#+}, Tongwen WU², Li ZHANG² ¹National Climate Center, China Meteorological Administration, ²China Meteorological Administration

AS11-D1-EVE-P-041 | AS11-A018

ERA-5 and MERRA-2 Temperature Trends in the Stratosphere Michal KOZUBEK^{1#+} ¹Czech Academy of Sciences

AS12-D1-EVE-P-042 | AS12-A002

A Case Study of Assimilation of Radar and Cloud-to-ground Lightning Data with 3DVAR Combined with Physical Initialization Method Ruhui GAN¹⁺, Yi YANG^{1‡} ¹Lanzhou University

AS12-D1-EVE-P-043 | AS12-A003

Improving Forecasting of Strong Convection by Assimilating FY4 Lightning Data Using WRF-3DVAR Peng LIU¹⁺, Yi YANG^{1#} ¹Lanzhou University

AS12-D1-EVE-P-044 | AS12-A009

Assimilation of Simulated Polarimetric Radar Data for a Tornadic Supercell with Two-moment Microphysics Scheme and Ensemble Kalman Filter Kefeng ZHU¹⁺⁺, Ming XUE^{1,2} ¹Nanjing University, ²The University of Oklahoma

AS12-D1-EVE-P-045 | AS12-A012

Impact of AMSR2 Data Assimilation in the KIAPS DA System

Han-Byeol JEONG¹⁺⁺, Hyoung-Wook CHUN¹, Sihye LEE¹ ¹Korea Institute of Atmospheric Prediction Systems (KIAPS)

AS12-D1-EVE-P-046 | AS12-A013

Stochastically Perturbed Forcing with KIM-LETKF System Sujeong LIM^{1#+}, In-Hyuk KWON¹, Myung-Seo KOO¹ ¹Korea Institute of Atmospheric Prediction Systems (KIAPS)

AS12-D1-EVE-P-047 | AS12-A014

Analysis of Forecast Performance by Altered Conventional Observation Set

Hyun-Jun HAN^{1#+}, In-Hyuk KWON¹, Jeon-Ho KANG¹, Hyoung-Wook CHUN¹, Sihye LEE¹, Sujeong LIM¹, Tae-Hun KIM¹

¹Korea Institute of Atmospheric Prediction Systems (KIAPS)

AS12-D1-EVE-P-048 | AS12-A015

Evaluating the Effect of Assimilating Cloud-contaminated Radiances in Regional Air Quality Forecasting: A Case Study Using Synthetic Radiance Data Ebony LEE¹⁺, Seon Ki PARK^{1‡}

¹Ewha Womans University

AS12-D1-EVE-P-049 | AS12-A020

Blending of Global and Regional Analyses/Forecasts with a Spatial Filter

Anurag DIPANKAR^{1#+}, Xiang-Yu HUANG² ¹Meteorological Service Singapore, ²Centre for Climate Research Singapore

AS12-D1-EVE-P-050 | AS12-A021

Investigation of Aerosol Effects on Weather Forecast Using NCEP Global Forecast and Analysis System Sarah LU^{1#+}, Shih-Wei WEI², Andrew COLLARD³, Quanhua

LIU⁴ ¹University at Albany - State University of New York, ²University at Albany, State University of New York, ³NOAA National Centers for

 $\label{eq:constraint} Environmental \ Prediction, \ ^4NOAA \ Center \ for \ Satellite \ Application \ and \ Research$

AS18-D1-EVE-P-051 | AS18-A001

Stable Carbon Isotope Analysis of Airborne Particulate Matter Using a Carbon Aerosol Analyzer and a Cavity Ringdown Spectrometer

Zhiwei LIN¹⁺⁺, Thomas GOTTSCHALK¹, Xiaojing ZHANG² ¹*Picarro Inc.*, ²*Picarro, Inc.*

AS18-D1-EVE-P-052 | AS18-A004

Chemical Characteristics of Primary and Aged Fine Particulate Matter from Biomass Burning Smoke Kin Fai HO^{1±+}, Junji CAO²

¹The Chinese University of Hong Kong, ²Chinese Academy of Sciences

AS18-D1-EVE-P-053 | AS18-A006

Identification and Quantification of Ambient Acidic Ultrafine Particles Using a Self-developed Diffusion Sampler Haoxian LU¹⁺, Hai GUO^{1#} ¹The Hong Kong Polytechnic University

AS18-D1-EVE-P-054 | AS18-A009

Secondary Organic Aerosol Formation from Isoprene Epoxides at Three Sites over China Yuqing ZHANG¹⁺, Xiang DING^{1#} ¹Guangzhou Institute of Geochemistry, Chinese Academy of Sciences

AS24-D1-EVE-P-055 | AS24-A001

Impact of Urban Induced Land Use Change on Local Weather over Two Tropical Indian Cities During Pre-monsoon Thunderstorms Sudhansu Sekhar RATH¹⁺, Jagabandhu PANDA^{1#} ¹National Institute of Technology, Rourkela

AS24-D1-EVE-P-056 | AS24-A002

The Effect of Urbanisation on Humidity Concentration in a High-rise and High-density City Zixuan WANG^{1#+}, P.W. CHAN², Yuguo LI¹ ¹The University of Hong Kong, ²Hong Kong Observatory

AS24-D1-EVE-P-057 | AS24-A006

Incorporation of the Urban Morphology and Governing Physics Including the Building Anthropogenic Heat Source in the Mesoscale NWP WRF Model's PX-LSM and ACM2-PBL Scheme and its Simulation over the PRD Region in Southern China Utkarsh BHAUTMAGE^{1#+}, Jimmy Chi Hung FUNG¹, Jonathan PLEIM², Alexis LAU¹ ¹The Hong Kong University of Science and Technology, ²United States Environmental Protection Agency

AS24-D1-EVE-P-058 | AS24-A010

Investigating the Three-dimensional Characteristics of the Canopy Layer Urban Heat Island in Singapore Minghong YU^{1#+}, Matthias ROTH¹ ¹National University of Singapore

AS24-D1-EVE-P-059 | AS24-A013

Vegetation Biophysical and Ecophysiological Properties Mediating Urban Microclimate and Water Fluxes: A Modelling Study

Naika MEILI^{1#+}, Simone FATICHI¹, Gabriele MANOLI¹, Paolo BURLANDO¹, Matthias ROTH², Erik VELASCO³, Edoardo DALY⁴, Kerry A. NICE^{4.5}, Nigel J. TAPPER⁴, Andrew M. COUTTS^{4.6}, Winston CHOW², Enrique R. VIVONI⁷ ¹ETH Zurich, ²National University of Singapore, ³Independent Researcher, ⁴Monash University, ⁵University of Melbourne,

⁶Cooperative Research Centre for Water Sensitive Cities, ⁷Arizona State University

AS24-D1-EVE-P-061 | AS24-A018

Evaluation of the Performance of a Hierarchy of Urban Canopy Schemes for Singapore Quang-Van DOAN^{1f+}, Anurag DIPANKAR², Andres

SIMON-MORAL³, Xiang-Yu HUANG¹ ¹Centre for Climate Research Singapore, ²Meteorological Service Singapore, ³National University of Singapore

AS24-D1-EVE-P-063 | AS24-A021

Assessment of Industrial Heat Island Using a Numerical Modeling Approach

Vivek Kumar SINGH¹^{±+}, Manju MOHAN¹, Shweta BHATI¹ ¹Indian Institute of Technology Delhi

AS24-D1-EVE-P-064 | AS24-A023

Effects of Urbanization on Hail and Tornado Characteristics Jiwen FAN^{1#+}, Yun LIN¹, Jong-Hoon JEONG¹ ¹Pacific Northwest National Laboratory

AS24-D1-EVE-P-065 | AS24-A026

On the Analysis of High-rise Building Typologies to Improve Outdoor Thermal Comfort in Singapore Juan A. ACERO^{1#+}, Elliot KOH¹, Lea RUEFENACHT², Leslie NORFORD³

¹Singapore-MIT Alliance for Research and Technology, ²Singapore-ETH Centre, ³Massachusetts Institute of Technology

AS24-D1-EVE-P-066 | AS24-A027

High-resolution Regional Climate Model Experiments Focusing on Urban Impact in the Tokyo Metropolitan Area in Summer

Ibuki SUGINO¹⁺, Yasutaka WAKAZUKI^{1,2#} ¹Ibaraki University, ²Japan Agency for Marine-Earth Science and Technology

AS24-D1-EVE-P-068 | AS24-A030

Spatial Distribution of Heat Stress Within Urban Districts Around Tokyo

Ryoko ODA¹**, Kyosuke KAWANO¹, Atsushi INAGAKI², Eiji YAUCHI¹

¹Chiba Institute of Technology, ²Tokyo Institute of Technology

AS25-D1-EVE-P-069 | AS25-A008 (Invited)

Marine Wind Field in and Around Tropical Cyclone Estimated from Multi-platform Satellite Measurements Seung-Woo LEE^{1*+}, Sung-Hyun NAM¹ ¹Seoul National University

AS25-D1-EVE-P-070 | AS25-A010

Typhoons Parma and Melor: A Fujiwhara Case Study Ravi Shankar PANDEY^{1*+}, Yuei-An LIOU¹ ¹National Central University

AS25-D1-EVE-P-071 | AS25-A013

Bias Characterization of Advanced Meteorological Imager Infrared Observation Using NWP Model Data Tae-Myung KIM¹⁺, Su Jeong LEE¹, Myoung-Hwan AHN^{1‡} ¹Ewha Womans University

AS30-D1-EVE-P-072 | AS30-A008

Characteristics of the Marine Boundary Layer Jet over the South China Sea During the Early Summer Rainy Season of Taiwan

Chuan-Chi TU¹, Yi-Leng CHEN^{2‡}, Pay-Liam LIN¹⁺, Yu DU³ ¹National Central University, ²University of Hawaii at Manoa, ³Sun Yat-sen University

AS30-D1-EVE-P-073 | AS30-A012

A Study of Dynamical Downscaling on Afternoon Thunderstorm Projected Changes in Northern Taiwan Cheng Tai CHANG^{1*+}, Pay LIAM¹ ¹National Central University

AS30-D1-EVE-P-074 | AS30-A015

Deep Convective Cloud Properties and Precipitation During Tropical Cyclone Intensity Changes Jason Pajimola PUNAY^{1‡+}, Chian-Yi LIU¹, Chi-Hao CHIU¹ ¹National Central University

AS30-D1-EVE-P-075 | AS30-A018

Raindrop Size Distribution Characteristics of Typhoon and Non-typhoon Precipitations Observed over North Taiwan Jayalakshmi JANAPATI¹⁺, Balaji Kumar SEELA^{1,2}, Pay-Liam LIN^{1‡}, Pao WANG^{2,3}

¹National Central University, ²Academia Sinica, ³University of Wisconsin-Madison

AS30-D1-EVE-P-076 | AS30-A027

Impacts of Cumulus Schemes on the Initiation of MJO Mei-Yu CHANG^{1‡+}, Pay-Liam LIN², Tim LI³, Ming-Dah CHOU²

¹Central Weather Bureau, ²National Central University, ³University of Hawaii

AS30-D1-EVE-P-077 | AS30-A030

Verification of Multiple-doppler-radar Derived Vertical Velocity Using Profiler Data YI-An CHEN^{1*+}, Yu-Chieng LIOU¹ ¹National Central University

AS30-D1-EVE-P-078 | AS30-A031

Diagnosing Observation Error Correlations for Dopper Radar Radial Winds Based on the WRF-LETKF Data Assimilation System Hao-Lun YEH^{1*+}, Hsiang-Wen CHENG¹, Shu-Chih YANG¹ ¹National Central University

AS30-D1-EVE-P-079 | AS30-A032

A Diagnostic Case Study of Mei-Yu Front Near Taiwan During June 2-3 2017 Hsiao-Jou SHIH^{1‡+}, Pay-Liam LIN¹ ¹National Central University

AS30-D1-EVE-P-080 | AS30-A035

Raindrop Size Distribution of Different Seasons over North Taiwan Meng-Tze LEE¹⁺, Pay-Liam LIN^{1‡}, Wei-Yu CHANG¹, Balaji Kumar SEELA^{1,2} ¹National Central University, ²Academia Sinica

AS31-D1-EVE-P-081 | AS31-A001

Contributions to the Explosive Growth of PM2:5 Mass Due to Aerosol-radiation Feedback and Decrease in Turbulent Diffusion During a Red Alert Heavy Haze in Beijing-Tianjin-Hebei, China Hong WANG^{1‡+}, Yue PENG¹, Xiaoye ZHANG¹, Hongli LIU¹ ¹Chinese Academy of Meteorological Sciences

AS31-D1-EVE-P-083 | AS31-A003

Spatial-temporal Characteristics of Haze and its Forming Reason in Jiangxi Province Lujun JIANG¹⁺, Ximing LIU^{1‡} ¹Jiangxi Institute of Meteorological Science

AS31-D1-EVE-P-084 | AS31-A008

Quantifying the Impacts of Cold Airmass on Aerosol Concentrations over North China Using Isentropic Analysis Qian LIU^{1±+}, Guixing CHEN¹, Toshiki IWASAKI² ¹Sun Yat-sen University, ²Tohoku University

AS31-D1-EVE-P-085 | AS31-A016

Modelling Background Air Quality in Singapore Sean LEE¹⁺, Sebastian EASTHAM², Florian ALLROGGEN², Akshay ASHOK^{2#}, Xianxiang LI³, Leslie NORFORD², Steve YIM⁴, Steven BARRETT²

¹Sun Yat-sen University, ²Massachusetts Institute of Technology, ³National University of Singapore, ⁴The Chinese University of Hong Kong

AS31-D1-EVE-P-086 | AS31-A019

Larger Sensitivities of Precipitation Extremes in Response to Aerosol Than Greenhouse Gas Forcing in CMIP5 Models Zhili WANG^{1#+}, Lei LIN², Yangyang XU³, Qiang FU⁴, Wenjie DONG²

¹Chinese Academy of Meteorological Sciences, ²Sun Yat-sen University, ³Texas A&M University, ⁴University of Washington

AS31-D1-EVE-P-087 | AS31-A021

Estimating Ground-level PM2.5 Concentration in China Using Geographically Weighted Regression Based on Satellite AOD Combined with CALIPSO and MODIS Fire Count

Wei YOU¹⁵⁺, Zengliang ZANG¹, Pan XIAOBIN¹, He HONGRANG¹ ¹National University of Defense Technology

AS31-D1-EVE-P-088 | AS31-A022

Quantifying the Decadal Vertical Distribution of Aerosols over Biomass Burning and Urban Regions in South East and East Asia Using CALIOP and Other Satellites Zhao WAN^{1#+}

¹Sun Yat-sen University

AS36-D1-EVE-P-089 | AS36-A002

ENSO Regulation on the Sub-seasonal Prediction Skill of Surface Maximum Temperature over Yangtze River Basin in China Jing YANG¹⁵⁺

¹Beijing Normal University

AS36-D1-EVE-P-090 | AS36-A005

Development of an Atmosphere-ocean Coupled Data Assimilation System for Subseasonal-to-seasonal Forecasts Nakbin CHOI¹⁺, Myong-In LEE^{1‡} ¹Ulsan National Institute of Science and Technology

AS36-D1-EVE-P-091 | AS36-A007

Effects of the Tropical/Extratropical Intraseasonal Oscillations on Generating the Heat Wave over Yangtze River Valley: A Numerical Study Xin Ql^{1#+} ¹Beijing Normal University

AS36-D1-EVE-P-092 | AS36-A008

Comparing the Predictability of the Central Indian Ocean Mode Estimated Using the Observational and S2S Database Baosheng LI¹⁺, Jianhuang QIN¹, Lei ZHOU^{1#} ¹Shanghai Jiao Tong University

AS36-D1-EVE-P-093 | AS36-A014

Subseasonal Forecasts of Regional-scale Weather Types Across the Maritime Continent Andrew W. ROBERTSON^{1*+}, Vincent MORON² ¹Columbia University, ²Aix-Marseille Université

AS36-D1-EVE-P-094 | AS36-A016

Extratropical Prediction Skills of the Subseasonal-to-Seasonal (S2S) Prediction Models Seok-Woo SON^{1#}, Hera KIM¹⁺, Kanghyun SONG¹, Sang-Wook KIM¹, Patrick MARTINEAU² ¹Seoul National University, ²The University of Tokyo

AS36-D1-EVE-P-095 | AS36-A021

Prediction Skill of Asian Summer Monsoon Indices in the APCC Multimodel Ensemble System Chan-Yeong SONG¹⁺, Hye-Jin PARK¹, Vladimir KRYJOV²

¹Pusan National University, ²Hydrometcenter of Russia

AS36-D1-EVE-P-096 | AS36-A022

A Study on the Prediction of Winter Temperature over Mongolia Using CGCM and Artificial Neural Network Eung-sup KIM^{1‡+}, Gerelchuluun BAYASGALAN² ¹Pusan National University, ²Information and Research Institute of Meteorology, Hydrology and Environment

IG Poster Presentations

Mon - 29 Jul, 18:30 - 21:00 | EXHIBITION HALL

IG03-D1-EVE-P-097 | IG03-A004

Geochemical Characterization and Flow Modeling of a Low-enthalpy Hydrothermal Reservoir in Southeastern Sierra Madre Occidental, Mexico

Andrea BILLARENT CEDILLO¹^{#+}, Gilles LEVRESSE¹, Luca FERRARI¹, Antonio HERNÁNDEZ ESPRIÚ¹, Alberto ARIAS PAZ¹, Jaime CARRERA HERNÁNDEZ¹, Fernando CORBO CAMARGO¹, Emma Vanesa MARTÍNEZ RESÉNDIZ¹ ¹National Autonomous University of Mexico

IG03-D1-EVE-P-098 | IG03-A005

Estimating the Hydraulic Conductivity and Heat Capacity of the Aquifer Between the River and Well Site Using Joint Inversion Approach

Jui-Pin TSAI^{1‡+}, Chin Tsai HSIAO², Liang-Cheng CHANG³, Chun-Hung CHEN⁴, Yun-Ta CHENG⁴, Jen-Hung YU⁴ ¹National Cheng Kung University, ²Chung Chou University of Science and Technology, ³National Chiao Tung University, ⁴Ministry of Economic Affairs

IG03-D1-EVE-P-099 | IG03-A007

Characterizing Subsurface Hydraulic Characteristics at Bayin River Alluvial-proluvial Fan, China Yue LIANG^{1#+}, Tian-Chyi Jim YEH² ¹Chongqing Jiaotong University, ²University of Arizona

IG03-D1-EVE-P-100 | IG03-A009

Cross Correlation and Time Frequency Analysis of the Groundwater Head Variation Caused by Natural Stimuli Chin Tsai HSIAO^{1#+}, Jui-Pin TSAI² ¹Chung Chou University of Science and Technology, ²National Cheng

IG03-D1-EVE-P-101 | IG03-A010

Kung University

Satellite-based Estimates of Groundwater Depletion in Basin of Sinai Peninsula, Red Sea, East Coast and Western Desert and Delta in Egypt Jet LI^{1#+}, Wenzhao LI¹, Hesham EL-ASKARY¹ ¹Chapman University

IG03-D1-EVE-P-103 | IG03-A016

Development of Optimal Model for Conjunctive Use of Surface and Subsurface Water Chih-Chao HO^{1*+}, Yun Yu CHEN², Liang-Cheng CHANG², Chin Tsai HSIAO³ ¹Feng Chia University, ²National Chiao Tung University, ³Chung Chou University of Science and Technology

IG03-D1-EVE-P-104 | IG03-A017

Using Sentinel-1 and Local GNSS Network to Monitor Land Subsidence in Southwestern Taiwan Liu-Xuan JIAN¹⁵⁺, Kuo-Hsin TSENG¹ ¹National Central University

IG03-D1-EVE-P-105 | IG03-A018

Present-day Geothermal Regime of the Yangtze Tectonic Area, South China Shaowen LIU^{1#+}, Xianglan LI¹, Chunyan HAO¹

¹Nanjing University

IG04-D1-EVE-P-106 | IG04-A001

Multi-sectors Natural Hazards Risk Assessment in Metropolitan Region - A Case Study in Taipei City, Taiwan Kai Yuan KE^{1‡+}, Ji Hua LIN¹, Yun Ping WANG¹ ¹National Taiwan University

IG04-D1-EVE-P-107 | IG04-A005

Aeolian Environments and Sand Transport in the Desert-oasis Transitional Area of Dunhuang, China Kecun ZHANG¹⁺⁺, Shengbo XIE¹ ¹Chinese Academy of Sciences

IG04-D1-EVE-P-108 | IG04-A008

Risk Assessment of Gale Damage in Anhui Province, China Dongyan HE^{1#+}, Xueliang DENG² ¹Anhui Climate Center, ²Anhui Institute of Meteorology

IG04-D1-EVE-P-109 | IG04-A013

Storm Surge Modeling, Simulation and Early Warning System in the Philippines Vena Pearl BONGOLAN^{1,2}, Alezon Maxine VALERIO^{1‡+}, Michael GARCIA¹ ¹University of the Philippines Diliman, ²ICSU Regional Office for Asia and the Pacific

IG04-D1-EVE-P-110 | IG04-A014

Characteristics of Landslides Triggered by Intense Earthquake in the Hokkaido Eastern Iburi Earthquake 2018 Yasuhiro MURAKAMI^{1#+} ¹Civil Engineering Research Institute for Cold Region

IG04-D1-EVE-P-111 | IG04-A015

Towards to Resilience Science and Resilient Society -Advanced Science and Technology and Human Resource Cultivation-Yoshiyuki KANEDA^{1#+} ¹Kagawa University

IG04-D1-EVE-P-113 | IG04-A019

Tsunami Overwash Depositional Sites: A Case Study on the 1994 Tsunami in Mindoro, Philippines Alec Benjamin RAMIREZ¹⁸⁺, Noelynna RAMOS¹ ¹University of the Philippines Diliman

IG04-D1-EVE-P-114 | IG04-A020

Geomorphological Imprints of the 1976 Moro Gulf Tsunami in Western Mindanao Island, Philippines Sheinna May CLARO^{1&+}, Noelynna RAMOS¹ ¹University of the Philippines Diliman

IG04-D1-EVE-P-115 | IG04-A021

Characteristics of Event Sediments Confirmed in the Shiraho District on the East Coast of Ishigaki Island, Southwest Japan Shiro TANAKA^{1‡+}, Takumi YOSHII¹, Kiyoshi ICHIKAWA², Satoshi SOGI³, Yuki ITO¹, Takaomi HAMADA¹, Masafumi MATSUYAMA¹

¹Central Research Institute of Electric Power Industry, ²Hanshin Consultants Co., Ltd., ³Aero Photo Center Co., Ltd.

IG04-D1-EVE-P-116 | IG04-A022

Recent Changes in the Frequency of Occurrence of Extreme Weather Events in South Korea Jina HUR¹⁺, Kyo-Moon SHIM^{1‡}, Yongseok KIM¹, Kee-Kyung KANG¹, Myung-Pyo JUNG¹ ¹National Institute of Agricultural Sciences

IG04-D1-EVE-P-117 | IG04-A031

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IG04-D1-EVE-P-119 | IG04-A034

A Dam Failure in the Mekong Basin, Laos, 2018: Possible Cause of the Failure and Impacts of Flash Flood Edgardo LATRUBESSE¹, Edward PARK^{1#+}, Kerry SIEH¹, Nina LIN², Thang DANG³

¹Nanyang Technological University, ²National Taiwan University, ³Singapore University of Technology and Design

IG04-D1-EVE-P-120 | IG04-A042

A Study on the Possibility of Categorization of Disaster Detection Using High Resolution Satellite Imagery Jiyoon MOON¹⁺⁺, Kwangjae LEE¹, Eunseon KIM¹ ¹Korea Aerospace Research Institute

IG04-D1-EVE-P-121 | IG04-A046

Hydrothermal Variation and its Influence on the Desertified Ground Surface of Qinghai–Tibet Plateau Shengbo XIE^{1#+}, Kecun ZHANG¹ ¹Chinese Academy of Sciences

IG04-D1-EVE-P-122 | IG04-A048

Adoption of Concrete Petrography in National Policy, Disaster Risk Reduction and Mitigation, and Civil Defense: A Framework and Roadmap for the Philippines to 2021 and Beyond Joremy James JIMENIE ZI^{#+} Richard VBAÑIE ZI Carlo APCII I Al

Jeremy James JIMENEZ^{1#+}, Richard YBAÑEZ¹, Carlo ARCILLA¹, Nancy AGUDA¹, Maria Elizabeth LAUS¹, Antonio REYNO¹ ¹University of the Philippines Diliman

IG07-D1-EVE-P-123 | IG07-A001

China's Dikes: Characteristics and Evolving Trends of Dikes Construction Experience

Zhaohui YANG^{1,*+}, Xin WANG², xinmin XIE¹, huaxiang HE¹, Weiwei SHAO¹

¹China Institute of Water Resources and Hydropower Research, ²Shanghai Tianhua Urban Planning Ltd.

IG07-D1-EVE-P-124 | IG07-A014

Evaluation of Tsunami Risk Reduction Effect by Afforestation Area in Coastal Area of Indonesia Akihiro HAYASHI^{1#+}, Kei YAMASHITA¹, Fumihiko IMAMURA¹, Takayuki HAYASHI², Ichiro SATO² ¹Tohoku University, ²Tokio Marine & Nichido Risk Consulting Co., Ltd.

IG07-D1-EVE-P-125 | IG07-A015

Governing Flow Characteristics in Influencing Port Structure Damage in 2011 Great East Japan Tsunami Constance Ting CHUA^{1#+}, Adam SWITZER¹, Anawat SUPPASRI², Linlin LI³, Kwanchi PAKOKSUNG², David LALLEMANT¹

¹Nanyang Technological University, ²Tohoku University, ³National University of Singapore

IG07-D1-EVE-P-126 | IG07-A016

High-rise Building Damage in Storm Surges: Lessons Learnt from Typhoon Hato Constance Ting CHUA^{1#+}, Adam SWITZER¹, Linlin LI², David LALLEMANT¹, Kai Meng MOK³ ¹Nanyang Technological University, ²National University of

Singapore, ³University of Macau

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Quantitative Risk Assessment Study of Extreme Wind and Waves in the Andaman Sea Donlaporn SAETAE¹, Woraluck HONGTO¹⁺, Worachat WANNAWONG^{2#} ¹Mahidol University, ²Sun Yat-sen University

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Sensitivity Analysis of Exposure for Flood Risk Assessment in Data Scarce Areas: Monywa, Myanmar Tian Ning LIM^{1#+}, David LALLEMANT²

¹Earth Observatory of Singapore, Nanyang Technological University, ²Nanyang Technological University

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Using Molecular Ecology to Differentiate Between Storm and Tsunami Deposits at Phra Thong Island, Thailand Federico LAURO¹³⁺, Wenshu YAP¹, Adam SWITZER¹, Christos GOURAMANIS², Dale DOMINEY-HOWES³, Maurizio LABBATE⁴

¹Nanyang Technological University, ²National University of Singapore, ³University of Sydney, ⁴University of Technology Sydney

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Estimation of Coastal Inundation Induced by Sea Level Rise in South Korea Junho MAENG¹⁺, Hyeyun KU^{1#} ¹Korea Environment Institute

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Internal Flood Risk Analysis at Major SOC Site Considering Climate Change Beom Jin KIM¹⁺, Kun-Yeun HAN^{1‡}, Ho Jun KEUM¹, Jae Yeong LEE¹, Hyun Il KIM¹

¹Kyungpook National University

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A Development of Stationary and Nonstationary Frequency Analysis Model Based on Mixture Distribution Hong-Geun CHOI¹⁵⁺, Hyun-Han KWON¹, Dinh-Huy NGUYEN¹ ¹Sejong University

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Recognition of Landslides by the 2018 Hokkaido Eastern Iburi Earthquake Using High-resolution DEM and Field Survey Shusaku YAMAZAKI^{1#+}, Yoshihiko ITO¹, Terumasa NISHIHARA¹, Toshiyuki KURAHASHI¹ ¹Civil Engineering Research Institute for Cold Region

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A Comparative Study on the Impact of LDOF(2000) and GDDOF(2018) on the Trans-boundary Siang River and the Significance of Remote Sensing in Analysis of the Two Events Swapna ACHARJEE¹⁵⁺

¹State Remote Sensing Application Centre

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Initial Estimation of the BDS3 Integrity Monitoring Capability Yueling CAO^{1#+}, Xiaogong HU¹, Shanshi ZHOU¹, Qiuning TIAN¹ ¹Chinese Academy of Sciences

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An Analysis of the Sustainable Development Goals and Their Interactions Wystan CONCEPCION^{1#+}, James Gabriel ABAJA¹, Vena Pearl BONGOLAN^{1,2}

¹University of the Philippines Diliman, ²ICSU Regional Office for Asia and the Pacific

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Assessment of Heavy Metal Pollution in Shooting Range and Solutions Hong-Hyun KIM^{1#+}, Sangjo JEONG¹ ¹Korea Military Academy

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Recent Dynamics of Large Channel Bars in the Lower Ayeyarwady River, Myanmar Edward PARK^{1#+}, Edgardo LATRUBESSE¹, Samia AQUINO¹ ¹Nanyang Technological University

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C. K. SHUM^{1,2#+}, Tarig ALI³, Ratnesh BHATTACHARYA⁴, Xiaobin CAI¹, Ardershir CONTRACTOR¹, Yuanyuan JIA¹, Chung-Yen KUO⁵, Yu ZHANG¹

¹The Ohio State University, ²Chinese Academy of Sciences, ³American University of Shajah, ⁴Global Positioning Strategies LLC, ⁵National Cheng Kung University

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Dongeon KIM^{1,2#+}, Shie-Yui LIONG¹, Philippe GOURBESVILLE², Jiandong LIU¹

¹National University of Singapore, ²University of Nice Sophia Antipolis

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¹China University of Geosciences

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Daewon KIM¹, Hanlim LEE^{1 \sharp +}, Seong-Taek YUN², Seong-Chun JUN³, Youngmin NOH¹

¹Pukyong National University, ²Korea University, ³GeoGreen21 Co. Ltd

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Modeling Mineral Trapping for Carbon Dioxide Enhanced Water Recovery Qi LI¹⁺⁺, Xiaoyan ZHANG², Liang XU² ¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

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Estimation of Effective Stimulated Reservoir Volume in Supercritical CO2 Fracturing Xiaochen WEI¹⁺, Jingxuan ZHANG¹, Xiangjun LIU^{1#}, Lixi LIANG¹ ¹Southwest Petroleum University

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¹Chinese Academy of Sciences

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¹Vietnam National University, ²Indiana University,

³Christian-Albrechts-Universität zu Kiel, ⁴University of Bremen, ⁵Geological Survey of Finland

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¹Earth Observatory Singapore, ²Nanyang Technological University, ³Federal University of Goias

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¹National Taiwan University, ²Artelia Vietnam, ³Nanyang Technological University

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Stalagmite-inferred Dramatic Change in SW China Vegetation Coverage over the Past 300 Years

Ke LIN^{1,2‡+}, Xianfeng WANG¹, Wuhui DUAN³, Xinggong KONG⁴, Liangcheng TAN³, Chuan-Chou SHEN² ¹Nanyang Technological University, ²National Taiwan University, ³Chinese Academy of Sciences, ⁴Nanjing Normal University

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Transition from Open Vent Magmatic Eruptions to Phreatic Fissure Events, Gamalama Volcano, North Maluku, East Indonesia

Nia HAERANI^{1#}, Ugan SAING¹, Philipson BANI², Syegi KUNRAT¹⁺, Alessandro AIUPPA³, Devy Kamil SYAHBANA¹ ¹Center for Volcanology and Geological Hazard Mitigation, ²The French Research Institute for Development, ³Università di Palermo

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First Characterization of Gamkonora Magmatic Gas Emission, North Maluku, Indonesia

Ugan SAING^{1‡+}, Philipson BANI², Nia HAERANI¹, Alessandro AIUPPA³, Sofyan PRIMULYANA¹, Hilma ALFIANTI¹, Mita MARLIA¹, Devy Kamil SYAHBANA¹, Kristianto KRISTIANTO¹ ¹Center for Volcanology and Geological Hazard Mitigation, ²The French Research Institute for Development, ³Università di Palermo

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Basaltic Magma Injection as a Trigger of the Increasing Activity of Mount Agung, Bali, Indonesia Adzkia Noerma ARIFA¹⁺, I G.B. Eddy SUCIPTA^{1‡}, Asep SAEPULOH¹, Sri WIDIYANTORO¹ ¹Bandung Institute of Technology

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SO2 Emission Budget From North Maluku and Sulawesi Volcanoes Based on Ground Based Measurements Kristianto KRISTIANTO¹⁺, Etienne LE GLAS², Philipson BANI^{3#}, Devy Kamil SYAHBANA¹, Hendra GUNAWAN¹, Ugan SAING¹, Sofyan PRIMULYANA¹, Hilma ALFIANTI¹ ¹Center for Volcanology and Geological Hazard Mitigation, ²Université Clermont Auvergne, ³The French Research Institute for Development

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Alaa Ramadan MOSTAFA² ¹Chapman University, ²Alexandria University

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¹Daegu University

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¹Macau University of Science and Technology

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The Solar Wind Interaction with the Reiner Gamma Anomaly: The Effect of Varying the Upstream Solar Wind Conditions

Jan DECA¹⁵⁺, Andrey DIVIN², Bertrand LEMBEGE³, Hsiang-Wen HSU¹, Andrew POPPE⁴, Li Hsia YEO¹, Mihaly HORANYI¹

¹University of Colorado Boulder, ²Saint Petersburg State University, ³National Center for Scientific Research/University of Versailles Saint-Quentin-en-Yvelines/Institute Pierre Simon Laplace, ⁴University of California, Berkeley

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Raman Laser Spectrometer FM Functional Verification with Real Samples in Automatic Operation Carlos PEREZ^{1#+} ¹National Institute of Aerospace Technology

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Jiacheng LIU¹⁺, Joseph MICHALSKI^{1‡}, Fuyuan AN², Yiliang LI¹ ¹The University of Hong Kong, ²Chinese Academy of Sciences

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The PTAL Project: A Spectral Database in Support to Future in Situ Investigations of Mars François POULET¹⁵⁺, Stephanie WERNER², Henning DYPVIK², Fernando RULL PEREZ³

¹Paris-Sud University, ²Oslo University, ³Valladolid University

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¹Macau University of Science & Technology, ²National Institute for Astrophysics, ³National Central University

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Why Earth Rotation is Important for Climate Prediction Leonid ZOTOV $^{1\sharp \star}$

¹National Research University Higher School of Economics

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Fluid Love Numbers and Interior Structure of (Exo-)Planets Sebastiano PADOVAN^{1#+}, Philipp BAUMEISTER², Nicola TOSI³, Frank SOHL³, Doris BREUER³, Tilman SPOHN³ ¹DLR - German Aerospace Center, ²Technische Universität Berlin, ³German Aerospace Center

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¹Max Planck Institute for Solar System Research, ²Swedish Institute of Space Physics, ³The Johns Hopkins University Applied Physics Laboratory, ⁴University of Bern

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Titan's "Average" Ionospheric Structures from Cassini Jen-Kai HSU^{1#+}, Wing-Huen IP¹ ¹National Central University

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Yong HUANG^{1*+}, Songhe QIN², Peijia LI¹, Shan QUAN¹ ¹Chinese Academy of Sciences, ²Shanghai Astronomical Observatory, CAS

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The Lunar Atmosphere During Extreme Solar Storms Zheng-Xian CHEN^{1‡+}, Wing-Huen IP¹, Hua-Shan SHI¹, Meng-Che WU¹ ¹National Central University

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The Diviner Lunar Radiometer: 10 Years Observing the Moon in the Thermal Infrared

Benjamin GREENHAGEN^{1#+}, David PAIGE² ¹The Johns Hopkins University Applied Physics Laboratory, ²University of California, Los Angeles

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VU Science Experiments (VUSE) Igluna Project, A Science Showcase for a Moon Ice Habitat Arlene DINGEMANS^{1*+}, Bernard FOING^{1,2}, Bram DE WINTER¹ ¹Vrije Universiteit Amsterdam, ²European Space Agency

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Fitting Polarization Phase-curve of the Moon Chae Kyung SIM^{1#+}, Sukbum HONG¹, Sungsoo KIM¹, Minsup JEONG², Young-Jun CHOI² ¹Kyung Hee University, ²Korea Astronomy and Space Science Institute

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Shock and Thermal Behavior of Synthesized Amorphous MgSiO3 as a Model Material for Cosmic Dust Akane ARASUNA^{1#+}, Masayuki OKUNO¹, Nobuaki KAWAI² ¹Kanazawa University, ²Kumamoto University

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Science Enabled by the Cassini Cosmic Dust Analyser at Saturn

Hsiang-Wen HSU^{1\$+}, Nicolas ALTOBELLI², Sascha KEMPF¹, Frank POSTBERG³, Jurgen SCHMIDT⁴, Ralf SRAMA⁵ ¹University of Colorado Boulder, ²European Space Agency, ³Freie Universität Berlin, ⁴University of Oulu, ⁵University of Stuttgart

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Construction of a New Galaxy Spectral Energy Distribution Model with Cosmic Dust Evolution Kazuki NISHIDA¹⁵⁺, Tustomu TAKEUCHI¹ ¹Nagoya University

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From Space to the Lab: Comparing Cometary Dust Collected and Analyzed with Rosetta with Cosmic Dust Collected and Analyzed on Earth

Sihane MEROUANE^{1#+}, Stefanie GUENTHER², Martin HILCHENBACH¹, Cecile ENGRAND³, Olivia CHITARRA⁴, Oliver STENZEL¹

¹Max Planck Institute for Solar System Research,

²Georg-August-Universität Göttingen, ³Center for Nuclear Science and Matter Sciences, ⁴Université Paris-Saclay

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A New Dust Evolution Model in Galaxies with a Gas Infall Sayaka NAGASAKI^{1#+}, Tustomu TAKEUCHI¹, Kazuki NISHIDA¹

¹Nagoya University

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Recurrent Dipolarization Energisation and Aurora: Corotation or Modulation? Z. H. YAO^{1‡}, Denis GRODENT¹, Nick SERGIS², Benjamin PALMAERTS¹⁺, Ruilong GUO³, Katerina RADIOTI¹ ¹University of Liege, ²Academy of Athens, ³Chinese Academy of

¹University of Liege, ²Academy of Athens, ³Chinese Academy o_j Sciences

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Evidence for CO2 Ice Clouds with MAVEN/IUVS Stellar Occultation Measurements

Fayu JIANG^{1,2#}, Roger YELLE², Sonal JAIN³, Jun CUI^{1,4+}, Franck MONTMESSIN⁵, Nick SCHNEIDER³, Justin DEIGHAN³, Hannes GRÖLLER², Loïc VERDIER⁶

¹Chinese Academy of Sciences, ²The University of Arizona, ³University of Colorado Boulder, ⁴Sun Yat-sen University, 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), ⁶National Center for Scientific Research (CNRS)

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The Morphology of the Topside Martian Ionosphere: Implications on Bulk Ion Flow Jun CUI^{1,2#+}, Xiaoshu WU², Shaosui XU³, Robert LILLIS³, Roger YELLE⁴, Niklas EDBERG⁵, Eric VIGREN⁵ ¹Sun Yat-sen University, ²Chinese Academy of Sciences, ³University of California, Berkeley, ⁴The University of Arizona, ⁵Swedish Institute of Space Physics

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Photochemical Escape of Atomic C and N on Mars: Clues from a Multi-instrument Maven Dataset Jun CUI^{1,2+}, Xiaoshu WU², Fayu JIANG^{2,3}, Yong WEI² ¹Sun Yat-sen University, ²Chinese Academy of Sciences, ³The University of Arizona

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Structural Variability of the Cross-terminator Martian Ionosphere: Dawn-dusk Asymmetry and Impacts of Crustal Magnetic Fields

Yutian CAO^{1#+}, Jun CUI^{1,2}, Xiaoshu WU¹, Yong WEI¹ ¹Chinese Academy of Sciences, ²Sun Yat-sen University

PS10-D1-EVE-P-230 | PS10-A015

Structural Variability of the Enceladus Water Plume Menghao FU^{1*+}, Jun CUI^{1,2}, Fayu JIANG^{1,3} ¹Chinese Academy of Sciences, ²Sun Yat-sen University, ³The University of Arizona

PS10-D1-EVE-P-231 | PS10-A016

Active Experiments Beyond the Earth: Plasma Effects of Sounding Radar Operations in the Ionospheres of Venus, Mars, and the Jovian System Andrii VOSHCHEPYNETS¹⁷, Stas BARABASH¹⁺, Mats HOLMSTRÖM¹, Rudy FRAHM² ¹Swedish Institute of Space Physics, ²Southwest Research Institute

PS10-D1-EVE-P-232 | PS10-A017

The Martian Magnetic Pileup Boundary Configuration During the September 10th 2017 Event Christy LENTZ^{1#+}, Dan BAKER¹, Laila ANDERSSON¹, Christopher FOWLER¹, Trevor LEONARD¹ ¹University of Colorado Boulder

PS10-D1-EVE-P-233 | PS10-A021

Martian Magnetotail Topology with Respect to Upstream IMF

Shaosui XU^{1#+}, Tristan WEBER², David MITCHELL¹, David A. BRAIN², Janet LUHMANN¹, Gina DI BRACCIO³, Shannon CURRY¹, Chaunfei DONG⁴, Jasper HALEKAS⁵, Yaxue DONG², Christian MAZELLE⁶

¹University of California, Berkeley, ²University of Colorado Boulder, ³NASA Goddard Space Flight Center, ⁴Princeton Plasma Physics Laboratory, ⁵The University of Iowa, ⁶National Center for Scientific Research

PS10-D1-EVE-P-234 | PS10-A025

Variability of the Martian Ionosphere and Preliminary Results from a 3D Multi-fluid Hall MHD Model Yuni LEE^{1,2*+}, Mehdi BENNA¹, Paul MAHAFFY¹

¹NASA Goddard Space Flight Center, ²University of Maryland, Baltimore County

PS10-D1-EVE-P-235 | PS10-A026

GCM Modeling of Electron Impact Effects in the Mars Nightside Ionosphere

Robert LILLIS^{1#+}, Jean-Yves CHAUFRAY², David PAWLOWSKI³, David MITCHELL¹, Mehdi BENNA⁴, Meredith ELROD⁴

¹University of California, Berkeley, ²University Pierre et Marie Curie, ³Eastern Michigan University, ⁴NASA Goddard Space Flight Center

PS11-D1-EVE-P-236 | PS11-A004

Ocean Dynamics and the Inner Edge of the Habitable Zone for Tidally Locked Terrestrial Planets

Jun YANG^{1#+}, Dorian ABBOT², Yongyun HU¹, Adam SHOWMAN³

¹Peking University, ²University of Chicago, ³The University of Arizona

PS12-D1-EVE-P-239 | PS12-A015

Calibration of Juno Gravity Science Data Dustin BUCCINO^{1#+}, Marzia PARISI¹, William FOLKNER¹, Oscar YANG¹, Kamal OUDRHIRI¹, Daniel KAHAN¹ ¹NASA Jet Propulsion Laboratory

PS12-D1-EVE-P-240 | PS12-A018

Juno: Union of Art and Science Theodore CLARKE^{1#+} ¹Juno

PS12-D1-EVE-P-241 | PS12-A019

Jupiter's Magnetic Field, Beaming Half-cone Angle and Source Location of Decametric Radio Emissions Observed by Juno

Yasmina M MARTOS^{1#+}, Masafumi IMAI², J. E. P. CONNERNEY^{1,3}, Stavros KOTSIAROS¹, William KURTH² ¹NASA Goddard Space Flight Center, ²The University of Iowa, ³Space Research Corporation

PS14-D1-EVE-P-242 | PS14-A001

Research of Activity of Main Belt Comets 176P/Linear, 238P/Read and 288P/2006 VW139 Jianchun SHI^{1‡+}, Yuehua MA¹ ¹Chinese Academy of Sciences

PS14-D1-EVE-P-243 | PS14-A003

The Case for a Large-scale Occultation Network Malena RICE¹⁺⁺, Greg LAUGHLIN¹ ¹Yale University

PS14-D1-EVE-P-244 | PS14-A005

Ammonium Salts as a Main Carrier of the 3.2 μm Band in Virtis/Rosetta Spectra of Comet

67P/Churyumov-Gerasimenko: A New Reservoir for Accounting the Missing Nitrogen?

Istiqomah ISTIQOMAH^{1,2#}, Olivier POCH^{1,2}, Eric QUIRICO², Pierre BECK^{1,2}, Patrice THEULE³, Bernard SCHMITT¹, Alexandre FAURE¹, Pierre HILY-BLANT¹, Batiste ROUSSEAU⁴, Mauro CIARNIELLO⁵, Gianrico FILACCHIONE⁵, Andrea RAPONI⁵, Fabrizio CAPACCIONI⁵,

Antoine POMMEROL⁶ ¹Université Grenoble Alpes, ²French National Center for Scientific Research, ³Université d'Aix Marseille, ⁴Institut de Planétologie et d'Astrophysique de Grenoble, ⁵National Institute for Astrophysics, ⁶University of Bern

PS14-D1-EVE-P-245 | PS14-A007

Shape, Morphology and Spin-axis Evolution of Kuiper Belt Objects Due to Nucleus Activities Yuhui ZHAO^{1#+}, Ladislav REZAC², Yuri SKOROV²

¹Chinese Academy of Sciences, ²Max Planck Institute for Solar System Research

PS14-D1-EVE-P-246 | PS14-A009

Sensitivity Calibration of Visible Spectroscopy Camera Onboard the Hayabusa2 Spacecraft

Marika ISHIDA^{1#+}, Koto AMANO¹, Keiichi MOROI¹, Eri TATSUMI², Tra-Mi HO³, Shingo KAMEDA¹, Seiji SUGITA², Rie HONDA⁴, Tomokatsu MOROTA⁵, Yasuhiro YOKOTA⁶, Toru KOUYAMA⁷, Hidehiko SUZUKI⁸, Manabu YAMADA⁹, Naoya SAKATANI⁶, Chikatoshi HONDA¹⁰, Masahiko HAYAKAWA⁶, Kazuo YOSHIOKA², Moe MATSUOKA⁶, Yuichiro CHO², Hirotaka SAWADA⁶

¹Rikkyo University, ²The University of Tokyo, ³German Aerospace Center, ⁴Kochi Univerisity, ⁵Nagoya University, ⁶Japan Aerospace Exploration Agency, ⁷National Institute of Advanced Industrial Science and Technology, ⁸Meiji University, ⁹Chiba Institute of Technology, ¹⁰The University of Aizu

PS14-D1-EVE-P-247 | PS14-A012

The East-Asian Comet 46P/Wirtanen Observation Campaign Ying LIAO^{1‡+}, Chih Hao HSIA¹, Zhong Yi LIN², Tin Long LEI¹, Zhen WANG³, Jin Zhong LIU³, Xuan ZHANG³, Li Na LU³, Xiliang ZHANG⁴, Zhuoxi HUO⁵, Myung-Jin KIM⁶, Wei-Ling TSENG⁷, Wing-Huen IP²

¹Macau University of Science and Technology, ²National Central University, ³Xinjiang Astronomical Observatory of Chinese Academy of Sciences, ⁴Chinese Academy of Sciences, ⁵Qian Xuesen Laboratory of Space Technology, ⁶Korea Astronomy and Space Science Institute, ⁷National Taiwan Normal University

PS14-D1-EVE-P-248 | PS14-A013

67P/Churyumov-Gerasimenko: Properties of Dust and Gas in the Comet's Coma as Seen by OSIRIS and VIRTIS-M Onboard Rosetta

Cecilia TUBIANA^{1‡+}, Giovanna RINALDI² ¹Max Planck Institute for Solar System Research, ²National Institute for Astrophysics

PS14-D1-EVE-P-249 | PS14-A014

Analysis of the Sparse Light Curves in ZTF: Taxonomy and Shape Distribution

Ting Shuo YEH^{1‡+}, Chan-Kao CHANG¹, Wing-Huen IP¹, Tao LUO², Ting Long LEI²

¹National Central University, ²Macau University of Science and Technology

PS14-D1-EVE-P-252 | PS14-A021

On the Dynamical Effects of Pluto-sized Objects in the Primordial Kuiper Belt I Putu Wira HADIPUTRAWAN^{1#+}, Wing-Huen IP¹

¹National Central University

PS14-D1-EVE-P-253 | PS14-A022

New Detection of Transneptunian Objects with Serendipitous Stellar Occultations and MIOSOTYS Alain DORESSOUNDIRAM¹⁺⁺, Françoise ROQUES¹, Chihyuan LIU¹

¹Paris Observatory

PS14-D1-EVE-P-254 | PS14-A023

Spectrophotometric Mapping of Ceres and its Implications Jian-Yang LI^{1#+}, Stefano MOTTOLA², Andreas NATHUES³, Julie CASTILLO-ROGEZ⁴, Norbert SCHORGHOFER¹, David WILLIAMS⁵, Mauro CIARNIELLO⁶, Andrea LONGOBARDO⁶, Carol RAYMOND⁴, Christopher RUSSELL⁷

¹Planetary Science Institute, ²German Aerospace Center, ³Max

Planck Institute for Solar System Research, ⁴Jet Propulsion Laboratory, California Institute of Technology, ⁵Arizona State University, ⁶National Institute for Astrophysics, ⁷University of California, Los Angeles

PS14-D1-EVE-P-256 | PS14-A030

A Spin-rate Study of the Main-belt Asteroids Using the CNEOST at Xu-Yi Observatory

Ting Shuo YEH¹⁵⁺, Bin Ll², Chan-Kao CHANG¹, Haibin ZHAO², Jianghui Jl², Zhong-Yi LIN¹, Wing-Huen IP¹ ¹National Central University, ²Chinese Academy of Sciences

PS15-D1-EVE-P-257 | PS15-A001

The MERTIS Instrument on its Way to Mercury Jorn HELBERT^{1#+}, Mario D'AMORE¹, Alessandro MATURILLI¹, Harald HIESINGER²

¹German Aerospace Center, ²University of Münster

PS16-D1-EVE-P-258 | PS16-A002

Radiative Transfer Simulation Including a Non-LTE Model for JUICE/SWI for Ganymede and Terahertz Explorer-1 for Mars Atmospheric Observation

Takayoshi YAMADA^{1#+}, Richard LARSSON², Ladislav REZAC², Paul HARTOGH², Takeshi KURODA^{1,3}, Yasuko KASAI¹

¹National Institute of Information and Communications Technology, ²Max Planck Institute for Solar System Research, ³Tohoku University

PS16-D1-EVE-P-259 | PS16-A003

Development of Calibration System of Terahertz Explorer-1 for Mars Atmospheric Observation

Yuki UCHIYAMA^{1,2*+}, Takayoshi YAMADA¹, Shigeru SATO¹, Toshiyuki NISHIBORI³, Satoshi OCHIAI¹, Richard LARSSON⁴, Yukio NAKANO², Yasuko KASAI¹

¹National Institute of Information and Communications Technology, ²Tokyo Gakugei University, ³Japan Aerospace Exploration Agency, ⁴Max Planck Institute for Solar System Research

PS16-D1-EVE-P-260 | PS16-A005

The Chirp Transform Spectrometer EQM of JUICE SWI Paul HARTOGH^{1#+}

¹Max Planck Institute for Solar System Research

PS16-D1-EVE-P-261 | PS16-A013

On the Interpretation of Heliocentric Water Production Rates of Comets

Ladislav REZAC^{1#+}, David MARSHALL¹, Paul HARTOGH¹, Yuhui ZHAO², Nicholas ATTREE³

¹Max Planck Institute for Solar System Research, ²Chinese Academy of Sciences, ³University of Stirling

PS16-D1-EVE-P-262 | PS16-A015

Solar System Object Observations at Far-infrared and Sub-millimetre Wavelengths: The Herschel/Spire 194-671 Mm Data

Mark KIDGER^{1#+}, Cristina ROMERO², Miriam RENGEL^{1,3} ¹European Space Astronomy Centre, ²Technische Universität Berlin, ³Max Planck Institute for Solar System Research

PS16-D1-EVE-P-263 | PS16-A016

Ground-based Observations of Mesospheric Water Vapour Above Kiruna, Sweden

Richard LARSSON^{1‡+}, Paul HARTOGH¹, Borys DABROWSKI¹, Uwe RAFFALSKI²

¹Max Planck Institute for Solar System Research, ²Institute of Space Physics

PS16-D1-EVE-P-264 | PS16-A017

Investigating Physical and Chemical Mechanisms of Planetary Atmospheres: A Project Characterizing Planetary Atmospheres Inside and Outside Our Solar System Miriam RENGEL^{1,2+}, Ansgar REINERS³, Denis SHULYAK¹, Fei YANG³, Jessica KHAIMOVA³

¹Max Planck Institute for Solar System Research, ²European Space Astronomy Centre, ³Georg-August-Universität Göttingen

PS16-D1-EVE-P-265 | PS16-A022

Chemical Composition of the Prospective Exosphere of Europa

Chien-Hsun LI^{1#+}, Yi-Jehng KUAN², Wei-Ling TSENG², Yo-Ling CHUANG², Hsiang-Wen HSU³ ¹National Taiwan University, ²National Taiwan Normal University, ³University of Colorado Boulder

PS16-D1-EVE-P-266 | PS16-A023

ACA Observations of Ceres' Molecular Exosphere Chia-Cheng CHIANG^{1#+}, Yi-Jehng KUAN¹, Yo-Ling CHUANG¹ ¹National Taiwan Normal University

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PS18-D1-EVE-P-267 | PS18-A003

The Study for Designing the Venus Future Mission of Radio Occultation Measurement by Small Satellites Yukako KIKUCHII⁺, Norihiko SUGIMOTO^{2‡}, Asako HOSONO³, Mirai ABE², Hiroki ANDO⁴, Masahiro TAKAGI⁴, Itziar GARATE LOPEZ⁵, Sebastien LEBONNOIS⁶, Chi AO⁷ ¹Yokohama Futaba High School, ²Keio University, ³Toshimagaoka

Women High School, ⁴Kyoto Sangyo University, ⁵Euskal Herriko Unibertsitatea, ⁶Sorbonne Universite, ⁷Jet Propulsion Laboratory, California Institute of Technology

PS18-D1-EVE-P-268 | PS18-A006

Cause of Magnetic Anomalies on the Southern Martian Hemisphere Chuxin CHEN¹⁵⁺

¹University of Science and Technology of China

PS18-D1-EVE-P-269 | PS18-A007

Akatsuki's IR2 Nightside Photometry Restoration by Deconvolution

Choon Wei VUN^{1#+}, Takehiko SATOH², Takao SATO², Takeshi HORINOUCHI³, Javier PERALTA², Kevin MCGOULDRICK⁴

¹SOKENDAI, ²Japan Aerospace Exploration Agency, ³Hokkaido University, ⁴University of Colorado Boulder

PS18-D1-EVE-P-270 | PS18-A008

Venusian Cloud Physics Investigated by a General Circulation Model

Hiroki ANDO^{1#+}, Masahiro TAKAGI¹, Norihiko SUGIMOTO², Hideo SAGAWA¹, Yoshihisa MATSUDA³ ¹Kyoto Sangyo University, ²Keio University, ³Tokyo Gakugei University

PS18-D1-EVE-P-271 | PS18-A009

Spectroscopic and Imaging Observation of the Venus Atmosphere by a Circumpolar Stratospheric Telescope FUJIN-2 Yukiko SHIRAFUJI^{1#+}, Makoto TAGUCHI¹

¹*Rikkyo University*

PS18-D1-EVE-P-272 | PS18-A010

Numerical Simulation of Dust Lifting Within a Steady State Dust Devil Shefali UTTAM^{1#+}, Varun SHEEL¹, Sanjay MISHRA¹

PS18-D1-EVE-P-273 | PS18-A016

¹Physical Research Laboratory

Improving the Accuracy of the Martian Ephemeris Short Term Prediction Peijia Ll^{1‡+}, Shan QUAN¹, Yong HUANG¹ ¹Chinese Academy of Sciences

PS18-D1-EVE-P-274 | PS18-A019

The Uncooled Microbolometer Camera Newly Developed to Detect Fine Horizontal Brightness Temperature Structures at the Cloud-top Level of Venus Tetsuya FUKUHARA^{1‡+}, Makoto TAGUCHI¹, Takeshi IMAMURA², Sanjay S LIMAYE³ ¹Rikkyo University, ²The University of Tokyo, ³University of Wisconsin

PS18-D1-EVE-P-275 | PS18-A020

The Global Variation of Venus Cloud Obtained from IR1 Camera Onboard Akatsuki Seiko TAKAGI^{1‡+}, Naomoto IWAGAMI² ¹Hokkaido University, ²none

PS18-D1-EVE-P-276 | PS18-A022

Formation of the Y Feature at the Venusian Cloud Top by Planetary-scale Waves and the Mean Circulation: Analysis of Venus Express VMC Images

Yusuke NARA^{1‡+}, Takeshi IMAMURA¹, Hiroki KASHIMURA², Manabu YAMADA³, Shin-Ya MURAKAMI⁴, Kazunori OGOHARA⁵, Naoki SATO⁶, Toru KOUYAMA⁷, Masahiro TAKAGI⁸

¹The University of Tokyo, ²Kobe University, ³Chiba Institute of Technology, ⁴Akatsuki, ⁵The University of Shiga Prefecture, ⁶Tokyo Gakugei University, ⁷National Institute of Advanced Industrial Science and Technology, ⁸Kyoto Sangyo University

PS18-D1-EVE-P-277 | PS18-A029

Effects of Orographic Gravity Waves on the Venus Atmospheric Super-rotation Anna SUZUKI¹⁺⁺, Masahiro TAKAGI¹, Yasumitsu MAEJIMA², Hiroki ANDO¹, Norihiko SUGIMOTO³, Yoshihisa MATSUDA⁴ ¹Kyoto Sangyo University, ²RIKEN Advanced Institute for Computational Science, ³Keio University, ⁴Tokyo Gakugei University

PS18-D1-EVE-P-278 | PS18-A031

A Spatio-temporal Study of the Neutral and Ion Species in the Martian Atmosphere Ashimananda MODAK^{1#+}, Varun SHEEL¹ ¹Physical Research Laboratory

PS20-D1-EVE-P-279 | PS20-A007

Titan's Atmospheric Structure and its Evolution Through Time

Athena COUSTENIS^{1#+}, Donald JENNINGS², Richard ACHTERBERG³, Georgios BAMPASIDIS⁴, Panayiotis LAVVAS⁵, Conor NIXON², F. Michael FLASAR² ¹Paris Observatory/ French National Center for Scientific Research/ PSL Research University, ²NASA Goddard Space Flight Center, ³University of Maryland, ⁴National and Kapodistrian University of Athens, ⁵Universite Reims Champargne-Ardennes

PS20-D1-EVE-P-280 | PS20-A009

Partial Dissociation of Clathrate Hydrates in the Presence of Ammonia: A Possible Mechanism for Replenishing Titan's Atmospheric Methane Mathieu CHOUKROUN^{1#+}, Tuan VU¹, Helen MAYNARD-CASELY², Christophe SOTIN¹, Ashley DAVIES¹, Claire PETUYA¹ ¹Jet Propulsion Laboratory, California Institute of Technology,

²Australian Nuclear Science and Technology Organisation

PS20-D1-EVE-P-281 | PS20-A010

Stability of the Subsurface Ocean of Pluto Jun KIMURA^{1#+}, Shunichi KAMATA² ¹Osaka University, ²Hokkaido University

Day 02 30 Jul, Tue

Day 02 - 30 Jul 2019, Tuesday Program Overview

T : (D	AM1	AM2	LUNCH	PM1	PM2
Time / Room	08:30 - 10:30	11:00 - 12:30	12:30 - 13:30	13:30 - 15:30	16:00 - 18:00
MR308	AS05 p.M47	AS08 p.M55		AS06 p.M60	AS06 p.M67
MR304	AS26 p.M48	AS25 p.M55		AS30 p.M61	AS30 p.M68
MR303	AS36 p.M48	AS36 p.M55		AS44 p.M61	AS44 p.M68
MR330	SE19 p.M49	SE19 p.M56		SE01 p.M62	SE01 p.M69
MR329	SE12 p.M49	SE12 p.M56	SE Meeting	SE12; SE16 p.M62	SE16 p.M69
MR328	SE10 p.M50	SE06 p.M56		SE06 p.M63	
MR310	PS08; PS15 p.M50	PS06 p.M57	PS Meeting	PS18 p.M63	PS18 p.M70
MR311	PS07 p.M51	PS07 p.M57		PS02 <i>p.M64</i>	PS11 p.M70
MR327	AS09 p.M51	AS12 <i>p.M58</i>		AS12 p.M65	AS18 p.M71
MR302	OS15 <i>p.M52</i>	OS11 <i>p.M58</i>	OS Meeting	OS15 <i>p.M65</i>	OS15 <i>p.M</i> 71
MR300	BG03; BG04 <i>p.M53</i>	BG05 p.M59	BG Meeting	WS01	p.F22
MR309	AS46 p.M53	AS17 <i>p.M59</i>	AS Meeting	AS17 p.M66	AS17 p.M72
MR323	IG20 p.M54	IG04 p.M60	IG Meeting	IG04 <i>p.M66</i>	IG04 p.M72
Nicoll 1	OS18 <i>p.M52</i>	OS18 <i>p.M59</i>		OS05 p.M66	OS05; OS12 <i>p.M</i> 72
Nicoll 2	ST21 <i>p.M47</i>	KL-ST <i>p.F18</i> DL-ST <i>p.F17</i>	ST Meeting		
Nicoll 3	HS01 p.M54	KL-HS p.F14 DL-HS p.F13	HS Meeting	SS01 p.M67	WS02 <i>p</i> .F23
EXHIBITION HALL				HS Posters <i>p.M74</i> ST Posters <i>p.M82</i>	

Sessions & Conveners

* Main Convener

AS05-Mesoscale Meteorology and High-impact Weather

*Kevin CHEUNG Macquarie University, Tieh-Yong KOH Singapore University of Social Sciences, Ryo OYAMA Japan Meteorological Agency, Chee-Kiat TEO Centre for Climate Research Singapore, Cheng-Ku YU National Taiwan University

AS06-Convection and Its Effects on Weather and Climate

*Ji NIE Peking University, Chunsong LU Nanjing University of Information Science & Technology, Jonathon WRIGHT Tsinghua University, Jia-Yuh YU National Central University

AS08-The Science and Prediciton of Heavy Precipitation and Floods

*Yali LUO Chinese Academy of Meteorological Sciences, Johnny CHAN City University of Hong Kong, Huiling YUAN Nanjing University

AS09-Application of Cloud-resolving Model Simulations for Studying Cloud-related Processes in Climate

*Masaki SATOH The University of Tokyo, Pay-Liam LIN National Central University, Chung-Hsiung SUI National Taiwan University, Wei-Kuo TAO NASA Goddard Space Flight Center, Qinghong ZHANG Peking University

AS12-12th Sasaki Symposium on Data Assimilation for Atmospheric, Oceanic, and Hydrologic Applications

*Seon Ki PARK Ewha Womans University, Ibrahim HOTEIT King Abdullah University of Science and Technology, Xiang-Yu HUANG Centre for Climate Research Singapore, Takemasa MIYOSHI RIKEN Center for Computational Science, Liang XU Naval Research Laboratory

AS17-Atmospheric Chemistry in Highly Polluted Environments: Emissions, Fates, and Impacts

*Jianlin HU Nanjing University of Information Science & Technology, Sri Harsha KOTA India Institute of Technology Delhi, Qi YING Texas A&M University, Hongliang ZHANG Louisiana State University

AS18-Organic Aerosols in the Atmosphere

*Hai GUŌ The Hong Kong Polytechnic Ūniversity, Xiaopu LYU The Hong Kong Polytechnic University

AS25-Application of Satellite Data to Weather Prediction

*Kozo OKAMOTO Japan Meteorological Agency, Myoung Hwan AHN Ewha Womans University, Wei HAN Numerical Weather Prediction Center of Chinese Meteorological Administration, Jun LI University of Wisconsin-Madison, Chian-Yi LIU National Central University

AS26-Regional Climate Downscaling and Cordex: Challenges and Prospects

*Dong-Hyun CHA Ulsan National Institute of Science and Technology, Koji DAIRAKU National Research Institute for Earth Science and Disaster Resilience, Jason EVANS University of New South Wales, Xuejie GAO Chinese Academy of Sciences, Shuyu WANG Nanjing University

AS30-Extreme Weather Resiliency: Prediction and Response Strategies

*Pay-Liam LIN National Central University, Everette JOSEPH University at Albany - State University of New York

AS36-Subseasonal to Seasonal Forecasts and Applications

*Thea TURKINGTON Centre for Climate Research Singapore, Raizan RAHMAT Centre for Climate Research Singapore, Andrew W. ROBERTSON Columbia University

AS44- Advances in Remote Sensing and Modeling of Fires and Tropospheric Composition in Asia

*Jun WANG The University of Iowa, Liangfu CHEN Chinese Academy of Sciences, Richard ECKMAN National Aeronautics and Space Administration, Rokjin J. PARK Seoul National University

AS46-Impacts of Land-atmosphere Interactions on the Climate and the Hydrological Cycle

*Eun-Soon IM The Hong Kong University of Science and Technology, Joong-Bae AHN Pusan National University, Claudio CASSARDO University of Torino, Min-Hui LO National Taiwan University, Qiuhong TANG Chinese Academy of Sciences

BG03-Atmosphere-Ocean-Biota Interactions That Influence Global Climate: Role Of Marine Bacteria, Phytoplankton And Macroalgae In A Changing Environment *Siew Moi PHANG University of Malaya, Punyasloke BHADURY Indian Institute of Science Education and Proceeds

BHADURY Indian Institute of Science Education and Research Kolkata, Gill MALIN University of East Anglia

BG04-Remote Sensing of Essential Climate Variables and Its Applications

*Wei YANG Chiba University, Xin CAO Beijing Normal University, Hideki KOBAYASHI Japan Agency for Marine-Earth Science and Technology, Xiaolin ZHU The Hong Kong Polytechnic University

BG05-Understanding Biogeochemical Cycles in the Earth System: from Local to Regional and Global Scales

*Long CAO Zhejiang University, Atul JAIN University of Illinois at Urbana-Champaign, Xiujun WANG Beijing Normal University, Yongfu XU Chinese Academy of Sciences

HS01-Risk Assessment Related to Hydrological, Climatic, and Environmental Changes

*Tsang-Jung CHANG National Taiwan University, Howard H-C HO National Taiwan University, Hwa-Lung YU National Taiwan University

IG04-Natural Hazards and Disaster Risk: Current and Historical Perspectives

*Vena Pearl BONGOLAN University of the Philippines Diliman, Adam SWITZER Nanyang Technological University, James TERRY Zayed University, Fiona WILLIAMSON Singapore Management University

IG20-Big Data, Machine Learning, and Data Analytics in Geosciences

*Sanat Kumar DAS Bose Institute, Uma DAS Indian Institute of Information Technology Kalyani, Chen Jeih PAN National Central University

OS05-Coastal and Estuarine Processes

*Atsushi FUJIMURA University of Guam, Sung Yong KIM Korea Advanced Institute of Science and Technology

OS11-Ocean Circulation and Air-sea Interaction Over the Maritime Continent and Surrounding Waters

*Lei ZHOU Shanghai Jiao Tong University, R. Dwi SUSANTO University of Maryland, Dongxiao WANG Chinese Academy of Sciences, Kunio YONEYAMA Japan Agency for Marine-Earth Science and Technology, Wen ZHOU City University of Hong Kong

OS12-Dynamic Coasts, Past, Present, Future

*Serena LEE Griffith University, Charles LEMCKERT University of Canberra

OS15-Regional Oceanic Numerical Modeling and Observations

*Changming DONG Nanjing University of Information Science & Technology, Sergey PRANTS Pacific Oceanological Institute, Yusuke UCHIYAMA Kobe University

OS18-Coastal Hazards: Impacts of Tropical Storms and Tsunamis

*Philip Li-Fan LIU National University of Singapore, Linlin LI National University of Singapore, Shie-Yui LIONG National University of Singapore, Nobuhito MORI Kyoto University, Xiping YU Tsinghua University

PS02-Plasma - Surface Interactions with Airless Bodies in the Solar System

*Jan DECA University of Colorado Boulder, Charles LUE Swedish Institute of Space Physics, Li Hsia YEO University of Colorado Boulder

PS06-Planetary Shape, Gravity, Rotation, and Interior Structures from Observations and Models

*Juergen OBERST German Aerospace Center (DLR), Koji MATSUMOTO National Astronomical Observatory of Japan, Jinsong PING Chinese Academy of Sciences, Alexander STARK German Aerospace Center (DLR)

PS07-Magnetospheres, Atmospheres, Exospheres of Outer Planets and Their Satellites

*Norbert KRUPP Max Planck Institute for Solar System Research, Sushil ATREYA University of Michigan, Scott BOLTON Southwest Research Institute, Scott EDGINGTON Jet Propulsion Laboratory, California Institute of Technology, Linda SPILKER Jet Propulsion Laboratory, California Institute of Technology

PS08-Open Session on Lunar Science, Exploration and Utilisation

*Bernard FOING European Space Agency, Wing-Huen IP National Central University

PS11-Exoplanets: Observations, Theories, and Modeling

*Jun YANG Peking University, Cheng LI California Institute of Technology, Xi ZHANG University of California Santa Cruz

PS15-Science and Exploration of Mercury and the Moon - a Comparative View

*Jorn HELBERT German Aerospace Center, Gordon CHIN NASA Goddard Space Flight Center, Kyeong Ja KIM Korea Institute of Geoscience and Mineral Resources, Makiko OHTAKE Japan Aerospace Exploration Agency, Long XIAO China University of Geosciences

PS18-Science and Exploration of Mars and Venus

*Varun SHEEL Physical Research Laboratory, Takeshi IMAMURA The University of Tokyo, Shuanggen JIN Nanjing University of Information Science & Technology

ST21-Use of Nano/microsatellites for Solar-terrestrial and Planetary Studies

*Kyoung Wook MIN Korea Advanced Institute of Science and Technology, Alfred CHEN National Cheng Kung University, Mohammad Tariqul ISLAM Universiti Kebangsaan Malaysia, Devi MINAKSHI Gauhati University, Koichiro OYAMA National Cheng Kung University

SE01-Paleomagnetism and Rock Magnetism Applied to Solving Geological, Geophysical, and Environmental Problems

*Martin CHADIMA Advanced Geoscience Instruments Company, Yongxin PAN Chinese Academy of Sciences, Andrew ROBERTS Australian National University, Yuhji YAMAMOTO Kochi University, Xixi ZHAO University of California Santa Cruz

SE06-Tectonics, Minerals, Metals and Gems Resources of Asia Oceania Region

*Khin ZAW University of Tasmania, Chakkaphan SUTTHIRAT Chulalongkorn University, Hai Thanh TRAN Hanoi University of Mining and Geology

SE10-Dynamic System of Earth: Interactions from Surface to Core

*Takashi NAKAGAWA The University of Hong Kong, Weijia KUANG NASA Goddard Space Flight Center, Xiaodong SONG University of Illinois Urbana-Champaign, Daoyuan SUN University of Science and Technology of China, Eh TAN Academia Sinica

SE12-From Earthquakes and Fault Ruptures to Seismic Hazards of Southeast and East Asia

*Yu WANG National Taiwan University, Chung-Han CHAN Nanyang Technological University, Noelynna RAMOS University of the Philippines Diliman, Xuhua SHI Zhejiang University, Myo THANT University of Yangon

SE16-Integrating Our Understanding of the 2018 Mw 7.5 Palu Earthquakes and Its Tsunami

*Yu WANG National Taiwan University, Mudrik DARYONO Indonesian Institute of Sciences - LIPI, Philip Li-Fan LIU National University of Singapore, Qiang QIU University of Southern California, Shengji WEI Nanyang Technological University

SE19-Multiscale Seismic Modelling and Imaging

*Ping TONG Nanyang Technological University, Lihui CHAI Sun Yat-Sen University, Shaolin LIU Nanyang Technological University, Guojie SONG Southwest Petroleum University, Xu YANG University of California, Santa Barbara

SS01-Satellite Observations for Tropical Cyclone Research *Tsengdar LEE NASA, Jack KAYE NASA Earth Science Division,

Yukari TAKAYABU The University of Tokyo

AS05 / Mesoscale Meteorology and High-impact Weather

Tue - 30 Jul | MR308

 Time
 08:30-10:30

 Chair(s)
 Tieh-Yong KOH, Singapore University of Social Sciences

AS05-D2-AM1-308-001 | AS05-A004

The Impact of Dynamical Changes on Atmospheric Rivers over Western North America

Yaheng TAN¹⁺, Francis ZWIERS²⁺, Song YANG¹, Chao LI³⁴, Kaiqiang DENG¹

¹Sun Yat-sen University, ²University of Victoria, ³Ministry of Education, ⁴East China Normal University

AS05-D2-AM1-308-002 | AS05-A007 (Invited)

Analysis of Tornado-like Vortices Using Phased Array Weather Radar and Deep Learning Toru ADACHI^{1#+}, Naoki ISHITSU^{2,3}, Kenichi KUSUNOKI³,

Hanako INOUE³, Ken-ichiro ARAI^{2,3}, Chusei FUJIWARA⁴, Hiroto SUZUKI⁴

¹Meteorological Research Institute, ²Alpha Denshi, ³Japan Meteorological Agency, ⁴East Japan Railway Company

AS05-D2-AM1-308-003 | AS05-A017 (Invited)

Remote Triggering Effect of a Tropical Cyclone in the Bay of Bengal on a Heavy Rainfall Event in Subtropical East Asia Huang-Hsiung HSU^{1#+}, Sho ARAKANE¹ ¹Academia Sinica

AS05-D2-AM1-308-004 | AS05-A013

The Degree of Prevalence of Similarity Between Outer Tropical Cyclone Rainbands and Squall Lines Cheng-Ku YU^{1#+}, Che-Yu LIN¹, Lin-Wen CHENG¹, Jhang-Shuo LUO¹, Chun-Chieh WU¹, Ying CHEN¹ ¹National Taiwan University

AS05-D2-AM1-308-005 | AS05-A029 (Invited)

Does Lower-stratospheric Shear Influence the Mesoscale Organization of Convection? Todd LANE^{1,2#+}

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

AS05-D2-AM1-308-006 | AS05-A019

Hot Weather Characteristics in China Qinglan LI^{1#+}, Tianyu ZHU¹, Pengcheng XU¹, Guangxin LI¹, Dian HUANG¹ ¹Chinese Academy of Sciences

AS05-D2-AM1-308-007 | AS05-A028

Comparison of Simulation Performances in 2016 and 2018 South Korea Heat Waves

Dong Hyuck YOON¹⁺, Dong-Hyun CHA¹⁺, Myong-In LEE¹, Ki-Hong MIN^{2,3}

¹Ulsan National Institute of Science and Technology, ²Kyungpook National University, ³Purdue University

ST21 / Use of Nano/Microsatellites for Solar-terrestrial and Planetary Studies

Tue - 30 Jul | Nicoll 2

Time	08:30-10:30
α	

Chair(s)	Kyoung Wook MIN, Korea Advanced Institute of Science
	and Technology
	Koichiro OYAMA, National Cheng Kung University

ST21-D2-AM1-Nicoll 2-001 | ST21-A001

How to Inspire International Space Weather Research with Small Missions Daniel BAKER^{1#+}, Amal CHANDRAN¹ ¹University of Colorado Boulder

ST21-D2-AM1-Nicoll 2-002 | ST21-A003 (Invited)

The Snipe Mission for Observing Small Scale Ionospheric and Magnetosphric Plasma Phenonena Jaejin LEE^{1±+} ¹Korea Astronomy and Space Science Institute

ST21-D2-AM1-Nicoll 2-003 | ST21-A004

Space Weather Measurements Using Spire's Growing Cubesat Constellation Takayuki YUASA¹⁸⁺ ¹Spire Global

ST21-D2-AM1-Nicoll 2-004 | ST21-A005

The Development of the Dual-band Optical Transient Camera and its Preliminary Results Alfred CHEN^{1#+}, Charles LIN¹, Toshinori KUWAHARA², Wei-Tai LIU¹, Mike Chih-Chen TSAI¹, Hannah TOMIO² ¹National Cheng Kung University, ²Tohoku University

ST21-D2-AM1-Nicoll 2-005 | ST21-A019 (Invited)

Preliminary Results of Planetary Observation by the RISESAT Microsatellite

Junichi KURIHARA^{1*+}, Wing-Huen IP², Yukihiro TAKAHASHI¹, Masataka IMAI³, Toru KOUYAMA³, Toshinori KUWAHARA⁴, Shinya FUJITA⁴, Yuji SAKAMOTO⁴

¹Hokkaido University, ²National Central University, ³National Institute of Advanced Industrial Science and Technology, ⁴Tohoku University

ST21-D2-AM1-Nicoll 2-006 | ST21-A006

Mesosphere and Ionosphere Plasma Exploration Complex (MIPEX) for In-situ Plasma Measurements in the Ionosphere Hui-Kuan FANG^{1*+}, Alfred CHEN¹, Wen-Hao CHEN¹, Ting-Chou WU¹, Ke-Shen LIU¹, Yi-Chen WANG¹ ¹National Cheng Kung University

ST21-D2-AM1-Nicoll 2-007 | ST21-A015

Need of Constellation of Satellites in Identification of Atmospheric Forcing Dynamics During Successive Clusters of Strong Earthquakes of East-west Pacific Zone : Inputs for EQ Precursive Model

Devi MINAKSHI^{1#+}, Ananda BARBARA¹, 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

ST21-D2-AM1-Nicoll 2-008 | ST21-A010

Energy Calibration of Charged Particle Detector Using

Radioactive Isotope Sources Chanhaeng LEE¹⁺, Jongho SEON^{1#}, Sungmin PAK¹, Woohyeong SEOL¹

¹Kyung Hee University

AS26 / Regional Climate Downscaling and Cordex: Challenges and Prospects

Tue - 30 Jul | MR304

Time 08:30-10:30

Chair(s) Koji DAIRAKU, National Research Institute for Earth Science and Disaster Resilience Fredolin TANGANG, National University of Malaysia

AS26-D2-AM1-304-001 | AS26-A007

Applying Super Resolution Algorithm into Downscaling of AGCM Precipitation Output Sunmin KIM^{1#+}, Yasuto TACHIKAWA¹

¹Kyoto University

AS26-D2-AM1-304-002 | AS26-A021

Intercomparison of Global Solar Radiation in Regional Climate Models Around Japan Nobuhiko ENDO^{1#+}, Motoki NISHIMORI¹ ¹National Agriculture and Food Research Organization

AS26-D2-AM1-304-003 | AS26-A015 (Invited)

Projected Future Changes of Rainfall in Southeast Asia Based on Multi-model Simulations of CORDEX Southeast Asia Fredolin TANGANG^{1,2*}, Jing Xiang CHUNG¹, Liew JUNENG¹, Supari SUPARI³, Ester SALIMUN¹, Ahmad Fairudz JAMALUDDIN¹, Abdul Azim AMIRUDIN¹, Mary Angelina JUD¹, Afiqah Bahirah AYOUB¹, Sheau Tieh NGAI¹, Faye Abigail CRUZ⁴, Gemma NARISMA⁴, Jerasron SANTISIRISOMBOON², Thanh NGO-DUC⁵, Phan VAN-TAN⁵, Patama SINGHRUCK⁶, Dodo GUNAWAN³, Edvin ALDRIAN⁷, Ardhasena SOPAHELUWAKAN³, Nikulin GRIGORY⁸, Armelle Reca REMEDIO⁶, John MCGREGOR¹⁰, Hongwei YANG¹¹, Hidetaka

SASAKI¹² ¹National University of Malaysia, ²Ramkhamhaeng University, ³Agency for Meteorology, Climatology and Geophysics, ⁴Manila

Observatory, ⁵Vietnam National University, ⁶Chulalongkorn University, ⁷Agency for the Assessment and Application of Technology, ⁸Swedish Hydrological and Meterorological Institute (SMHI), ⁹Climate Service Center (GERICS), ¹⁰Commonwealth Scientific and Industrial Research Organisation, ¹¹APEC Climate Center, ¹²Japan Meteorological Agency

AS26-D2-AM1-304-004 | AS26-A018

Future Precipitation Extreme Changes over Southeast Asia Based on Bias-adjusted CORDEX-SEA Multi-models Simulations

Ju Neng LIEW^{1‡+}, Sheau Tieh NGAI¹, Fredolin TANGANG^{1,2} ¹National University of Malaysia, ²Ramkhamhaeng University

AS26-D2-AM1-304-005 | AS26-A001

High Resolution Climate Downscaling over Singapore Srivatsan VIJAYARAGHAVAN^{1#+}, Ngoc Son NGUYEN¹ ¹National University of Singapore

AS26-D2-AM1-304-006 | AS26-A026

Evaluation and Comparison of Convective-permitting Regional Climate Models in the Western Maritime Continent Jianhua QIAN^{1*+}, Srivatsan VIJAYARAGHAVAN², Ngoc Son NGUYEN², Jina HUR², Shie-Yui LIONG², Venkatraman PRASANNA¹, Muhammad Eeqmal HASSIM³, Bertrand TIMBAL⁴

¹Meteorological Service Singapore, ²National University of Singapore, ³Centre for Climate Research Singapore, Meteorological Service Singapore, ⁴National Environment Agency

AS26-D2-AM1-304-007 | AS26-A022

Putting Distillation into Practice: Co-developing Climate Services to Build Resilience Across South Asia Katy RICHARDSON¹⁵⁺, Joseph DARON¹, Rachel MCINNES¹, Nicola GOLDING¹, Cathryn FOX¹, Benjamin HARRISON¹, Bernd EGGEN¹, Tamara JANES¹, David CORBELLI¹, Maxine SHIELDS¹ ¹Met Office

AS26-D2-AM1-304-008 | AS26-A017

Study of Atmospheric Variability in the Amundsen Sea Embayment, West Antarctica Using Satellite Data and Regional Climate Model Pranab DEB¹⁵⁺, Andrew ORR²

¹Indian Institute of Technology Kharagpur, ²British Antarctic Survey

AS36 / Subseasonal to Seasonal Forecasts and Applications

Tue - 30 Jul | MR303

Time	08:30-10:30
Chair(s)	Thea TURKINGTON, Centre for Climate Research
	Singapore
	Raizan RAHMAT, Centre for Climate Research Singapore

AS36-D2-AM1-303-001 | AS36-A015

The WWRP/WCRP Sub-seasonal to Seasonal Prediction Project (S2S): Highlights from Phase I and Plans for Phase II Andrew W. ROBERTSON¹⁵⁺, Frederic VITART² ¹Columbia University, ²European Centre for Medium-Range Weather Forecasts

AS36-D2-AM1-303-002 | AS36-A019

Week 3-4 Predictability over South and East Asia Assessed from Two Operational Ensemble Prediction Systems Lei WANG^{1#+}, Andrew W. ROBERTSON² ¹Fudan University, ²Columbia University

AS36-D2-AM1-303-003 | AS36-A017

Assessing SST Forecast Skill in the Warm Pool with the S2S Database

Charlotte DEMOTT^{1#+}, Nicholas KLINGAMAN^{2,3}, Harry HENDON⁴

¹Colorado State University, ²National Centre for Atmospheric Science, ³University of Reading, ⁴Bureau of Meteorology

AS36-D2-AM1-303-004 | AS36-A018

Prediction Skill of the MJO and Sub-seasonal Teleconnections in the NCEP FV3-GEFS 35-day Experiments Wei Ll^{1±+}, Yuejian ZHU¹, Xiaqiong ZHOU¹, Bing FU¹, Dingchen HOU¹, Hong GUAN¹, Eric SINSKY¹, Xianwu XUE¹ ¹National Oceanic and Atmospheric Administration

SE19 / Multiscale Seismic Modelling and Imaging

Tue - 30 Jul | MR330

Time 08:30-10:30

Chair(s) Xu YANG, University of California, Santa Barbara Shaolin LIU, Nanyang Technological University Lihui CHAI, Sun Yat-Sen University

SE19-D2-AM1-330-001 | SE19-A021

3-D Numerical Simulation of Seismic Ground-motions Based Upon Spectral Element Method Including Finite Fault Effects. Application to the Region of Trieste (NE Italy) Laetitia FOUNDOTOS¹⁵⁺, Abdelkrim AOUDIA¹ ¹International Centre for Theoretical Physics

SE19-D2-AM1-330-002 | SE19-A018

Finite Difference Method for Fractional Seismic Wave Field Simulation Xinmin ZHANG^{1#+}, Guojie SONG¹, Zhiliang WANG¹, Yali CHEN¹

¹Southwest Petroleum University

SE19-D2-AM1-330-003 | SE19-A010

S-wave Velocity Structure and Poisson's Ratio of the Lithosphere Beneath NE Tibetan Plateau Weilai WANG¹⁺⁺, Jianping WU², Lihua FANG², Guijuan LAI²

¹Institute of Geophysics, China Earthquake Administration, ²China Earthquake Administration

SE19-D2-AM1-330-004 | SE19-A011

Numerical Simulation Study of Seismic Ground Motion on Sedimentary Basins Yiqiong LI^{1#+}, Yanxiang YU¹ ¹China Earthquake Administration

SE19-D2-AM1-330-005 | SE19-A002

Seismic Tomography, Frozen Gaussian Approximation and Deep Learning Xu YANG^{1*+} ¹University of California, Santa Barbara

SE19-D2-AM1-330-006 | SE19-A005

Slab Morphology Beneath Sumatra Revealed by Regional and Teleseismic Traveltime Tomography Shaolin LIU¹⁺, Ping TONG^{1#} ¹Nanyang Technological University

SE19-D2-AM1-330-007 | SE19-A015 (Invited)

Probing the E. Asian Lithosphere with Large Seismic Arrays and Multiple Geophysical Data Weisen SHEN^{1#+} ¹Stony Brook University

SE19-D2-AM1-330-008 | SE19-A003 (Invited)

Mapping Deep Mantle Flows Using Full Waveform Inversion Hejun ZHU^{1#+} ¹The University of Texas at Dallas

SE12 / From Earthquakes and Fault Ruptures to Seismic Hazards of Southeast and East Asia

Tue - 30 Jul | MR329

Chair(s) Chung-Han CHAN, Nanyang Technological University Xuhua SHI, Zhejiang University

SE12-D2-AM1-329-001 | SE12-A014 (Invited)

Probabilistic Seismic Hazard Analysis Based on Three-dimensional Seismotectonic Model in Strong Earthquake Structure Zone Lifang ZHANG^{1#+}, Yuejun LYU¹ ¹China Earthquake Administration

SE12-D2-AM1-329-002 | SE12-A021

Earthquakes in Bay of Bengal and Seismic Hazard in Eastern Coast of India Abhishek K. RAI^{1#+} ¹Indian Institute of Technology Kharagpur

SE12-D2-AM1-329-003 | SE12-A034

Study on the Relationship of Shear Wave Velocity and Geotechnical Properties of Different Soils of Major Cities in Myanmar for Future Site Specific Seismic Hazard Assessment Myo THANT^{1,2#+}, Khin Kyawt Kyawt OO¹, Ei Hmon Nathar MYO¹, Thinzar YADANAR¹, Lamin KO KO¹, Saw Myat MIN², Win Pyae HTET², Thazin Htet TIN¹, Hiroshi KAWASE³, Shinichi MATSUSHIMA³

¹University of Yangon, ²Myanmar Earthquake Committee, ³Kyoto University

SE12-D2-AM1-329-004 | SE12-A035

Seismic Hazard Function (SHF) Study Off Coast Sources of Sumatra Island: Evaluation SHF of Padang & Bengkulu City Aris SUWONDO^{1,2#+}, Wahyu TRIYOSO¹

¹Bandung Institute of Technology, ²Meteorological, Climatological and Geophysical agency

SE12-D2-AM1-329-005 | SE12-A025

Investigations on Performances of Mega-sub Isolation System Under Near-fault Strong Ground Motions Li XIANGXIU^{1#+} ¹China Earthquake Administration

SE12-D2-AM1-329-006 | SE12-A033 (Invited)

Applications of a Large-N Strong Motion Array Equipped with Low-cost Sensors in the Taiwan Region: P-Alert Web Data Services

Wen-Tzong LIANG^{1‡+}, Yih-Min WU², Hsin-Hua LEE¹, Shu-Chen HUANG³

¹Academia Sinica, ²National Taiwan University, ³Taiwan Earthquake Research Center

SE12-D2-AM1-329-007 | SE12-A005

Seismic Damage to Ancient Monuments in Chiang Saen (Northern Thailand): Implication for Historical Earthquakes in Golden Triangle Area Teraphan ORNTHAMMARATH^{1#+} ¹Mahidol University

SE10 / Dynamic System of Earth: Interactions from Surface to Core

Tue - 30 Jul | MR328

Time 08:30-10:30

Chair(s) Daoyuan SUN, University of Science and Technology of China Takashi NAKAGAWA, The University of Hong Kong

SE10-D2-AM1-328-001 | SE10-A004 (Invited)

Multiscale Topography of Mantle Discontinuities and **Implications for Mantle Geodynamics**

Sidao NI1#+, Wenbo WU2, Han ZHANG3, Yong ZHOU4 ¹Chinese Academy of Sciences, ²California Institute of Technology, ³University of New Mexico, ⁴Southern University of Science and Technology

SE10-D2-AM1-328-002 | SE10-A008

Interaction Between Volcanisms Inland and the Spreading Center: Example of Galápagos Archipelago

Walid BEN MANSOUR1,2#+, Guust NOLET3, Mario RUIZ4, Juan Carlos A.1

¹Macquarie University, ²University of Leicester, ³Géoazur, ⁴Instituto Geofisico – Escuela Politecnica Nacional

SE10-D2-AM1-328-003 | SE10-A012

Middle Mantle Heterogeneity Beneath the Okhotsk Sea Daoyuan SUN1#+, Ye YUAN1 ¹University of Science and Technology of China

SE10-D2-AM1-328-004 | SE10-A001

Viscosity of Lower Mantle Estimated from the Common Diffusivity of Creep and Grain Growth Atsuro OKAMOTO^{1#+}, Takehiko HIRAGA¹ ¹The University of Tokyo

SE10-D2-AM1-328-005 | SE10-A003 (Invited)

Origin of the D" Discontinuity: Implication from **High-pressure Experiments** Zhu MAO1#+

¹University of Science and Technology of China

SE10-D2-AM1-328-006 | SE10-A005

On Thermal and Compositional Convection of the Earth's Core over 4 Billion Years Assessing with 1-D Time-dependent Global Heat and Mass Balance in Earth's Core Takashi NAKAGAWA1#+ ¹The University of Hong Kong

SE10-D2-AM1-328-007 | SE10-A006

A Constraint on Shear Velocity at the Top of Inner Core from **PKIIKP/PKIKP Amplitude Ratios at Antipodal Distances** Wenshuang WANG¹, Xiaodong SONG^{1,2#+} ¹Wuhan University, ²University of Illinois Urbana-Champaign

SE10-D2-AM1-328-008 | SE10-A013

Length of Day Analysis, 6-year Signal and Edge Effects Leonid ZOTOV1#+

¹National Research University Higher School of Economics

PS08 / Open Session on Lunar Science, Exploration and Utilisation PS15 / Science and Exploration of Mercury and the Moon - a Comparative View

Tue - 30 Jul | MR310

Time	08:30-10:30
Chair(s)	Bernard FOING, European Space Agency Wing-Huen IP, National Central University Kyeong Ja KIM, Korea Institute of Geoscience and Mineral Resources

PS08-D2-AM1-310-001 | PS08-A002

The Science Mission of the Space IL Lunar Lander Chris RUSSELL1#+, Ian GARRICK-BETHELL2,3, James HEAD4, Oded AHARONSON⁵, Benjamin WEISS⁶, Mark WIECZOREK⁷,

Asaf GROSZ⁸ ¹University of California, Los Angeles, ²University of California, Santa Cruz, ³Kyung Hee University, ⁴Brown University, ⁵Planetary Science Institute, 6Massachusetts Institute of Technology, 7Observatoire de la Côte d'Azur, 8Ben Gurion University

PS08-D2-AM1-310-002 | PS08-A006

Science from the Chandrayaan-2 Mission Anil BHARDWAJ1#+ ¹Physical Research Laboratory

PS08-D2-AM1-310-003 | PS08-A004

Far Ultraviolet Investigation of Cold Spots on the Moon and **Implications for Space Weathering Rates on Airless Bodies** Yang LIU1#+, Elisha JHOTI2, Tyler POWELL3, Kurt RETHERFORD⁴, Thomas GREATHOUSE⁴, Kathleen MANDT⁵, Joshua BANDFIELD⁶, Jean-Pierre WILLIAMS³, Joshua CAHILL⁵, Amanda HENDRIX⁷, Dana HURLEY⁵, Ujjwal RAUT⁴, Cesare GRAVA⁴, G. Randy GLADSTONE⁴, Anthony EGAN⁴ ¹National Space Science Center, ²The University of Edinburgh, ³University of California, Los Angeles, ⁴Southwest Research Institute, ⁵The Johns Hopkins University Applied Physics Laboratory, ⁶Space Science Institute, 7Planetary Science Institute

PS08-D2-AM1-310-004 | PS08-A009 (Invited)

Lunar/Martian Holes and Lava Tubes as Resources for Science and Exploration Junichi HARUYAMA1#+ ¹Japan Aerospace Exploration Agency

PS08-D2-AM1-310-005 | PS08-A013

Moon Habitat Science Experiments and Laboratory Concepts: **ILEWG/VU Euromoonmars Activities** Bram DE WINTER¹, Anna SITNIKOVA², Bernard FOING^{1,3}, Arlene DINGEMANS1#+ ¹Vrije Universiteit Amsterdam, ²ILEWG Euromoonmars Igluna, ³European Space Agency

PS08-D2-AM1-310-006 | PS08-A007

"Towards the International Lunar Decade: A Strategy for the World, Europe, Americas and Asia-Oceania" Vidvuds BELDAVS1#+ ¹University of Latvia

PS15-D2-AM1-310-007 | PS15-A005

Crustal Evolution of the Moon and Mercury: The Power of Integrating Geochemical Remote Sensing Techniques for Planetary Geological Investigations Rachel KLIMA1#+ ¹The Johns Hopkins University Applied Physics Laboratory

PS15-D2-AM1-310-008 | PS15-A004

Development Status of Korea Pathfinder Lunar Obiter Gamma-ray Spectrometer

Kyeong Ja KIM^{1‡+}, Yire CHOI¹, Junghun PARK¹, Eung Seok YI¹, Sungsoon LEE¹, Young-Kwang YEON¹, K.B. LEE², Yong-Kwon KIM³, Kilsoon PARK³, Kyoung Wook MIN⁴, Kyungin KANG⁴, Jin Yeon CHO⁵, Nobuyuki HASEBE⁶, Masayuki NAITO⁶

¹Korea Institute of Geoscience and Mineral Resources, ²Korea Research Institute of Standards and Science, ³NuCare, ⁴Korea Advanced Institute of Science and Technology, ⁵Inha University, ⁶Waseda University

PS07 / Magnetospheres, Atmospheres, Exospheres of Outer Planets and Their Satellites

Tue - 30 Jul | MR311

Time 08:30-10:30

Chair(s) Norbert KRUPP, Max Planck Institute for Solar System Research

PS07-D2-AM1-311-001 | PS07-A003 (Invited)

Jupiter's Lighting: New Perspectives from Juno's Stellar Reference Unit

Heidi BECKER¹⁵⁺, Martin BRENNAN¹, James ALEXANDER¹, Alexandre GUILLAUME¹, Shannon BROWN¹, Andrew INGERSOLL², Candice HANSEN³, Masafumi IMAI⁴, Ivana KOLMASOVA^{5,6}, William KURTH⁴, Michael JANSSEN¹, Steven LEVIN¹, John CONNERNEY⁷

¹Jet Propulsion Laboratory, California Institute of Technology, ²Geological and Planetary Sciences, California Institute of Technology, ³Planetary Science Institute, ⁴The University of Iowa, ⁵Czech Academy of Sciences, ⁶Charles University, ⁷NASA Goddard Space Flight Center

PS07-D2-AM1-311-002 | PS07-A010 (Invited)

ENA Imaging of the Jovian Moons-magnetosphere Interactions Stas BARABASH^{1#+}, Pontus BRANDT², Peter WURZ³ ¹Swedish Institute of Space Physics, ²The Johns Hopkins University Applied Physics Laboratory, ³University of Bern

PS07-D2-AM1-311-003 | PS07-A015 (Invited)

Ganymede's Interaction with the Jovian Plasma from Hybrid Simulation

Ronan MODOLO^{1#+}, Ludivine LECLERCQ², Gianluca CARNIELLI³, Francois LEBLANC⁴, Marina GALAND³ ¹University of Versailles Saint Quentin, ²University of Virginia, ³Imperial College, ⁴French National Centre for Scientific Research

PS07-D2-AM1-311-004 | PS07-A001 (Invited)

Signatures of Europa's Atmosphere in Galileo Data Hans HUYBRIGHS^{1#+}, Elias ROUSSOS², Markus FRAENZ², Yoshifumi FUTAANA³, Stas BARABASH³, Olivier WITASSE¹ ¹European Space Research and Technology Centre, ²Max Planck Institute for Solar System Research, ³Swedish Institute of Space Physics

PS07-D2-AM1-311-005 | PS07-A008

Large-scale Response of Jupiter's Magnetosphere to the External Forcing: 3D Global MHD Simulations Xianzhe JIA^{1#+}, Yash SARKANGO¹ ¹University of Michigan

PS07-D2-AM1-311-006 | PS07-A025

Cassini-Huygens Mission Highlights: From Dream to Reality Linda SPILKER^{1#+}, Scott EDGINGTON¹ ¹Jet Propulsion Laboratory, California Institute of Technology

PS07-D2-AM1-311-007 | PS07-A004

The Consequences of Saturn's "Ring Rain" James O'DONOGHUE^{1,2#+}, Luke MOORE³, J. E. P. CONNERNEY^{2,4}, Henrik MELIN⁵, Tom STALLARD⁵, Hsiang-Wen HSU⁶, Kevin BAINES⁷, Steve MILLER⁸ ¹Japan Aerospace Exploration Agency, ²NASA Goddard Space Flight Center, ³Boston University, ⁴Space Research Corporation, ⁵University of Leicester, ⁶University of Colorado Boulder, ⁷University of Wisconsin-Madison, ⁸University College London

AS09 / Application of Cloud-resolving Model Simulations for Studying Cloud-related Processes in Climate

Tue - 30 Jul | MR327

Time 08:30-10:30

Chair(s) Tomoki MIYAKAWA, The University of Tokyo Masaki SATOH, The University of Tokyo

AS09-D2-AM1-327-001 | AS09-A014 (Invited)

Simulating Organized Convection and Extreme Rainfall over Darwin Using High-resolution Cloud-resolving Models Todd LANE^{1,2*+}, Martin JUCKER^{2,3}, Martin BERGEMANN^{1,2} ¹The University of Melbourne, ²ARC Centre of Excellence for Climate Extremes, ³The University of New South Wales

AS09-D2-AM1-327-002 | AS09-A008

The Relationship Between the Moist Transport in the Marine Boundary Layer from the Northern South China Sea and Heavy Rainfall over the Taiwan Area During SCSTIMX (2017) Chuan-Chi TU¹, Yi-Leng CHEN^{2#}, Pay-Liam LIN¹⁺, Po-Hsiung LIN³

¹National Central University, ²University of Hawaii at Manoa, ³National Taiwan University

AS09-D2-AM1-327-003 | AS09-A007

The Implementation of Framework for Improvement by Vertical Enhancement (FIVE) into Energy Exascale Earth System Model (E3SM) Hsiang-He LEE^{1#+}, Peter BOGENSCHUTZ¹, Takanobu YAMAGUCHI² ¹Lawrence Livermore National Laboratory, ²NOAA Earth System Research Laboratory

AS09-D2-AM1-327-004 | AS09-A013

A Mechanism to Accelerate the Initiation of Warm Rain – Condensation-collision-turbulence Interaction Using Direct Numerical Simulation (DNS) M.K.(Peter) YAU^{1#+} ¹McGill University

AS09-D2-AM1-327-005 | AS09-A002

WRF-SBM Simulations of Deep Convective Systems Through Aerosol Dynamical Downscaling from Merra Global Aerosol Reanalysis

Wei-Kuo TAO^{1‡+}, Takamichi IGUCHI², Toshihisa MATSUI^{1,2} ¹NASA Goddard Space Flight Center, ²University of Maryland

AS09-D2-AM1-327-006 | AS09-A012

Sensitivity Study of High-cloud Property Responses to Sea Surface Temperature Change Using a Global Nonhydrostatic Model

Tomoki OHNO1#+, Masaki SATOH2

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

AS09-D2-AM1-327-007 | AS09-A001

A Modeling Study of the Boreal Winter Intraseasonal Variability over Indo-pacific Warm Pool Chung-Hsiung SUI1#+ ¹National Taiwan University

AS09-D2-AM1-327-008 | AS09-A015 (Invited) Pathways to Better Prediction of the Madden-Julian Oscillation: Cloud-resolving and Air-sea Coupling Shuyi CHEN1#+

¹University of Washington

OS15 / Regional Oceanic Numerical Modeling and Observations

Tue - 30 Jul | MR302

Time 08:30-10:30

Chair(s) Changming DONG, Nanjing University of Information Science & Technology

OS15-D2-AM1-302-001 | OS15-A031 (Invited)

Observed Mesoscale Eddies in the South China Sea Guihua WANG1#+ ¹Fudan University

OS15-D2-AM1-302-002 | OS15-A002

Mixing in the Indonesian Seas Robin ROBERTSON1#+ ¹Xiamen University Malaysia

OS15-D2-AM1-302-003 | OS15-A003

Kuroshio-derived Pinch-off Mesoscale Eddies: Generation, Propagation, and Recollision with the Kuroshio

Yusuke UCHIYAMA1#+, Nobue OKADA1, Changming DONG2,3 ¹Kobe University, ²Nanjing University of Information Science & Technology, ³University of California, Los Angeles

OS15-D2-AM1-302-004 | OS15-A004

Biogeochemical Responses to Seasonal Oceanic Variability Along the Kuroshio Xu ZHANG1#+, Yusuke UCHIYAMA1, Yota SUZUE2, Hidekatsu YAMAZAKI

¹Kobe University, ²CTI Engineering Co., Ltd., ³Tokyo University of Marine Science and Technology

OS15-D2-AM1-302-005 | OS15-A005

Medium-term Water Mass Exchange and Associated Regional Circulations in the South China Sea Naru TAKAURA1#+, Yusuke UCHIYAMA1, Nizamani ZAFARULLAH², Akihiko NAKAYAMA² ¹Kobe University, ²Universiti Tunku Abdul Rahman

OS15-D2-AM1-302-006 | OS15-A006

A Flood-induced Sediment and Suspended Radiocesium Transports in the Fukushima Coast Due to Typhoon 201326 Analyzed with a JCOPE2-ROMS Downscaling Model and in Situ Observations

Natsuki TOKUNAGA1#+, Yusuke UCHIYAMA1, Daisuke TSUMUNE², Masatoshi YAMADA³, Yutaka TATEDA², Yukari ITO4, Takashi ISHIMARU4, Yutaka WATANABE5, Ken IKEHARA⁶, Miho FUKUDA⁷

¹Kobe University, ²Central Research Institute of Electric Power Industry, ³Hirosaki University, ⁴Tokyo University of Marine Science and Technology, ⁵Hokkaido University, ⁶National Institute of Advanced Industrial Science and Technology, ⁷National Institute of Radiological Science (NIRS)

OS15-D2-AM1-302-007 | OS15-A042

Freshwater Impact on Sound Speed Structure of the Bay of Bengal Sudip JANA1#+ ¹Adamas University

OS15-D2-AM1-302-008 | OS15-A040

Summertime Upwelling Northwest Off the Hainan Island and its Mechanism

Ai-Jun PAN1#+, Fangfang KUANG2, Kai LI1, Junpeng ZHANG2 ¹Ministry of Natural Resources, ²State Oceanic Administration

OS18 / Coastal Hazards: Impacts of Tropical Storms and Tsunamis

Tue - 30 Jul | Nicoll 1

Time 08:30-10:30 Chair(s) Xiping YU, Tsinghua University

OS18-D2-AM1-Nicoll 1-001 | OS18-A004 (Invited)

A Multi-GPU High-performance Integrated Hydrodynamic Modelling System for Modelling Coastal Flooding from **Multiple Sources**

Qiuhua LIANG1#+, Peng WAN2, Yun XING2, Xilin XIA1, Gang WANG²

¹Loughborough University, ²Hohai University

OS18-D2-AM1-Nicoll 1-002 | OS18-A002

The Influence of Typhoon Track and Wind Stress on Storm Surge Heights Around Taiwan Coast Using Tide-surge-wave Model

Wei-Che HUANG1#+, Wen-Cheng LIU1 ¹National United University

OS18-D2-AM1-Nicoll 1-003 | OS18-A006

Extreme Wave and Storm Surge Assessment Due to Typhoon and Low Pressure Weather System on the Sanin Coast, Japan Sooyoul KIM1#+, Keishiro CHIYONOBU1, Junichi NINOMIYA2, Sota NAKAJO3, Tomohiro YASUDA4, Takao OTA1

¹Tottori University, ²Kanazawa University, ³Osaka City University, ⁴Kansai Universitu

OS18-D2-AM1-Nicoll 1-004 | OS18-A047

Simulating the Typhoon-driven Storm Waves in Manila Bay with Different Wind Field Data Xionghua ZHONG1+, Zhaofei REN1, Zhipeng ZHOU1, Jun ZHANG¹, Kehua WANG¹, Yabin SUN^{1#}

¹CCCC-FHDI Engineering Co., Ltd.

Day 02 - 30 Jul, Tue

OS18-D2-AM1-Nicoll 1-005 | OS18-A048

Assess the Typhoon-driven Extreme Wave Conditions in Manila Bay Through Numerical Simulation Kehua WANG¹⁺, Jun ZHANG¹, Zhaofei REN¹, Xionghua ZHONG¹, Zhipeng ZHOU¹, Yabin SUN^{1‡} ¹CCCC-FHDI Engineering Co., Ltd.

OS18-D2-AM1-Nicoll 1-006 | OS18-A008

Typhoon Induced Risk Assessment Model and Maps for the Nearshore Area of Taiwan

Lien-Kwei CHIEN^{1#+}, Chi-Wen HUANG¹, Ming-Yan TSAI¹, Chih-Hsin CHANG², Ting-Yu LIANG², Wei-Bo CHEN² ¹National Taiwan Ocean University, ²National Science and Technology Center for Disaster Reduction

OS18-D2-AM1-Nicoll 1-007 | OS18-A029

Evaluation of Annual Risk by Storm Surge Disaster in Japanese Major Bays Tomohiro YASUDA¹⁵⁺, Shota HIRAI¹ ¹Kansai University

OS18-D2-AM1-Nicoll 1-008 | OS18-A016

Numerical Modeling of Tsunami Inundation in Urban Area Using Sub-grid Scale Drag Force Model Nobuki FUKUI^{1‡+}, Nobuhito MORI¹ ¹Kyoto University

BG03 / Atmosphere-Ocean-Biota Interactions That Influence Global Climate: Role Of Marine Bacteria, Phytoplankton And Macroalgae In A Changing Environment BG04 / Remote Sensing of Essential Climate Variables and Its Applications

Tue - 30 Jul | MR300

Time 08:30-10:30

Chair(s) Siew Moi PHANG, University of Malaya Gill MALIN, University of East Anglia Punyasloke BHADURY, Indian Institute of Science Education and Research Kolkata Wei YANG, Chiba University

BG03-D2-AM1-300-001 | BG03-A006 (Invited)

Dimethyl Sulphide (DMS) and its Dimethylsulphoniopropionate (DMSP) Precursor: Where Are We Now? Gill MALIN¹⁵⁺

¹University of East Anglia

BG03-D2-AM1-300-002 | BG03-A001

How Does Temperature Influence Halocarbon Emission by Tropical Seaweeds?

Fiona Seh-Lin KENG¹⁺, Siew Moi PHANG¹⁺, Hui-Yin YEONG¹, Noorsaadah ABDUL RAHMAN¹, Emma LEEDHAM ELVIDGE², Gill MALIN², William STURGES² ¹University of Malaya, ²University of East Anglia

BG03-D2-AM1-300-003 | BG03-A002

Physiological Properties Of Haloperoxidase Extracted From Sargassum Binderi Sonder Ex J. Agardh (Sargassaceae, Fucales) Thillai PUNITHA¹⁺, Siew Moi PHANG^{1‡}, Joon Ching JUAN¹, Saad TAYYAB¹, Noorsaadah ABDUL RAHMAN¹ ¹University of Malaya

BG03-D2-AM1-300-004 | BG03-A003

RNA-seq Transcriptome Analysis of Heat Stress Response in a Polar Microalga Phaik-Eem LIM^{1#+}, Sze Wan POONG¹, Kok-Keong LEE¹, Tun-Wen PAI², Chiew-Yen WONG³, Cing Han YANG⁴, Siew Moi PHANG¹ ¹University of Malaya, ²National Taipei University of Technology, ³International Medical University, ⁴National Taiwan Ocean University

BG04-D2-AM1-300-005 | BG04-A003

Remote Sensing Estimation of Forest Coverage and Leaf Area Index in the Three Gorges Area Lixin DONG^{1#+} ¹National Satellites Meteorological Center

BG04-D2-AM1-300-006 | BG04-A005

Calibrate GCC Time Series of Phenology Camera Imagery Based on Histogram Features Xuehong CHEN^{1‡+}, Qing LI¹, Jin CHEN¹, Xin CAO¹, Xihong CUI¹ ¹Beijing Normal University

BG04-D2-AM1-300-007 | BG04-A002

A Generic Framework to Produce High Spatiotemporal Resolution NDVI Time-series Data Ruyin CAO^{1#+}, Yang CHEN¹ ¹University of Electronic Science and Technology of China

AS46 / Impacts of Land-atmosphere Interactions on the Climate and the Hydrological Cycle

Tue - 30 Jul | MR309

Time	08:30-10:30
Chair(s)	Min-Hui LO, National Taiwan University
	Eun-Soon IM, The Hong Kong University of Science and
	Technology
	Xingcai LIU, Chinese Academy of Sciences

AS46-D2-AM1-309-001 | AS46-A018

Simulations of Pheno-physiological Parameters in Regional Vineyards of Piedmont (Italy) with the Crop Model IVINE Claudio CASSARDO^{1#+}, Valentina ANDREOLI¹ ¹University of Torino

AS46-D2-AM1-309-002 | AS46-A020

A Comparison of Statistical Downscaling Techniques for Use in Agricultural Applications Jyoti SINGH¹⁺⁺, Sandeep SAHANY¹, C.T. DHANYA¹ ¹Indian Institute of Technology Delhi

AS46-D2-AM1-309-003 | AS46-A015

Impacts of Irrigation in Central Asia on Local and Regional Hydroclimatology Tzu-Ying WU¹⁺⁺, Min-Hui LO¹ ¹National Taiwan University

AS46-D2-AM1-309-004 | AS46-A009

The Driving Processes of Flash Drought in China Fangxing TIAN^{1,2#+}, Nicholas KLINGAMAN^{1,2}, Buwen DONG² ¹National Centre for Atmospheric Science, ²University of Reading

AS46-D2-AM1-309-005 | AS46-A012

Impact of Preceding Precipitation on Heat Stress in the Low Latitudes Qiuhong TANG^{1#}, Xingcai LIU¹⁺ ¹Chinese Academy of Sciences

AS46-D2-AM1-309-006 | AS46-A008

Global Soil Moisture-air Temperature Coupling Based on Grace-derived Terrestrial Water Storage Ajiao CHEN1#+, Huade GUAN1, Okke BATELAAN1, Xinping ZHANG², Xinguang HE² ¹Flinders University, ²Hunan Normal University

AS46-D2-AM1-309-007 | AS46-A004

Impact of Surface Evapotranspiration on Land Precipitation: A Nonlocal Perspective Based on Water Vapor Transport Jiangfeng WEI1#+ ¹Nanjing University of Information Science & Technology

AS46-D2-AM1-309-008 | AS46-A011

High Mountains of Asia: Moisture Sources and Contribution to Summer Monsoon Moetasim ASHFAQ1#+, Shahid MEHMOOD2 ¹Oak Ridge National Laboratory, ²Academia Sinica

IG20 / Big Data, Machine Learning, and Data Analytics in Geosciences

Tue - 30 Jul | MR323

Time 08:30-10:30 Chair(s) Uma DAS, Indian Institute of Information Technology Kalyani Sanat Kumar DAS, Bose Institute

IG20-D2-AM1-323-001 | IG20-A005

Unsupervised Deep Learning for Multi-modal Object **Detection and Tracking**

Nicholas LAHAYE^{1,2#+}, Hesham EL-ASKARY¹, Erik LINSTEAD¹ ¹Chapman University, ²Jet Propulsion Laboratory, California Institute of Technology

IG20-D2-AM1-323-002 | IG20-A001

Estimating Spatiotemporal Distribution of People with **Detailed Attributes Using Multiple Population Statistics** Toshihiro OSARAGI1#+ ¹Tokyo Institute of Technology

IG20-D2-AM1-323-003 | IG20-A002

Analysis of Spatio Temporal Correlation Tendency Between Wind and Solar Xianxun WANG1#+, Lihua CHEN2, Yadong MEI1 ¹Wuhan University, ²Guangxi University

IG20-D2-AM1-323-004 | IG20-A003

Coherency Analysis of Change-points in Regressive Slope in Monthly Temperature Series Between Global Ocean and Land for 1850-2018 Jianmin JIANG1#+ ¹China Meteorological Administration Training Centre

IG20-D2-AM1-323-005 | IG20-A011

NASA GES DISC Giovanni - Current and Future Jennifer WEI1#+, Mahabaleshwara HEGDE1,2, Hailang ZHANG1,2, Christine SMIT^{1,2}, Long PHAM¹, David MEYER³ ¹NASA Goddard Earth Sciences Data and Information Services Center, ²Adnet Systems, ³NASA Goddard Space Flight Center

HS01 / Risk Assessment Related to Hydrological, Climatic, and Environmental Changes

Tue - 30 Jul | Nicoll 3

Time 08:30-10:30 Chair(s) Tsang-Jung CHANG, National Taiwan University

HS01-D2-AM1-Nicoll 3-001 | HS01-A006

Flood Vulnerability Index in Seoul Metropolitan Area Nanhee HWANG1+, Heeseong PARK2, Gunhui CHUNG1# ¹Hoseo University, ²Korea Institute of Civil Engineering and Building Technology

HS01-D2-AM1-Nicoll 3-002 | HS01-A019

Development of a One-dimensional Flood Model in Bengawan Solo River Basin

Sapratisto Daim FAKHRIYANTO¹, Idham Riyando MOE^{2#+}, Aris RINALDI², Mohammad FARID³, Antonius SURYONO¹ ¹BBWS Bengawan Solo, ²Ministry of Public Works and Housing, ³Bandung Institute of Technology

HS01-D2-AM1-Nicoll 3-003 | HS01-A003

Development of Data Assimilation on Urban Flood Inundation Modeling Hsiang-Lin YU1#+, Tsang-Jung CHANG1 ¹National Taiwan University

HS01-D2-AM1-Nicoll 3-004 | HS01-A008

Categorical Prediction of Heavy Snow Damage Using Random Forest Method Gunhui CHUNG1#, Hyeong-Joo LEE1+, Heeseong PARK2

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

HS01-D2-AM1-Nicoll 3-005 | HS01-A009

Large-scale and High-resolution Flood Risk Assessment for Thailand Anongnart ASSTEERAWATT1#+, Sourima GHOSH1, Maximiliano SASSI¹

¹Risk Management Solutions

HS01-D2-AM1-Nicoll 3-006 | HS01-A014

A Comparison of Hydrological Model for Assessing the Flood Vulnerability in a Tropical Catchment I Putu SANTIKAYASA^{1#+}, Muh TAUFIK¹ ¹IPB University

HS01-D2-AM1-Nicoll 3-007 | HS01-A017

Optimization of Low Impact Development for Flood Mitigation in Urban Area Howard H-C HO1#+ ¹National Taiwan University

HS01-D2-AM1-Nicoll 3-008 | HS01-A018

Low Impact Development Practices on Water Quantity and Quality Using Multi-objective Genetic Algorithm for **Overdeveloped** City Howard H-C HO1#+ ¹National Taiwan University

AS08 / The Science and Prediciton of Heavy **Precipitation and Floods**

Tue - 30 Jul | MR308

Time 11:00-12:30 Kalli FURTADO, Met Office Chair(s)

AS08-D2-AM2-308-001 | AS08-A018 (Invited)

What is the Main Cause of Diurnal Variation and Nocturnal Peak of Summer Precipitation in Sichuan Basin, China? The Key Role of Boundary Layer Low-level Jet Inertial Oscillations Ming XUE1,2#+, Yuhan ZHANG², Kefeng ZHU², Bowen ZHOU² ¹The University of Oklahoma, ²Nanjing University

AS08-D2-AM2-308-002 | AS08-A015 (Invited)

Factors Affecting Simulations of Extreme Rainfall over South China

Kalli FURTADO1#+, Paul FIELD1, Adrian HILL1, Tianjun ZHOU2 ¹Met Office, ²Chinese Academy of Sciences

AS08-D2-AM2-308-003 | AS08-A005

A Numerical Investigation of Second Rainy-season Rainfall Diurnal Variation in Southeast China: The Role of Land-sea Contrast, Complicated Topography and Atmospheric **Environmental Profiles** Yuchun ZHAO1#+, Yehong WANG1 ¹Xiamen Meteorological Bureau

AS08-D2-AM2-308-004 | AS08-A011

Roles of Dynamic Forcings and Diabatic Heating in Summer **Extreme Precipitation in East China and Southeast United** States Ji NIE1#+, Bowen FAN1 ¹Peking University

AS08-D2-AM2-308-005 | AS08-A016

Moisture Sources for Wintertime Extreme Precipitation Events over Three Rainiest Subregions of Tibetan Plateau Tianpei QIU1+, Wenyu HUANG1# ¹Tsinghua University

AS08-D2-AM2-308-006 | AS08-A025

Multi-scale Analysis of Clustered Cold-season Extreme Precipitation Events in Eastern North America, and Their Modulation by Air Masses John GYAKUM1#+ ¹McGill University

AS25 / Application of Satellite Data to Weather Prediction

Tue - 30 Jul | MR304

Time 11:00-12:30 Chair(s) Chian-Yi LIU, National Central University

AS25-D2-AM2-304-001 | AS25-A007 (Invited)

GNSS Radio Occultation Observed Using Spire's Cubesat Constellation Takayuki YUASA1#+ ¹Spire Global

AS25-D2-AM2-304-002 | AS25-A001 (Invited)

Estimating the Intensity of Tropical Cyclone over the Western North Pacific Using FY-3C/ MWTS-II Data Miao ZHANG1#+, Hong QIU1, Danyu QIN1 ¹National Satellite Meteorological Center

AS25-D2-AM2-304-003 | AS25-A005

Analysis of Atmospheric Profiles Within Tropical Cyclones Using New-generation Satellite Observations Ryo OYAMA1#+, Kozo OKAMOTO1, Takeshi IRIGUCHI1, Hidehiko MURATA¹, Hironori FUDEYASU², Kevin CHEUNG³, Kazuhisa TSUBOKI4

¹Japan Meteorological Agency, ²Yokohama National University, ³Macquarie University, ⁴Nagoya University

AS25-D2-AM2-304-004 | AS25-A012

Deep Convective Cloud Properties and Precipitation During **Tropical Cyclone Intensity Changes** Jason Pajimola PUNAY1#+, Chian-Yi LIU1, Chi-Hao CHIU1 ¹National Central University

AS25-D2-AM2-304-005 | AS25-A009

Potential Application of Real-time Land Surface Emissivity of **ATMS to Numerical Weather Prediction Model** Jisoo KIM1#+, Myoung-Hwan AHN1 ¹Ewha Womans University

AS25-D2-AM2-304-006 | AS25-A011

Characteristics of Deep Convections and Associated Dynamic Conditions from Cloudsat over the South China Sea and **Maritime Continent** Chian-Yi LIU1#+, En-Hao CHEN1 ¹National Central University

AS36 / Subseasonal to Seasonal Forecasts and Applications

Tue - 30 Jul | MR303

Time 11.00-12.30

Andrew W. ROBERTSON, Columbia University Chair(s) Raizan RAHMAT, Centre for Climate Research Singapore

AS36-D2-AM2-303-001 | AS36-A020

Stratospheric Initial Conditions Provide Seasonal Predictability of the North Atlantic and Arctic Oscillations Yu NIE1#+, Adam SCAIFE2, Hong-Li REN1, Ruth COMER2 ¹China Meteorological Administration, ²Met Office

AS36-D2-AM2-303-002 | AS36-A004

Recent Progress in Indian Ocean Dipole Prediction and Predictability Study Youmin TANG1#+ ¹Ministry of Natural Resources

AS36-D2-AM2-303-003 | AS36-A010

The Use of ECMWF Subseasonal-to-Seasonal (S2S) Predictions for Extreme Temperature Forecasts over Singapore and the Surrounding Region: A Comparison of Two Methods Ryan KANG^{1#+}, Wee Leng TAN¹, Thea TURKINGTON¹, Raizan RAHMAT¹

¹Centre for Climate Research Singapore

AS36-D2-AM2-303-004 | AS36-A013

Prediction of the 2018 Summer Heat Waves in Northern Europe and Northeast Asia on S2S Time Scales Mien-Tze KUEH^{1#+}, Chuan-Yao LIN¹ ¹Academia Sinica

AS36-D2-AM2-303-005 | AS36-A012

Subseasonal-to-Seasonal Predictions for Southeast Asia (S2S-SEA) Capability Building 4-year Programme – Progress, Case Studies, and Future Developments Wee Leng TAN^{1#+}, Thea TURKINGTON¹, Ryan KANG¹, Raizan RAHMAT¹ ¹Centre for Climate Research Singapore

AS36-D2-AM2-303-006 | AS36-A024

Provision of Optimised Seasonal Forecasts by the ARRCC Project

Francis COLLEDGE^{1#+}, Andrew COLMAN¹, Tamara JANES¹, Rebecca PARFITT¹, Jessica STACEY¹, Katy RICHARDSON¹, David CORBELLI¹, Maxine SHIELDS¹ ¹Met Office

SE19 / Multiscale Seismic Modelling and Imaging

Tue - 30 Jul | MR330

 Time
 11:00-12:30

 Chair(s)
 Ping TONG, Nanyang Technological University

SE19-D2-AM2-330-001 | SE19-A014

A Generalized H-κ Method with Harmonic Corrections on PS and its Crustal Multiples in Receiver Functions Jiangtao LI¹, Xiaodong SONG^{1,2#+}, Pan WANG³, Lupei ZHU^{4,5} ¹University of Illinois Urbana-Champaign, ²Wuhan University, ³Hohai University, ⁴Saint Louis University, ⁵China University of Geosciences

SE19-D2-AM2-330-002 | SE19-A012 (Invited)

Roads: New Generation of Seismic Sources Jieyuan NING^{1#+} ¹Peking University

SE19-D2-AM2-330-003 | SE19-A017

Applications of Short-period Seismic Nodes for Earthquake Studies and Passive Seismic Imaging: Case Studies from Lombok and Singapore

Karen LYTHGOE¹⁺⁺, Muzli MUZLI^{1,2}, Andri Dian NUGRAHA³, Rahmat TRIYONO², Shengji WEI¹

¹Nanyang Technological University, ²Meteorological, Climatological, and Geophysical Agency, ³Bandung Institute of Technology

SE19-D2-AM2-330-004 | SE19-A004 (Invited)

Hierarchical Reconstruction of the Elastic Models: Preconditioning with P/S Wave Mode Decoupling Jiubing CHENG^{1#+} ¹Tongji University

SE12 / From Earthquakes and Fault Ruptures to Seismic Hazards of Southeast and East Asia Tue - 30 Jul | MR329

i ue - 50 jui + MK329

Time11:00-12:30Chair(s)Yu WANG, National Taiwan University

SE12-D2-AM2-329-001 | SE12-A011

Earthquake Potential of Active Faults Offshore of Phuket and Phang Nga, Thailand Passakorn PANANONT^{1#+}, Haley RAMIREZ², Kevin P. FURLONG², Sebastian KRASTEL³ ¹Kasetsart University, ²Penn State University, ³Christian-Albrechts-Universität zu Kiel

SE12-D2-AM2-329-002 | SE12-A003 (Invited)

Uniform Late Quaternary Slip Rate Along the Jinghong Fault, SE of the Eastern Himalayan Syntaxis Xuhua SHI^{1,2#+}, Ray WELDON³, Jing LIU⁴, Weerachat

WIWEGWIN⁵, Zhigang LI⁶, Yanxiu SHAO⁴, Lewis A. OWEN⁷, Elise WELDON³, Yu WANG⁸, Kerry SIEH², Paula FIGUEIREDO⁷, Daoyang YUAN⁴

¹Zhejiang University, ²Nanyang Technological University, ³University of Oregon, ⁴China Earthquake Administration, ⁵Department of Mineral Resources, ⁶Sun Yat-sen University, ⁷University of Cincinnati, ⁸National Taiwan University

SE12-D2-AM2-329-003 | SE12-A032

The Nature of Fault System and Active Tectonic Deformation Along the Northwestern Papun (Mae Ping) Fault, Taungoo District, Bago Region, Myanmar Soe MIN^{1*+}, Win NAING² ¹Taungoo University, ²Dagon University

SE12-D2-AM2-329-004 | SE12-A024

Active Fault and Paleoseismic Studies of the Sagaing Fault Near Nay Pyi Taw, Central Myanmar Saw Ngwe KHAING^{1,2*+}, Tun Tun MIN³, Kaung SITHU³, Soe MIN⁴, Than SOE⁴ ¹Hinthada University, ²Myanmar Earthquake Committee, ³University of Yangon, ⁴Taungoo University

SE12-D2-AM2-329-005 | SE12-A028

Structural Deformation Related to Active Inversion of the Pyay Fault, Central Myanmar Belt

Lin Thu AUNG^{1,2#+}, Kyaw Zin OO³, Kyaw Myo WIN⁴, Gregory MOORE⁵, Soe Thura TUN⁶, Win NAING⁷, Kerry SIEH¹ ¹Nanyang Technological University, ²Myanmar Geosciences Society, ³MPRL E & P, ⁴Myanmar Oil and Gas Enterprise, ⁵University of Hawaii at Manoa, ⁶Myanmar Earthquake Committee, ⁷Dagon University

SE06 / Tectonics, Minerals, Metals and Gems Resources of Asia Oceania Region

Tue - 30 Jul | MR328

Time11:00-12:30Chair(s)Khin ZAW, University of Tasmania

SE06-D2-AM2-328-001 | SE06-A006

Mineralogical and Petrological Aspects of Igneous and Metamorphic Rocks of Ondan-Kyaukhlebein Area, Thabeikkyin and Mogok Townships, Mandalay Region Myo MIN^{1#+}, Thu Zar AUNG²

¹Dagon University, ²Macle Gem Trade Laboratory

Day 02 - 30 Jul, Tue

SE06-D2-AM2-328-002 | SE06-A022

Gemological Characteristics of Legyi Danburite in Momeik Area: Mogok Metamorphic Belt, Myanmar

Khaing Nyein HTAY1^{#+}, Lin Thu AUNG^{2,3}, Khin ZAW⁴, Wai La WIN¹

¹Gemological Institute of Myanmar, ²Nanyang Technological University, ³Myanmar Geosciences Society, ⁴University of Tasmania

SE06-D2-AM2-328-003 | SE06-A027 (Invited)

Diamond: Landak Region, Kalimantan, Indonesia Thyesun TAY^{1#+} ¹Far East Gemological Laboratory

SE06-D2-AM2-328-004 | SE06-A017

Age, Setting and Geology of Ayer Chawan Facies, Jurong Formation, Singapore: Observation of Syndepositional Pyroclastic Sedimentation Process with Possible Peperite Formation

Kar WINN1#+, Khin ZAW2, Jay THOMPSON2

¹Rock mechanics and Engineering Society Singapore, ²University of Tasmania

SE06-D2-AM2-328-005 | SE06-A016

Geochemistry and Zircon U-Pb Geochronology of Granitogneiss Rocks in the Chu Lai - Kham Duc Area in Central Vietnam: Implications for Rifting the Indochina Block from Northern Gondwana

Sang DINH^{1#+}, Khin ZAW², Sebastien MEFFRE², Anthony CRAWFORD³, Hai Thanh TRAN⁴

¹PetroVietnam University, ²University of Tasmania, ³A & A Crawford Geological Research Consultants, ⁴Hanoi University of Mining and Geology

PS06 / Planetary Shape, Gravity, Rotation, and Interior Structures from Observations and Models

Tue - 30 Jul | MR310

Time 11:00-12:30

Chair(s) Juergen OBERST, German Aerospace Center (DLR) Koji MATSUMOTO, National Astronomical Observatory of Japan

PS06-D2-AM2-310-001 | PS06-A002

Improved Trajectory of Hayabusa2 by Combining LIDAR Data and a Shape Model

Koji MATSUMOTO^{1#+}, Hirotomo NODA¹, Yoshiaki ISHIHARA², Hiroki SENSHU³, Keiko YAMAMOTO¹, Naru HIRATA⁴, Naoyuki HIRATA⁵, Noriyuki NAMIKI¹, Toshimichi OTSUBO⁶, Sei-Ichiro WATANABE⁷, Takahide MIZUNO⁸, Yukio YAMAMOTO⁸, Hitoshi IKEDA⁸, Naoko OGAWA⁸, Shota KIKUCHI⁸, Takanao SAIKI⁸, Yuichi TSUDA⁸

¹National Astronomical Observatory of Japan, ²National Institute for Environmental Studies, ³Chiba Institute of Technology, ⁴The University of Aizu, ⁵Kobe University, ⁶Hitotsubashi University, ⁷Nagoya University, ⁸Japan Aerospace Exploration Agency

PS06-D2-AM2-310-002 | PS06-A008

Alignment Determination of the Hayabusa2 Laser Altimeter (LIDAR)

Hirotomo NODA¹⁵⁺, Koji MATSUMOTO¹, Hiroki SENSHU², Noriyuki NAMIKI¹, Seiji SUGITA³

¹National Astronomical Observatory of Japan, ²Chiba Institute of Technology, ³The University of Tokyo

PS06-D2-AM2-310-003 | PS06-A004

Estimation of Hayabusa2 Trajectory Using LIDAR and AIT Data Sets

Keiko YAMAMOTO¹⁴⁺, Toshimichi OTSUBO², Koji MATSUMOTO¹, Hirotomo NODA¹, Noriyuki NAMIKI¹, Hiroki SENSHU³, Takahide MIZUNO⁴, Naoko OGAWA⁴, Go ONO⁴, Yuya MIMASU⁴, Kent YOSHIKAWA⁴, Tadateru TAKAHASHI⁴, Yuto TAKEI⁴, Atsushi FUJII⁴, Fuyuto TERUI⁴, Takanao SAIKI⁴, Satoru NAKAZAWA⁴, Makoto YOSHIKAWA⁴, Yuichi TSUDA⁴ ¹National Astronomical Observatory of Japan, ²Hitotsubashi University, ³Chiba Institute of Technology, ⁴Japan Aerospace Exploration Agency

PS06-D2-AM2-310-004 | PS06-A001

Determination of Physical Parameters of NEOs Using Rotational Corrections Eduardo RONDON¹⁵⁺, Daniela LAZZARO¹ ¹Observatorio Nacional

PS06-D2-AM2-310-005 | PS06-A010

Phobos and Deimos: Shape and Implications for Their Formation Xuanyu HU¹, Juergen OBERST^{2#+}, Konrad WILLNER²

¹Technical University Berlin, ²German Aerospace Center (DLR)

PS07 / Magnetospheres, Atmospheres, Exospheres of Outer Planets and Their Satellites

Tue - 30 Jul | MR311

Time11:00-12:30Chair(s)Sushil ATREYA, University of Michigan

PS07-D2-AM2-311-001 | PS07-A023 (Invited)

A Magnetic Perspective on the Interior of Saturn Michele DOUGHERTY^{1#+}, Hao CAO^{2,3} ¹Imperial College London, ²Harvard University, ³California Institute of Technology

PS07-D2-AM2-311-002 | PS07-A013

Saturn's Deep Atmospheric Flows in Light of the Cassini Gravity and Magnetic Measurements Eli GALANTI^{1#+}, Yohai KASPI¹ ¹Weizmann Institute of Science

PS07-D2-AM2-311-003 | PS07-A019 (Invited)

The Ionosphere of Saturn Using the RPWS/LP Measurements During the Cassini Grand Finale

Lina HADID^{1*+}, Michiko MOROOKA², Jan-Erik WAHLUND², Ann PERSOON³, William M. FARRELL⁴, William KURTH³, Luke MOORE⁵, Matthew HEDMAN⁶, David ANDREWS², Oleg SHEBANITS⁷, Niklas EDBERG², Erik VIGREN², J. Hunter WAITE, JR.⁸, Thomas E. CRAVENS⁹, Rebecca PERRYMAN⁸ ¹European Space Research and Technology Centre, ²Swedish Institute of Space Physics, ³The University of Iowa, ⁴NASA Goddard Space Flight Center, ⁵Boston University, ⁶University of Idaho, ⁷Imperial College London, ⁸Southwest Research Institute, ⁹University of Kansas

PS07-D2-AM2-311-004 | PS07-A012 (Invited)

On the 1-hour Periodicities in the Saturnian System Benjamin PALMAERTS^{1#+}, Elias ROUSSOS², Denis GRODENT¹, Z. H. YAO¹, Katerina RADIOTI¹, Peter DELAMERE³, Brandon BURKHOLDER³

¹University of Liege, ²Max Planck Institute for Solar System Research, ³University of Alaska Fairbanks

PS07-D2-AM2-311-005 | PS07-A007

Plasmoid Observation in the Magnetotail of Uranus: Implications for Plasma Convection and Downtail Mass Loss Gina DI BRACCIO¹⁺⁺, Daniel GERSHMAN¹ ¹NASA Goddard Space Flight Center

AS12 / 12th Sasaki Symposium on Data Assimilation for Atmospheric, Oceanic, and Hydrologic Applications

Tue - 30 Jul | MR327

Time 11:00-12:30

Chair(s) Shu-Chih YANG, National Central University Ibrahim HOTEIT, King Abdullah University of Science and Technology

AS12-D2-AM2-327-001 | AS12-A017 (Invited)

Improving Convection Initiation Forecast of an Extreme Rainstorm by Assimilating Every 10-min AHI Radiances with WRF 4DVAR Zhiquan LIU^{1#+}, Yali WU¹ ¹National Center for Atmospheric Research

AS12-D2-AM2-327-002 | AS12-A008

The Australian Wind Profiler Network and its Impact on Global Numerical Numerical Weather Prediction Bronwyn DOLMAN^{1‡+}, Iain REID^{1,2}, Chris TINGWELL³ ¹ATRAD Pty Ltd, ²University of Adelaide, ³Australian Government Bureau of Meteorology

AS12-D2-AM2-327-003 | AS12-A010

The Impacts of Background Error Statistics in Radar Data Assimilation

Thiruvengadam PADMANABHAN^{1#+}, Indu J.¹, Subimal GHOSH¹ ¹Indian Institute of Technology Bombay

AS12-D2-AM2-327-004 | AS12-A005

Exploring the Sparsity of Error Covariance with Applications to Unscented Kalman Filter Wei KANG^{1#+}, Liang XU² ¹Naval Postgraduate School, ²Naval Research Laboratory

AS12-D2-AM2-327-005 | AS12-A006

Relevance of the Background Error Covariance Matrix for SINGV Joshua LEE^{1#+}, Xiang-Yu HUANG¹ ¹Centre for Climate Research Singapore

AS12-D2-AM2-327-006 | AS12-A007

Big Data Assimilation: Past 5 Years and Perspectives for the Future

Takemasa MIYOSHI^{1,2#+}, Shigenori OTSUKA¹, Takumi HONDA¹, Guo-Yuan LIEN³, Yasumitsu MAEJIMA³, Yoshito YOSHIZAKI⁴, Hiromu SEKO⁴, Hirofumi TOMITA³, Shinsuke SATOH⁵, Tomoo USHIO⁶, Tatiana MARTSINKEVICH¹, Balazs GEROFI¹, Yutaka ISHIKAWA¹

¹RIKEN Center for Computational Science, ²University of Maryland, ³RIKEN Advanced Institute for Computational Science, ⁴Japan Meteorological Agency, ⁵National Institute of Information and

Communications Technology, 6 Tokyo Metropolitan University

OS11 / Ocean Circulation and Air-sea Interaction Over the Maritime Continent and Surrounding Waters

Tue - 30 Jul | MR302

Time11:00-12:30Chair(s)Lei ZHOU, Shanghai Jiao Tong University

OS11-D2-AM2-302-001 | OS11-A020 (Invited)

The Initial Condition Errors Occurring in the Indian Ocean Temperature that Cause "Spring Predictability Barrier" for El Niño in the Pacific Ocean Wansuo DUAN¹²⁺

¹Chinese Academy of Sciences

OS11-D2-AM2-302-002 | OS11-A013

The Changing Impact Mechanisms of a Diverse El Niño on the Western Pacific Subtropical High

Xin WANG^{1#+}, Mengyan CHEN¹, Jin-Yi YU², Wenping JIANG³ ¹Chinese Academy of Sciences, ²University of California, Irvine, ³Hohai University

OS11-D2-AM2-302-003 | OS11-A033

Interdecadal Change in South China Sea Tropical Cyclone Frequency in Association with Zonal Sea Surface Temperature Gradient

Wen ZHOU^{1#+}, Cheuk Yin LI¹ ¹City University of Hong Kong

OS11-D2-AM2-302-004 | OS11-A011

Internal Variability in South China Sea Juncheng XIE^{1,2}, Lei ZHOU^{3#+}, Raghu MURTUGUDDE⁴, Markus JOCHUM⁵, Yisen ZHONG³

¹Hohai University, ²State Oceanic Administration, ³Shanghai Jiao Tong University, ⁴University of Maryland, ⁵University of Copenhagen

OS11-D2-AM2-302-005 | OS11-A025

Competitive Interannual Variations of the Eastward Branch and Northward Branch of the South China Sea Upper Layer Circulation in Summer Tingting ZU^{1#+}, Dongxiao WANG¹, Bingxu GENG¹, Mingting LI^{2,3}, Lei YANG¹

¹Chinese Academy of Sciences, ²Peking University, ³Columbia University

OS11-D2-AM2-302-006 | OS11-A023

Distinguishing Different Tropical Climate Modes' Atmospheric Impacts on the South China Sea Cold Tongue Strength

Marvin Xiang Ce SEOW^{1#+}, Tomoki TOZUKA¹, Yushi MORIOKA²

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

OS18 / Coastal Hazards: Impacts of Tropical Storms and Tsunamis

Tue - 30 Jul | Nicoll 1

Time 11:00-12:30 Chair(s) Shie-Yui LIONG, National University of Singapore

OS18-D2-AM2-Nicoll 1-001 | OS18-A007

Projection of Maximum Potential Intensity of Storm Surge Around Japan in the Future Climate Nobuhito MORI1 ¹Kyoto University

OS18-D2-AM2-Nicoll 1-002 | OS18-A012

Downscaling for Reanalysis and Future Projection of Coastal Current System on the Ibaraki Coast Josko TROSELJ^{1,2#+}, Yuki IMAI², Junichi NINOMIYA³, Nobuhito MORI² ¹Hiroshima University, ²Kyoto University, ³Kanazawa University

OS18-D2-AM2-Nicoll 1-003 | OS18-A020

Flow Properties in the Swash Tip Region with Bottom **Resistance Based on the Taylor Expansion Method** Haijiang LIU1#+ ¹Zhejiang University

OS18-D2-AM2-Nicoll 1-004 | OS18-A026

Impact Assessment of Track Forecast Error on Storm Surge at the Port of Nagoya, Japan Masaya TOYODA1#+, Jun YOSHINO1, Tomonao KOBAYASHI1 ¹Gifu University

OS18-D2-AM2-Nicoll 1-005 | OS18-A040

Real-time Forecasts of Tropical Cyclones Using the WRF Model with Modified Initial Conditions Using Dynamical **Initialization Scheme**

Ngoc Son NGUYEN1, Srivatsan VIJAYARAGHAVAN1#+, Jina HUR¹, Shie-Yui LIONG¹, Jaedock LEE² ¹National University of Singapore, ²National Taiwan University

OS18-D2-AM2-Nicoll 1-006 | OS18-A056

Development of the Operational and Probabilistic Forecasting Models for Rogue Waves Occurred in the Ocean and at the Coast

Dong-Jiing DOONG1#+, Ying-Chih CHEN1 ¹National Cheng Kung University

BG05 / Understanding Biogeochemical Cycles in the Earth System: from Local to Regional and **Global Scales**

Tue - 30 Jul | MR300

Time 11:00-12:30 Chair(s) Long CAO, Zhejiang University

BG05-D2-AM2-300-001 | BG05-A001

Contrasting Interannual Atmospheric CO2 Variabilities and Their Terrestrial Mechanisms for Two Types of El Ninos Jun WANG1#+, Ning ZENG2 ¹Nanjing University, ²University of Maryland

BG05-D2-AM2-300-002 | BG05-A004 (Invited)

Impacts of Climate Change and Socio-economic Development on Future Nitrogen Export: A Comparative Study of Three Large River Basins

Ting TANG1#+, Mengru WANG2, Maryna STROKAL2, Peter BUREK¹, David LECLERE¹, Tamas KRISZTIN¹, Barbara WILLAARTS¹, Carolien KROEZE², Simon LANGAN¹, Yoshihide WADA1

¹International Institute for Applied Systems Analysis (IIASA), ²Wageningen University & Research

BG05-D2-AM2-300-003 | BG05-A007

Contributions of Coralline Macroalgae to Sediment Production in a Disturbed Mixed-macrophyte Habitat Natasha ARINA1+, Mohammad ROZAIMI1#, Nur HIDAYAH1, Chandran RAYNUSHA1 ¹Universiti Kebangsaan Malaysia

BG05-D2-AM2-300-004 | BG05-A009

Sources, Transport and Distribution of DIC, DOC and POC in the Nandu River Estuary, China

Yaying LIN1#4 ¹Tsinghua University

AS17 / Atmospheric Chemistry in Highly Polluted **Environments: Emissions, Fates, and Impacts** Tue - 30 Jul | MR309

Time 11:00-12:30

Sri KOTA, Indian Institute of Technology Delhi Chair(s) Hao GUO, Louisiana State University

AS17-D2-AM2-309-001 | AS17-A005 (Invited)

Atmospheric Chemistry Processes During the Pollution Episodes in the Fall and Winter of North China Min HU^{1#+}, Dongjie SHANG¹, Xin FANG¹, Yao XIAO¹, Limin ZENG¹, Song GUO¹, Zhijun WU¹, Sihua LU¹, Shiyi CHEN¹, Keding LU¹, Yuanhang ZHANG¹ ¹Peking University

AS17-D2-AM2-309-002 | AS17-A025

Snow Chemistry and Deposition Flux of Reactive Nitrogen Species Through Precipitation in Western Himalayas (India) Anshu SHARMA1#+, U.C. KULSHRESTHA1 ¹Jawaharlal Nehru University

AS17-D2-AM2-309-003 | AS17-A035

Comparison of Chemical Fingerprint and Source Apportionment of PM2.5 at Two Harbors in the Philippines and Taiwan Chung-Shin YUAN1#+, Gerry BAGTASA2, Jian-Xing WU1, Po-Hung CHENG¹, Bo-Xuan YAN¹

¹National Sun Yat-sen University, ²University of the Philippines

AS17-D2-AM2-309-004 | AS17-A036

Characteristics of PAHs and n-Alkanes in PM2.5 at Urban and **Residential Sites in Mongolia**

SangHee HAN1, Natsagdorj AMGALAN2#, Kia KIM3, Yong Pyo KIM3, Jiyi LEE3+

¹University of Florida, ²National University of Mongolia, ³Ewha Womans University

AS17-D2-AM2-309-005 | AS17-A022

Identification of Possible Sources of PM2.5 Using PM2.5 Growth Process and Hysplit for Developing a Preliminary Early Warning System for Air Quality in Indian Cities Shovan Kumar SAHU¹, Shubham SHARMA², Jianlin HU³, Sri KOTA^{2#+}

¹Tsinghua University, ²Indian Institute of Technology Delhi, ³Nanjing University of Information Science & Technology

IG04 / Natural Hazards and Disaster Risk: Current and Historical Perspectives

Tue - 30 Jul | MR323

- Time 11:00-12:30
- Chair(s) Vena Pearl BONGOLAN, University of the Philippines Diliman Bachtiar MUTAQIN, Universitas Gadjah Mada

IG04-D2-AM2-323-001 | IG04-A010

Global Major Weather and Climate Events in 2017 and the Possible Causes Shao SUN1#+ ¹National Climate Center

IG04-D2-AM2-323-002 | IG04-A025 (Invited)

An Improved Drought-fire Assessment for Tropical Peatlands Muh TAUFIK1#+, Marliana Tri WIDYASTUTI2, I Putu SANTIKAYASA1, Albertus SULAIMAN3, Haris GUNAWAN4, Daniel MURDIYARSO⁵, Awaluddin AWALUDDIN³ ¹IPB University, ²Bogor Agricultural University, ³Technology Assessment and Application Agency, 4Badan Restorasi Gambut, ⁵Center for International Forestry Research

IG04-D2-AM2-323-003 | IG04-A027

Lessons Learned from 2017/2018 California Wildfires Yue-Jun YIN1#+, Luxi ZHOU1, Tammy VIGGATO1 ¹AIR Worldwide

IG04-D2-AM2-323-004 | IG04-A045

Science and Policy Interacted for Combating Desertification Land Degradation - Case Summary from China Tao WANG1#+ ¹Chinese Academy of Sciences

IG04-D2-AM2-323-005 | IG04-A043

Radon Regulation and Research in Europe: Is it Relevant for the Asian-pacific Region?

Peter BOSSEW1#+, Miroslaw JANIK2, Giorgia CINELLI3, Tore TOLLEFSEN3, Marc DE CORT3

¹German Federal Office for Radiatiion Protection (BfS), ²National Institute of Radiological Sciences, ³European Commission

AS06 / Convection and Its Effects on Weather and Climate

Tue - 30 Jul | MR308

Time 13:30-15:30

Chunsong LU, Nanjing University of Information Science Chair(s) & Technology

AS06-D2-PM1-308-001 | AS06-A002 (Invited)

Vertical Transport of Pollutants in Deep Convective Clouds and its Impacts on the Acidity of Cloud and Rain Drops Yan YIN1#+, Jiaying HU2, Qian CHEN2 ¹Nanjing University of Information Science & Technology (NUIST),

²Nanjing University of Information Science & Technology

AS06-D2-PM1-308-002 | AS06-A003 (Invited)

Improvement of Cumulus Parameterization in the CWB Global Model and Evaluation of Simulated MJO Convection During 2011 Dynamo Campaign Ming-Jen YANG1#+, Chang-Hung LIN1, Jen-Her CHEN2

¹National Taiwan University, ²Central Weather Bureau

AS06-D2-PM1-308-003 | AS06-A026 (Invited)

On the Use of Chemical Tracers to Develop an **Observation-based Diagnostic for Quantifying Convective Transport Time Scales and Pathways** Z. Johnny LUO1#+, Laura L. PAN2, Elliot ATLAS3, Sofia CHELPON¹, Shawn HONOMICHL², Eric APEL², Rebecca

HORNBROOK², Samuel HALL² ¹The City University of New York, ²National Center for Atmospheric

Research, ³University of Miami

AS06-D2-PM1-308-004 | AS06-A007

Aircraft Observations of Convective Transport of Sulfur and Reactive Nitrogen Species in the Asian Summer Monsoon Region Hans SCHLAGER1#+, Greta STRATMANN1, Heinfried

AUFMHOFF1 ¹German Aerospace Center (DLR)

AS06-D2-PM1-308-005 | AS06-A004

Factors Affecting Entrainment Rate in Cumulus Clouds and Parameterizations

Chunsong LU1#+, Yangang LIU2, Cheng SUN1, Guang ZHANG3, Yanluan LIN³, Wenhua GAO⁴, Shengjie NIU¹, Yan YIN¹, Yujun QIU1, Lianji JIN1

¹Nanjing University of Information Science & Technology,

²Brookhaven National Laboratory, ³Tsinghua University, ⁴Chinese Academy of Meteorological Sciences

AS06-D2-PM1-308-006 | AS06-A001

Characteristics of Deep-developed Boundary Layer in Northwest China and Optimization of Parameterization Schemes in Numerical Simulation Minjin MA1#+ ¹Lanzhou University

AS06-D2-PM1-308-007 | AS06-A024

Main Detrainment Height of Deep Convection Systems over the Tibetan Plateau and its Southern Slope Quan-Liang CHEN1#+ ¹Chengdu University of Information Technology

AS30 / Extreme Weather Resiliency: Prediction and Response Strategies

Tue - 30 Jul | MR304

Time	13:30-15:30
Chair(s)	Pay-Liam LIN, National Central University

AS30-D2-PM1-304-001 | AS30-A023

US-Taiwan Partnership for International Research and Education on Extreme Weather and Decision-making Everette JOSEPH^{1s+}, Pay-Liam LIN² ¹University at Albany - State University of New York, ²National Central University

AS30-D2-PM1-304-002 | AS30-A005 (Invited)

Goddard Microphysics: Status and Evaluation Wei-Kuo TAO^{1#+} ¹NASA Goddard Space Flight Center

AS30-D2-PM1-304-003 | AS30-A002 (Invited)

A Modeling Study of the Severe Afternoon Thunderstorm Event at Taipei on 14 June 2015: The Roles of Sea Breeze, Microphysics, and Terrain Ming-Jen YANG^{1**}, Jyong-En MIAO¹ ¹National Taiwan University

AS30-D2-PM1-304-004 | AS30-A022

The Microphysical Characteristics of Heavy Precipitation Systems Revealed by Observational Data During SoWMEX/TiMREX Wei-Yu CHANG^{1*+}, Ke-Xin LU¹, Tai-Chi CHEN WANG¹

¹National Central University

AS30-D2-PM1-304-005 | AS30-A004 (Invited)

The Heavy Rainfall Process Revealed by Surface Station Observations and a 4DVar Radar Data Assimilation System - A Case Study in Northern Taiwan Yu-Chieng LIOU^{1±+} ¹National Central University

AS30-D2-PM1-304-006 | AS30-A029

Impact of Doppler Radar Network in Taiwan on the Convective-scale Data Assimilation and Precipitation Prediction: The Extreme Precipitation Event During 1-3 June 2017

Hsiang-Wen CHENG¹⁺⁺, Shu-Chih YANG¹, Ching-Sen CHEN¹ ¹National Central University

AS30-D2-PM1-304-007 | AS30-A019 (Invited)

Impacts of Dynamic Vortex Initialization of a Global Variable-resolution Model on Simulations of Westbound Typhoons

Ching-Yuang HUANG^{1*+}, Lin CHIA-YANG¹ ¹National Central University

AS30-D2-PM1-304-008 | AS30-A014

Evaluating the Performance of Very Short-term Forecast by Dual-polarimetric Radar Observations: A Case Study of SoWMEX-IOP 8

Kaoshen CHUNG^{1#+}, Cheng-Rong YOU¹, Chih-Chien TSAI² ¹National Central University, ²Taiwan Typhoon and Flood Research Institute

AS30-D2-PM1-304-009 | AS30-A016

Seasonal and Spatial Characteristics of Raindrop Size Distribution over South Taiwan Balaji Kumar SEELA^{1,2+}, Jayalakshmi JANAPATI¹, Pay-Liam LIN^{1#}, Pao WANG^{2,3}, Chi-Huei TSENG⁴, Lei FENG⁴ ¹National Central University, ²Academia Sinica, ³University of Wisconsin-Madison, ⁴Taiwan Typhoon Flood Research Institute

AS44 / Advances in Remote Sensing and Modeling of Fires and Tropospheric Composition in Asia Tue - 30 Jul | MR303

Time13:30-15:30Chair(s)Rokjin J. PARK, Seoul National University

AS44-D2-PM1-303-001 | AS44-A021 (Invited)

New Era of Air Quality Monitoring over Asia from Space: Geostationary Environment Monitoring Spectrometer (GEMS) Jhoon KIM^{1*+}, Myoung Hwan AHN², Rokjin J. PARK³, Jae KIM⁴, Hanlim LEE⁵, Chul Han SONG⁶, Yong-Sang CHOl², Kwon-Ho LEE⁷, Jung-Moon YOO², Seon Ki PARK², Kwang-Mog LEE⁸, Chang-Keun SONG⁹, Sang-Woo KIM³, Si-Wan KIM¹, Sujung GO¹, Ukkyo JEONG¹⁰, Heesung CHONG¹, Hana LEE¹, Sang Seo PARK³, Won-Jun CHOI¹¹, Kyung-Jung MOON¹¹, Hyunkee HONG¹¹, Ara CHO¹¹, Jongmin YOON¹¹, Sang-Kyun KIM¹¹, Xiong LIU¹², Kelly CHANCE¹³, Jassim AL-SAADI¹⁰, Ben VEIHEMLANN¹⁴

¹Yonsei University, ²Ewha Womans University, ³Seoul National University, ⁴Pusan National University, ⁵Pukyong National University, ⁶Gwangju Institute of Science and Technology, ⁷Gangneung-Wonju National University, ⁸Kyungpook National University, ⁹Ulsan National Institute of Science and Technology, ¹⁰NASA Goddard Space Flight Center, ¹¹National Institute of Environmental Research, ¹²Harvard University, ¹³Harvard-Smithsonian Center for Astrophysics, ¹⁴European Space Research and Technology Centre

AS44-D2-PM1-303-002 | AS44-A007 (Invited)

Advanced Validation of TROPOMI Satellite Observations of NO2 Column Densities Using Co-located Direct and Scattered Sunlight Measuring Spectrometers (Pandora and MAX-DOAS) at Yokosuka, Japan

Yugo KANAYA¹[#], Hisahiro TAKASHIMA^{1,2}, Masato NODZU³, Takashi SEKIYA¹, Kazuyuki MIYAZAKI¹, Henk ESKES⁴, Gaia PINARDI⁵, Daniel SANTANA DIAZ⁶, Moritz MUELLER⁶, AC CEDE^{6,7}

¹Japan Agency for Marine-Earth Science and Technology, ²Fukuoka University, ³Tokyo Metropolitan University, ⁴Royal Dutch Meteorological Institute, ⁵Royal Belgian Institute for Space Aeronomy, ⁶LuftBlick, ⁷NASA Goddard Space Flight Center

AS44-D2-PM1-303-003 | AS44-A012 (Invited)

Development of Hybrid Algorithm Based on DOAS and PCA for PBL SO2 Column Retrieval from UV Hyperspectral Satellite Sensor

Jiwon YANG¹, Hanlim LEE^{1*+}, Jhoon KIM², Can LI³, Nickolay KROTKOV ³

¹Pukyong National University, ²Yonsei University, ³NASA Goddard Space Flight Center

AS44-D2-PM1-303-004 | AS44-A028

Portable Multichannel Near-infrared Heterodyne Spectroradiometer for Simultaneous CO2 and CH4 Precision Column Measurements

Sergei ZENEVICH^{1#+}, Alexander RODIN¹, Dmitriy CHURBANOV¹, Maxim SPIRIDONOV¹, Iskander GAZIZOV¹ ¹Moscow Institute of Physics and Technology

AS44-D2-PM1-303-005 | AS44-A013

Aerosol Chemical Component: Simulations with WRF-Chem and Comparison with Measurements in Nanjing Tong SHA^{1#+}, Xiaoyan MA¹ ¹Nanjing University of Information Science & Technology

AS44-D2-PM1-303-006 | AS44-A032 (Invited)

From Enhanced Lofting to Increased Suppression, the Vertical Distribution and Ultimate Long-range or Local-transport of Different Fire Sources Across Asia Jason COHEN^{1#+} ¹Sun Yat-sen University

AS44-D2-PM1-303-007 | AS44-A002

Recent Advances in Remote Sensing of Fire Emission from Space Jun WANG^{1#+}, Sepehr ROUDINI¹ ¹The University of Iowa

SE01 / Paleomagnetism and Rock Magnetism Applied to Solving Geological, Geophysical, and Environmental Problems

Tue - 30 Jul | MR330

10.00-10.00	Time	13:30-15:30
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Chair(s) Andrew ROBERTS, Australian National University Yuhji YAMAMOTO, Kochi University

SE01-D2-PM1-330-001 | SE01-A011 (Invited)

Stalagmite-based Paleomagnetic Record of the Multidecadally-resolved Post-Blake Geomagnetic Excursion Yu-Min CHOU^{1‡+}, Xiuyang JIANG², Qingsong LIU¹, Hsunming HU³, Chung-Che WU³, Jianxing LIU⁴, Zhaoxia JIANG⁵, Teh-Quei LEE⁶, Chun-Chieh WANG⁷, Yen-Fang SONG⁷, Cheng-Cheng CHIANG⁷, Liangcheng TAN⁸, Mahjoor Ahmad LONE³, Yongxin PAN⁸, Rixiang ZHU⁸, Yaoqi HE⁹, An-Hung TAN¹⁰, Andrew ROBERTS¹¹, Xiang ZHAO¹¹, Chuan-Chou SHEN³ ¹Southern University of Science and Technology, ²Fujian Normal University, ³National Taiwan University, ⁴State Oceanic Administration, ⁵Ocean University of China, ⁶Academia Sinica, ⁷National Synchrotron Radiation Research Center, ⁸Chinese Academy of Sciences, ⁹Guizhou Minzu University, ¹⁰Chien Hsin University of Science and Technology, ¹¹Australian National University

SE01-D2-PM1-330-002 | SE01-A003

Magnetostratigraphic Study of the Potash-bearing Strata from Drilling Core ZK2893 in the Sakhon Nakhon Basin, Eastern Khorat Plateau

Maodu YAN^{1#+}, Dawen ZHANG¹ ¹Chinese Academy of Sciences

SE01-D2-PM1-330-003 | SE01-A019

From Extreme Geomagnetic Reversal Frequency to Superchron. The Case of the Early Paleozoic Vladimir PAVLOV^{1#+}, Yves GALLET² ¹Institute of Physics of the Earth of Russian Academy of Sciences, ²Institut de Physique du Globe de Paris

SE01-D2-PM1-330-004 | SE01-A014 (Invited)

Aeolian Dust in Sediments from the North Pacific Ocean and its Paleoclimatic Significance Qingsong LIU^{1#+}, Qiang ZHANG², Jianxing LI³, Ting CHEN¹, Andrew ROBERTS⁴

¹Southern University of Science and Technology, ²Chinese Academy of Sciences, ³China Geological Survey, ⁴Australian National University

SE01-D2-PM1-330-005 | SE01-A007

Nano-sized Magnetite and Hematite Inclusions in Muscovite Significantly Contribute to the Magnetic Enhancement of Loess-paleosol Deposits

Masayuki HYODO¹⁺, Takuro SANO¹, Megumi MATSUMOTO², Yusuke SETO¹, Kota SUZUKI¹, Tianshui YANG³

¹Kobe University, ²Tohoku University, ³China University of Geosciences

SE01-D2-PM1-330-006 | SE01-A021

Out-of-phase Susceptibility and Viscous Magnetization: Alternative Tools for Magnetic Granulometry of Loess and Paleosols

Martin CHADIMA^{1,2#}, Jaroslav KADLEC³, Vadim KRAVCHINSKY⁴, Rui ZHANG⁵, Michaela ZATECKA⁶, Sherry JING⁵

¹Advanced Geoscience Instruments Company, ²Czech Academy of Sciences, ³Geophysical Institute, ⁴University of Alberta, ⁵Northwest University, ⁶Charles University

SE01-D2-PM1-330-007 | SE01-A012

Magnetic Mineral Tracing of Sediment Provenance in the Middle Bengal Fan

Pengfei XUE^{1#+}, Liao CHANG¹, Shishun WANG¹, Shengfa LIU², Jinhua LI³, Xuefa SHI²

¹Peking University, ²State Oceanic Administration, ³Chinese Academy of Sciences

SE12 / From Earthquakes and Fault Ruptures to Seismic Hazards of Southeast and East Asia SE16 / Integrating Our Understanding of the 2018 Mw 7.5 Palu Earthquakes and Its Tsunami Tue - 30 Jul | MR329

<i>Time</i> 13:30-	15:30
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Chair(s) Qiu QIANG, Nanyang Technological University Yu WANG, National Taiwan University

SE12-D2-PM1-329-002 | SE12-A013

Tectono-geomorphic Signatures of Faults in Central Cebu Island, Philippines, Derived from Morphometric Analysis Lyndon NAWANAO JR.¹²⁺, Noelynna RAMOS¹, Raul Benjamin MENDOZA¹, Carla DIMALANTA¹ ¹University of the Philippines Diliman

SE12-D2-PM1-329-003 | SE12-A015

Fault Geometry and Seismic Hazard of the Central Cebu Fault, Philippines Raul Benjamin MENDOZA¹⁵⁺, Noelynna RAMOS¹, Carla DIMALANTA¹ ¹University of the Philippines Diliman

Day 02 - 30 Jul, Tue

SE12-D2-PM1-329-004 | SE12-A019 (Invited)

Evaluating Variability in Co-seismic Slip at a Point from Incomplete Paleoseismic Records: An Example from the Kamishiro Fault, Itoigawa-Shizuoka Tectonic Line Active Fault System, Central Japan Naoya TAKAHASHI^{1#+}, Shinji TODA¹ ¹Tohoku University

SE16-D2-PM1-329-001 | SE16-A008 (Invited)

Large Shallow Slip During the 2018 M7.6 Palu Earthquake Eric LINDSEY^{1#+}, Rishav MALLICK¹, Yu-Ting KUO², Guangcai FENG³, Teng WANG⁴, Yu WANG², Emma HILL¹ ¹Nanyang Technological University, ²National Taiwan University, ³Central South University, ⁴Peking University

SE16-D2-PM1-329-005 | SE16-A006 (Invited)

Field Observations and LIDAR Mapping of the 2018 Mw7.5 Surface Deformations Along the Palukoro Left-lateral Fault in Central Sulawesi, Indonesia Danny NATAWIDJAJA^{1#+}, Mudrik DARYONO², Astyka

PAMUMPUNI³, Endra GUNAWAN³, Sri HIDAYATI⁴ ¹Indonesian Institute of Sciences, ²Indonesian Institute of Sciences -LIPI, ³Institute of Technology Bandung, ⁴Geological Agency of Indonesia

SE16-D2-PM1-329-006 | SE16-A007

Active Deformation in Palu Bay and Makassar Strait as Inferred from Newly Acquired Bathymetry Data Nugroho D. HANANTO^{1*+}, Safri BURHANUDDIN², Marina FREDERIK³, Udrekh UDREKH³, Ramadhan ADHITAMA⁴, Asrafil ASRAFIL⁵, Sahab SAHABUDDIN⁶, Omar MOEFTI³, Bondan RIYALDA³, Muhammad IRFAN³, Dimas PUTRA³ ¹Indonesian Institute of Sciences, ²University of Hassanuddin, ³Agency for the Assessement and Application of Technology (BPPT), ⁴University of Trisakti, ⁵University Tadulako, ⁶University of Hassannuddin

SE06 / Tectonics, Minerals, Metals and Gems Resources of Asia Oceania Region

Tue - 30 Jul | MR328

 Time
 13:30-15:30

 Chair(s)
 Khin ZAW, University of Tasmania

SE06-D2-PM1-328-001 | SE06-A026 (Invited)

Geochemical Constraints on Scandium and REE Enrichment During Nickel Laterite Formation in the Infanta Deposit, South Palawan, Philippines

Jillian Aira GABO-RATIO^{1#+}, Kosei NODA², Kotaro YONEZU², Rogel SANTOS³

¹University of the Philippines Diliman, ²Kyushu University, ³MacroAsia Mining Corporation

SE06-D2-PM1-328-002 | SE06-A011

Ore Mineralogy, Ore Textures and Genesis of Phaungdaw Lead Skarn Deposit, Pyawbwe Township, Mandalay Region, Myanmar Yin Yin AYE^{1#+} ¹Mawlamyine University

SE06-D2-PM1-328-003 | SE06-A019

Geology and Geochemistry of Gold Mineralizations in Tachileik-Tar Lay Area, Tachileik and Tar Lay Townships, Shan State (East), Myanmar Zaw MYO HTET^{1#+} ¹University of Yangon

SE06-D2-PM1-328-004 | SE06-A029

Scapolite Occurrences in the Meta-sediments and Meta-volcanics of Proterozoic Delhi Supergroup: A Link to Base Metal Mineralization Prabodha SAHOO^{1#+}, Janmejaya SAHOO², Jyoti Priyam SHARMA³, Israil KHAN², Venkatesh AKELLA³ ¹Indian Institute of Technology (Indian School of Mines) Dhanbad, ²Geological Survey of India, ³Indian School of Mines

SE06-D2-PM1-328-005 | SE06-A008

Mineralization Characteristics of Shangalon-Kyungalon Porphyry Related Copper-molydenum-gold Deposit, Kawlin Township, Sagaing Region, Myanmar Kyaw Zin OO¹, Khin ZAW^{2#+} ¹206, Goldsmith Rd, Kyaunggyi ward, Pyay, Myanmar, ²University

SE06-D2-PM1-328-006 | SE06-A023

of Tasmania

Incremental Emplacement of the Late Jurassic Mid-crustal, Lopolith-like Qitianling Pluton and Implication for Mesozoic Tectonic Setting in South China Bo WANG^{1‡+}, Hongsheng LIU², Yan CHEN³, Guillaume MARTELET⁴, Michel FAURE³, Bruno SCAILLET³ ¹Nanjing University, ²Central-South University, ³University of Orleans, ⁴Bureau of Geological and Mining Research

SE06-D2-PM1-328-007 | SE06-A021

The Discovery of Mesoproterozoic Magmatic Generation in East Central Indochina Block and its Significance to the Regional Tectonic Evolution Hai Thanh TRAN^{1‡+}, Hau Vinh BUI¹, Hiep Huu NGUYEN¹, Thanh Xuan NGO¹, Khin ZAW² ¹Hanoi University of Mining and Geology, ²University of Tasmania

SE06-D2-PM1-328-008 | SE06-A018

Inhomogeneous Thinning of Cratonic Lithosphere Keel by Tectonic Extension: The Early Cretaceous Jiaodong-liaodong Peninsula Extensional Provinces, Eastern North China Craton Junlai LIU¹⁸⁺

¹China University of Geosciences (Beijing)

PS18 / Science and Exploration of Mars and Venus Tue - 30 Jul | MR310

 Time
 13:30-15:30

 Chair(s)
 Varun SHEEL, Physical Research Laboratory

PS18-D2-PM1-310-001 | PS18-A004 (Invited)

Oxidants on Mars: Role of Radiolysis, Photochemistry and Surface-atmosphere Interaction

Sushil ATREYĀ^{1#+}, Paul MAHAFFY², Therese ENCRENAZ³, Ralf KAISER⁴, Eric WILSON⁵

¹University of Michigan, ²NASA Goddard Space Flight Center, ³Paris Observatory, ⁴University of Hawaii, ⁵University of Michigan Alumnus

PS18-D2-PM1-310-002 | PS18-A005 (Invited)

Martian Aurora and its Causative Mechanisms: Maven Observations

S.A. HAIDER^{1#+}, Masoom P JETHWA¹, David A. BRAIN², Robert LILLIS³

¹Physical Research Laboratory, ²University of Colorado Boulder, ³University of California, Berkeley

PS18-D2-PM1-310-003 | PS18-A025

The Evolution of the Mars Ionosphere over Consecutive MEX Orbits from Radio Occultation

Martin PATZOLD¹⁺⁺, Silvia TELLMANN², Kerstin PETER², Bernd HAEUSLER³, Tom ANDERT³, Matthias HAHN¹, David P. HINSON⁴

¹University of Cologne, ²Rhenish Institute for Environmental Research, ³Universität der Bundeswehr München, ⁴Stanford University

PS18-D2-PM1-310-004 | PS18-A001

Martian Upper Atmospheric Wave Activities from Multi-satellite Accelerometers Observations and GCM Model Shuanggen JIN^{1,2#+}, Jiandong LIU³, Yawen LI¹

¹Nanjing University of Information Science & Technology, ²Shanghai Astronomical Observatory, Chinese Academy of Sciences, ³Chinese Academy of Sciences

PS18-D2-PM1-310-005 | PS18-A023

The Influence of Atmospheric Dust on the Atmosphere and Ionosphere of Mars as Seen by the Radio Science Experiment Mars on Mars Express

Silvia TELLMANN^{1#+}, Kerstin PETER², Martin PÄTZOLD¹, Bernd HÄUSLER³, David P. HINSON⁴

¹Rhenish Institute for Environmental Research, ²University of Cologne, ³Universität der Bundeswehr München, ⁴Stanford University

PS18-D2-PM1-310-006 | PS18-A018

Recent Improvements of the LMD GCM to Better Model the Martian Water and Dust Cycles Ehouarn MILLOUR¹⁸⁺, Francois FORGET², Margaux VALS³,

Aymeric SPIGA¹, Chao WANG² ¹Sorbonne Universite, ²University Pierre et Marie Curie, ³Laboratoire de Meteorologie Dynamique

PS18-D2-PM1-310-007 | PS18-A032

Mars Dust Storm Dynamics and Convective Earth Analogs

Scot RAFKIN^{1#+}, Jorge PLA-GARCIA², Cecilia LEUNG³ ¹Southwest Research Institute, ²Centro de Astrobiología (CSIC-INTA), ³The University of Arizona

PS18-D2-PM1-310-008 | PS18-A030

Effect of Dust on Martian Ozone Varun SHEEL^{1#+}, Ashimananda MODAK¹ ¹Physical Research Laboratory

PS02 / Plasma - Surface Interactions with Airless Bodies in the Solar System

Tue - 30 Jul | MR311

Time	13:30-15:30
Chair(s)	Jan DECA, University of Colorado Boulder Charles LUE, Swedish Institute of Space Physics

PS02-D2-PM1-311-001 | PS02-A003

Plasma Observation at Very Low Altitude Around Lunar Magnetic Anomalies Yoshifumi SAITO^{1‡+}, Masaki N. NISHINO¹, Shoichiro YOKOTA², Hideo TSUNAKAWA³

¹Japan Aerospace Exploration Agency, ²Osaka University, ³Tokyo Institute of Technology

PS02-D2-PM1-311-002 | PS02-A011

Numerical Simulation of Solar Wind Scattering by Lunar Crustal Magnetic Field Andrey DIVIN^{1#+}, Jan DECA², V. OLSHEVSKY³, Tara AHMADI^{1,4}, Stefano MARKIDIS³, Vladimir SEMENOV¹, Roman BELIAEV¹

¹Saint Petersburg State University, ²University of Colorado Boulder, ³KTH Royal Institute of Technology, ⁴The University of Tokyo

PS02-D2-PM1-311-003 | PS02-A007

Mapping the Lunar Wake Potential Structure with Artemis Data

Shaosui XU^{1#+}, Andrew POPPE¹, Jasper HALEKAS², James MCFADDEN¹, David MITCHELL¹, Yuki HARADA³ ¹University of California, Berkeley, ²The University of Iowa, ³Kyoto University

PS02-D2-PM1-311-004 | PS02-A006 (Invited)

Interactions Between Reflected Ions and Ultra Low Frequency Plasma Waves at the Moon Stephanie HOWARD^{1‡+}, Jasper HALEKAS¹, William M. FARRELL², Karl-Heinz GLASSMEIER³

¹The University of Iowa, ²NASA Goddard Space Flight Center, ³Technische Universitat Braunschweig

PS02-D2-PM1-311-005 | PS02-A009 (Invited)

Particle-in-cell Simulation Study on the Dayside Magnetopause in a Small-scale Magnetosphere Hideyuki USUI^{1#+}, Satoki OKI¹, Yohei MIYAKE¹ ¹Kobe University

PS02-D2-PM1-311-006 | PS02-A012

A New Perspective on Moon - Solar Wind Interaction After Chandrayaan-1 Mission Anil BHARDWAJ^{1#+} ¹Physical Research Laboratory

PS02-D2-PM1-311-007 | PS02-A008

Solar Wind Interaction with the Lunar Surface: Observations by the Advanced Small Analyzer for Neutrals on the Rover of Chang'E-4

Martin WIESER^{1#+}, Stas BARABASH¹, Xiao-Dong WANG¹, Aibing ZHANG^{2,3}, Chi WANG², Wenjing WANG² ¹Swedish Institute of Space Physics, ²Chinese Academy of Sciences, ³University of Chinese Academy of Sciences

AS12 / 12th Sasaki Symposium on Data Assimilation for Atmospheric, Oceanic, and Hydrologic Applications

Tue - 30 Jul | MR327

Time	13:30-15:30
Chair(s)	Wei KANG, Naval Postgraduate School Xiang-Yu HUANG, Centre for Climate Research Singapore

AS12-D2-PM1-327-001 | AS12-A011 (Invited)

Assimilation of GOES-R GLM Flash Extent Density in GSI EnKF for the Analysis and Forecast of the 13 July 2018 Mesoscale Convective System

Rong KONG¹, Ming XUE^{1,2*+}, Alex FIERRO³, Chengsi LIU¹, Youngsun JUNG¹, Edward MANSELL³, Donald MACGORMAN ³

¹The University of Oklahoma, ²Nanjing University, ³NOAA National Severe Storms Laboratory

AS12-D2-PM1-327-002 | AS12-A018

Development of a Mobile Water Vapor Raman Lidar and its Application for Data Assimilation Satoru YOSHIDA^{1‡+}, Tetsu SAKAI¹, Tomohiro NAGAI¹, Sho

YOKOTA¹, Hiromu SEKO¹, Yoshinori SHOJI¹, Koichi SHIRAISHI²

¹Japan Meteorological Agency, ²Fukuoka University

AS12-D2-PM1-327-003 | AS12-A004

Research on GRAPES-3DVAR Multigrid Assimilation Scheme Weiyu DING^{1#+}

¹Guangzhou Institute of Tropical and Marine Meteorology, CMA,CHINA

AS12-D2-PM1-327-004 | AS12-A016

Optimization of Multiple Parameters in Physics Schemes Using the Micro-genetic Algorithm in WRF for Quantitative Precipitation Forecast in the Eastern Coastal Region of Korea Sojung PARK¹⁺, Seon Ki PARK¹⁺ ¹Ewha Womans University

AS12-D2-PM1-327-005 | AS12-A022

Using Orthogonal Vector to Improve the Ensemble Space of the ENKF and its Effect on Data Assimilation and Forecasting Shu-Chih YANG¹³⁺, Yung-Yun CHENG¹ ¹National Central University

AS12-D2-PM1-327-006 | AS12-A023

Ensemble Transform Kalman Incremental Smoother and its Potentiality on Severe Weather Prediction Zhe-Hui LIN^{1#+}, Shu-Chih YANG¹ ¹National Central University

AS12-D2-PM1-327-007 | AS12-A019

Efficient Dynamical Downscaling of General Circulation Models Using Continuous Data Assimilation Srinivas DESAMSETTI¹, Hariprasad DASARI¹, Sabique LANGODAN¹, Edriss TITI², Omar KNIO¹, Ibrahim HOTEIT¹⁺⁺ ¹King Abdullah University of Science and Technology, ²Texas A&M University

OS15 / Regional Oceanic Numerical Modeling and Observations

Tue - 30 Jul | MR302

Time13:30-15:30Chair(s)Yusuke UCHIYAMA, Kobe University

OS15-D2-PM1-302-001 | OS15-A025 (Invited)

Building the Kuroshio Extension Observational Network Zhaohui CHEN^{1,2#+}, Lixin WU¹, Xiaopei LIN¹, Xin MA¹, Chun ZHOU¹

¹Ocean University of China, ²Qingdao National Laboratory for Marine Science and Technology

OS15-D2-PM1-302-002 | OS15-A010

Deep Submesoscales: Elephant Seal and Satellite Unravel a Major Pathway Connecting the Ocean Interior to the Surface Lia SIEGELMAN^{1#+}, Patrice KLEIN², Andrew THOMPSON¹ ¹California Institute of Technology, ²The French Research Institute for the Exploitation of the Sea (IFREMER)

OS15-D2-PM1-302-003 | OS15-A032

Numerical Study of Multiple-scale Temporal Variations in 2016 Wind-wave and Wind in the Coastal Area Along the Northern Jiangsu Province, China Xu JIN¹⁵⁺

¹Nanjing University of Information Science & Technology

OS15-D2-PM1-302-004 | OS15-A012

Global Navigational Satellite System Phase Altimetry of the Sea Level: Systematic Bias Effect Caused by Sea Surface Waves Yaroslaw ILYSHIN^{1,2#+}, Artem PADOKHIN³, Vladimir SMOLOV⁴ ¹Moscow State University, ²Kotlenikov Radio Engineering Institute, Moscow, Russia, ³Lomonosov Moscow State University, ⁴Marine Hydrophysical Institute

OS15-D2-PM1-302-005 | OS15-A035

SAM Effects on Zonally Asymmetric Response of Ocean Mixing, Nutrients and Production in the Southern Ocean Hui GAO^{1*+}, Changming DONG^{1,2}, Meibin JIN¹, Hui ZHAO³ ¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles, ³Guangdong Ocean University

OS15-D2-PM1-302-006 | OS15-A011

Mass and Heat Transport Generated by the Kuroshio and Tides Investigated with a High Resolution Downscaled Regional Oceanic Model

Eiji MASUNAGA^{1#+}, Waku KIMURA¹, Taichi KOSAKO², Yusuke UCHIYAMA³

¹Ibaraki University, ²Port and Airport Research Institute, ³Kobe University

OS15-D2-PM1-302-007 | OS15-A034

SST Anomalies in the Mozambique Channel

Guoqing HAN^{1#+}, Changming DONG^{1,2}, Junde LI³, Jingsong YANG³, Yu LIU¹

¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles, ³State Oceanic Administration

OS05 / Coastal and Estuarine Processes

Tue - 30 Jul | Nicoll 1

Time 13:30-15:30

Chair(s) Atsushi FUJIMURA, University of Guam Sung Yong KIM, Korea Advanced Institute of Science and Technology

OS05-D2-PM1-Nicoll 1-001 | OS05-A011

Monitoring and Modeling 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

OS05-D2-PM1-Nicoll 1-002 | OS05-A015

Eddy-current Interaction in the Leeuwin Current off the Lower-west Coast of Australia Qin-Yan LIU^{1#+} ¹Chinese Academy of Sciences

OS05-D2-PM1-Nicoll 1-003 | OS05-A008

Submesoscale Surface Tidal, Vortical, and Residual Circulations in a Semi-enclosed Bay Sung Yong KIM¹⁺⁺, Kyeong Ok KIM² ¹Korea Advanced Institute of Science and Technology, ²Korea Institute of Ocean Science and Technology

OS05-D2-PM1-Nicoll 1-004 | OS05-A001

Seasonal Behaviour of Tidal Damping and Residual Water Level Slope in the Yangtze River Estuary: Identifying the Critical Position and River Discharge for Maximum Tidal Damping Huayang CAI^{1#+} ¹Sun Yat-sen University

OS05-D2-PM1-Nicoll 1-005 | OS05-A002

Temporally Variable Trace Metal Speciation Discharged into Coastal Waters Surrounding Taiwan Kuo-Tung JIANN^{1#+} ¹National Sun Yat-sen University

OS05-D2-PM1-Nicoll 1-006 | OS05-A004

Pelagic Community Respiration and its Response to Environmental Factors in a Subtropical Estuary of China Biyan HE^{1#+}, Guangnan OU¹ ¹Jimei University

AS17 / Atmospheric Chemistry in Highly Polluted Environments: Emissions, Fates, and Impacts

Tue - 30 Jul | MR309

Chair(s) Meng GAO, Hong Kong Baptist University Huan LIU, Tsinghua University Hongliang ZHANG, Louisiana State University

AS17-D2-PM1-309-001 | AS17-A034 (Invited)

Seasonal Prediction of Indian Wintertime Aerosol Pollution Using the Ocean Memory Effect Meng GAO^{1#+} ¹Hong Kong Baptist University

AS17-D2-PM1-309-002 | AS17-A001

A Numerical Simulation Study on the Impact of Smoke Aerosols from Russian Forest Fires on the Air Pollution over Asia Qingzhe ZHU^{1±+} ¹Lanzhou University

AS17-D2-PM1-309-003 | AS17-A004

Effectiveness of Regional Emission Control Measures on Submicron Aerosol Pollution During 2016 G20 Summit in Hangzhou Jun HE¹⁸⁺ ¹University of Nottingham Ningbo China

AS17-D2-PM1-309-004 | AS17-A006 (Invited)

Optimizing Temporal-spatial Distribution of Truck Emission Inventories Using Big Data Analysis Huan LIU^{1‡+}

¹Tsinghua University

AS17-D2-PM1-309-005 | AS17-A021

Long-range Transport of Atmospheric Speciated Mercury in South China Sea Ming-Jie YEH^{1#+}, Chung-Shin YUAN¹, Hung KUO-NING¹, Chen TING-SHUO¹ ¹National Sun Yat-sen University

AS17-D2-PM1-309-006 | AS17-A007

Temporal Characteristics and Vertical Distribution of Atmospheric Ammonia and Ammonium in Winter in Beijing Qingqing WANG^{1±+}, Qi ZHANG², Zhiqiang MA³, Baozhu GE⁴, Conghui XIE⁴, Wei ZHOU⁴, Jian ZHAO⁴, Weiqi XU⁴, Wei DU⁴, Pingqing FU⁵, James LEE⁶, Eiko NEMITZ⁷, Nicholas COWAN⁷, Neil MULLINGER⁷, Xueling CHENG⁴, Libo ZHOU⁴, Siyao YUE⁴, Zifa WANG⁴, Yele SUN⁴

¹Institute of Atmospheric Physics, Chinese Academy of Sciences, ²University of California, Davis, ³China Meteorological Administration, ⁴Chinese Academy of Sciences, ⁵Tianjin University, ⁶University of York, ⁷Centre for Ecology & Hydrology

AS17-D2-PM1-309-007 | AS17-A028

Changes in Atmospheric Carbon Dioxide Concentration and its Delta 13carbon Values of Beijing City Prior to and After Heating in Autumn 2018 Xingkai XU^{1,2*+}, Aiguo LI¹ ¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

IG04 / Natural Hazards and Disaster Risk: Current and Historical Perspectives

Tue - 30 Jul | MR323

Time 13:30-15:30

Chair(s) James TERRY, Zayed University Fiona WILLIAMSON, Singapore Management University

IG04-D2-PM1-323-001 | IG04-A038

The Sichuan Hard Road, A Documentary Film About the Wenchuan 2008 Earthquake Isaac KERLOW^{1#+} ¹Earth Observatory of Sinagpore

M66

IG04-D2-PM1-323-002 | IG04-A039

Factors That Influence the Behavioral Intention of Residents of Barangay Pembo, Makati City, Philippines to Relocate from the West Valley Fault

Charmaine VILLAMIL1#+, Edmund CENTENO2

¹Department of Science and Technology - Philippine Institute of Volcanology and Seismology (DOST-PHIVOLCS), ²University of the Philippines Los Baños

IG04-D2-PM1-323-003 | IG04-A044

Second Oldest Description of Surfing Pyroclastic Surges During the Common Era Unveiled in Forgotten Written Sources in Indonesia

Bachtiar MUTAQIN^{1,2#+}, Franck LAVIGNE², Sunarto SUNARTO¹ ¹Universitas Gadjah Mada, ²Université Paris 1 Panthéon Sorbonne

IG04-D2-PM1-323-004 | IG04-A033

Distribution of Tsunami Interevent Times in the Indian Ocean Sumanta PASARI1#+ ¹BITS Pilani

IG04-D2-PM1-323-005 | IG04-A002 (Invited)

Records and Damage from Recent and Historical Trans-oceanic Tsunamis Kenji SATAKE1#+ ¹The University of Tokyo

IG04-D2-PM1-323-006 | IG04-A017

What is the Best Way to Model a Landslide? Or a Tsunami? Vena Pearl BONGOLAN^{1,2#+}, Joshua Frankie RAYO¹, Jose Marie Antonio MIÑOZA1

¹University of the Philippines Diliman, ²ICSU Regional Office for Asia and the Pacific

IG04-D2-PM1-323-007 | IG04-A011

Perceptions of Tsunami Risk and Efficacy and Evacuation Intentions in Java, Bali, Lombok, and Sumba Indonesia Sarah HALL1#+, Ron HARRIS2, Carolus PRASETYADI3, Gilang SETIADI⁴, Chad EMMETT², Amelia COPE¹, William MESERVY⁵, Irina RAFLIANA⁶, Arif AHMAD⁷

¹Utah Valley University, ²Brigham Young University, ³University Pembangan National, ⁴UPN Veteran Yogyakarta, ⁵Institut de Ciències del Mar (ICM-CSIC), 6Indonesian Institute of Sciences, 7Kompas

SS01 / Satellite Observations for Tropical Cyclone Research

Tue - 30 Jul | Nicoll 3

Time 13:30-15:30 Chair(s) Tsengdar LEE, NASA

SS01-D2-PM1-Nicoll 3-001 | SS01-A002 (Invited)

Assimilation of TC Inner Core Surface Winds by CYGNSS into Forecast Models Christopher RUF1,2#-

¹University of Michigan, ²National Aeronautics and Space Administration

SS01-D2-PM1-Nicoll 3-002 | SS01-A001 (Invited)

Assimilation of Passive and Active Sensors on Satellite to **Improve Tropical Cyclone Forecasts** Kozo OKAMOTO1#+ ¹Japan Meteorological Agency

SS01-D2-PM1-Nicoll 3-003 | SS01-A003 (Invited)

Raindrop Size Distribution Characteristics of Typhoon and Non-typhoon Precipitations Observed over North Taiwan Jayalakshmi JANAPATI¹, Balaji Kumar SEELA^{1,2}, Pay-Liam LIN1#+, Pao WANG2,3

¹National Central University, ²Academia Sinica, ³University of Wisconsin-Madison

SS01-D2-PM1-Nicoll 3-004 | SS01-A004 (Invited)

Future Challenges in Tropical Cyclone Models and the **Emphasis on Integrated Digital Systems** Ben EVANS1#

¹Australian National University

AS06 / Convection and Its Effects on Weather and Climate

Tue - 30 Jul | MR308

Time 16:00-18:00 Chair(s) Ji NIE, Peking University

AS06-D2-PM2-308-001 | AS06-A008 (Invited)

A Model for the Relationship Between Humidity, Instability and Precipitation in the Tropics Martin SINGH1#+, Robert WARREN1, Christian JAKOB1 ¹Monash University

AS06-D2-PM2-308-002 | AS06-A019 (Invited)

Towards Robust Computation of Convective Clouds: **Developing Advanced Turbulence Parameterizations** Xiaoming SHI1#+ ¹Hong Kong University of Science and Technology

AS06-D2-PM2-308-003 | AS06-A009

Modes of Tropical Convection and Their Roles in Transporting **Energy and Moisture** Jia-Yuh YU1#, Yi-Chien CHEN1+ ¹National Central University

AS06-D2-PM2-308-004 | AS06-A005

Similarity Among Atmospheric Thermal Stratifications over **Elevated Surfaces Under Radiative-convective Equilibrium** Ji NIE1#+, Yan XIA1, Shineng HU2, Jun YANG1, Ding MA3 ¹Peking University, ²University of California San Diego, ³Columbia University

AS06-D2-PM2-308-005 | AS06-A014

On the Formation Mechanism for Wintertime Extreme Precipitation Events over the Southeastern Tibetan Plateau Wenyu HUANG1#+, Tianpei QIU1 ¹Tsinghua University

AS06-D2-PM2-308-006 | AS06-A020

Quasi-2-day Convective Disturbances over the Equatorial **Indian Ocean and Western Pacific** Hungjui YU1#+, Hung-Chi KUO1, Richard JOHNSON2, Paul CIESIELSKI2 ¹National Taiwan University, ²Colorado State University

AS06-D2-PM2-308-007 | AS06-A015

Interannual Variation and Regime Shift of the Evaporative Moisture Sources for Wintertime Precipitation over Southern China Zifan YANG1+, Wenyu HUANG1# ¹Tsinghua University

AS30 / Extreme Weather Resiliency: Prediction and **Response Strategies**

Tue - 30 Jul | MR304

16:00-18:00 Time Chair(s) Pay-Liam LIN, National Central University

AS30-D2-PM2-304-001 | AS30-A006 (Invited)

Simulation and Projection of Atmospheric River Activity and Circulation Along the North American Northeast Coast Using GFDL HiRAM Huang-Hsiung HSU1#+, Ying-Ting CHEN1

¹Academia Sinica

AS30-D2-PM2-304-002 | AS30-A028 (Invited)

Impacts of Changing Climate on Wildfire Activity and **Carbonaceous Aerosol Loading**

Sarah LU1#+, Huang-Hsiung HSU2, Chin-An LIN1 ¹University at Albany - State University of New York, ²Academia Sinica

AS30-D2-PM2-304-003 | AS30-A007

Impacts of Cumulus Schemes on the Propagation of MJO Mei-Yu CHANG1#+, Pay LIAM2, Tim LI3, Ming-Dah CHOU2 ¹Central Weather Bureau, ²National Central University, ³University of Hawaii

AS30-D2-PM2-304-004 | AS30-A003

Warming Trends in Summer Heatwaves Seen in the Central **England Temperature Timeseries** David STAINFORTH1#, Sandra CHAPMAN2+, Nicholas WATKINS

¹London School of Economics, ²University of Warwick

AS30-D2-PM2-304-005 | AS30-A020

An Application of Multi-centre Grand Ensemble for Hazard Risk Assessment of Land-impacting Typhoon in the Western North Pacific Kelvin NG1#+, Gregor C. LECKEBUSCH1

¹University of Birmingham

AS30-D2-PM2-304-006 | AS30-A001

A Spatial Assessment of Typhoon Vulnerability Across Vietnam, Based on Hazard Exposure and Adaptive Capacity Kim-Anh NGUYEN^{1,2#+}, James TERRY³, Yuei-An LIOU¹ ¹National Central University, ²Vietnam Academy of Science and Technology, ³Zayed University

AS30-D2-PM2-304-007 | AS30-A013

The Characteristics and Application of Radar Refractivity During 2008 SoWMEX

Hsiu-Wei HSU1+, Ya-Chien FENG2, Pay-Liam LIN1#, Yu-Chieng LIOU

¹National Central University, ²Colorado State University

AS30-D2-PM2-304-008 | AS30-A010

Dynamic Downscaling Studies on Diurnal Variation of Mesoscale Circulation and Precipitation During Mei-Yu Season

Pay-Liam LIN1#+, Chung-Yin WANG1, Chuan-Chi TU1 ¹National Central University

AS44 / Advances in Remote Sensing and Modeling of Fires and Tropospheric Composition in Asia Tue - 30 Jul | MR303

Time	16:00-18:00
Chair(s)	Jun WANG, The University of Iowa Richard ECKMAN, National Aeronautics and Space Administration

AS44-D2-PM2-303-001 | AS44-A019

A Simulation of Acetonitrile to Quantify Effects of Siberian Forest Fires on PM2.5 Concentrations in Korea During the **KORUS-AQ** Campaign

Rokjin J. PARK1#+, Hyeonmin KIM1, Seungun LEE1, Yujin OK1, Chang-Keun SONG²

¹Seoul National University, ²Ulsan National Institute of Science and Technology

AS44-D2-PM2-303-002 | AS44-A009 (Invited)

Aerosol Optical Characteristics and its Vertical Distribution Under Enhanced Haze Pollution Events Affected by Different Aerosol Transportation over Yangtze River Delta Region in Eastern China Huizheng CHE1#+ ¹Chinese Academy of Meteorological Sciences

AS44-D2-PM2-303-003 | AS44-A015 (Invited)

Long-term Variation of Satellite-based PM2.5 and Influence **Factors over East China** Qianshan HE1#+ ¹Shanghai Meteorological Service

AS44-D2-PM2-303-004 | AS44-A029

Satellite Remote Sensing of Aerosols over East Asia: Characterization and Limitation Minghui TAO1#+ ¹China University of Geosciences

AS44-D2-PM2-303-005 | AS44-A014

Satellite-based Estimation of Surface PM/NO2/O3 **Concentrations in Eastern China** Kai OIN1#+ ¹China University of Mining and Technology

AS44-D2-PM2-303-006 | AS44-A027

The GaoFen-5 Satellite for Air Quality Monitoring in China: **General Performance and Preliminary Results** Liangfu CHEN1#+

¹Chinese Academy of Sciences

SE01 / Paleomagnetism and Rock Magnetism Applied to Solving Geological, Geophysical, and Environmental Problems

Tue - 30 Jul | MR330

Time 16:00-18:00

Chair(s) Martin CHADIMA, Advanced Geoscience Instruments Company

SE01-D2-PM2-330-001 | SE01-A008 (Invited)

Paleomagnetic Directions from Fuji Volcano, Japan : Contributions to Secular Variation Akira BABA^{1#+}, Hidetoshi SHIBUYA² ¹Mount Fuji Research Institute Yamanashi Prefectural Government, ²Kumamoto University

SE01-D2-PM2-330-002 | SE01-A004

Paleomagnetic Secular Variations During the Past 40,000 Years from the Bay of Bengal

Shishun WANG^{1‡+}, Liao CHANG¹, Pengfei XUE¹, Shengfa LIU², Xuefa SHI², Jianxing LIU², Jinhua LI³

¹Peking University, ²State Oceanic Administration, ³Chinese Academy of Sciences

SE01-D2-PM2-330-003 | SE01-A017

Domain State Diagnosis in Rock Magnetism: Evaluation of Potential Alternatives to the Day Diagram

Andrew ROBERTS^{14*}, Pengxiang HU¹, Richard HARRISON², David HESLOP¹, Adrian MUXWORTHY³, Hirokuni ODA⁴, Tetsuro SATO⁵, Lisa TAUXE⁶, Xiang ZHAO¹

¹Australian National University, ²University of Cambridge, ³Imperial College London, ⁴National Institude of Advanced Industrial Science

and Technology, ⁵Tohoku University, ⁶University of California, San Diego

SE01-D2-PM2-330-004 | SE01-A006

Paleomagnetic Study of the IODP Site U1335 Sediments in the Eastern Equatorial Pacific - Relative Paleointensity and Inclination Anomaly over the Last 8 Myr Toshitsugu YAMAZAKI^{1#}, Yuhji YAMAMOTO²⁺ ¹The University of Tokyo, ²Kochi University

SE01-D2-PM2-330-005 | SE01-A015

Detrital Remanent Magnetization of Sedimentary Magnetic Inclusions: Implications for Relative Paleointensity Determinations Liao CHANG^{1#+}, Hoabin HONG¹ ¹Peking University

SE01-D2-PM2-330-006 | SE01-A009

Reductive Chemical Demagnetization: A New Method for Magnetic Cleaning Hidetoshi SHIBUYA^{1#+}, Chisato ANAI¹, Nobutatsu MOCHIZUKI¹ ¹Kumamoto University

SE01-D2-PM2-330-007 | SE01-A018

FORCsensei: A Machine Learning Framework to Estimate Optimized First-order Reversal Curve Distributions Andrew ROBERTS¹⁵⁺, David HESLOP¹, Hirokuni ODA², Xiang ZHAO¹, Richard HARRISON³, Adrian MUXWORTHY⁴, Pengxiang HU¹, Tetsuro SATO⁵

¹Australian National University, ²National Institude of Advanced Industrial Science and Technology, ³University of Cambridge, ⁴Imperial College London, ⁵Tohoku University

SE16 / Integrating Our Understanding of the 2018 Mw 7.5 Palu Earthquakes and Its Tsunami

Tue - 30 Jul | MR329

Chair(s) Shengji WEI, Nanyang Technological University Mudrik DARYONO, Indonesian Institute of Sciences -LIPI

SE16-D2-PM2-329-001 | SE16-A001 (Invited)

Repetition of the Twin 1907-1909 and the Recent Mw6.2 2012-Mw7.4 2018 Earthquakes on the Palukoro Fault, Central Sulawesi, Indonesia

Mudrik DARYONO^{1*+}, Danny NATAWIDJAJA² ¹Indonesian Institute of Sciences - LIPI, ²Indonesian Institute of Sciences

SE16-D2-PM2-329-002 | SE16-A012

Seismic Tomography of the Source Area of the 2018 Mw 7.5 Palu Earthquake Ping TONG¹⁺⁺, Muzli MUZLI^{1,2}, Shaolin LIU¹, Shengji WEI¹,

Rahmat TRIYONO²

¹Nanyang Technological University, ²Meteorological, Climatological, and Geophysical Agency

SE16-D2-PM2-329-003 | SE16-A009

A Ray Theory Based Travel Time Calibration Procedure and its Application to the 2018 Mw 7.5 Sulawesi, Indonesia Earthquake Hongyu ZENG^{1#+}, Shengji WEI¹ ¹Nanyang Technological University

SE16-D2-PM2-329-004 | SE16-A010

Complex Super-shear Rupture Process of the 2018 Mw7.5 Palu Earthquake Revealed by the Multiple Point Source Inversions on Teleseismic Waveform Qibin SHI¹⁺, Shengji WEI^{1#}, Hongyu ZENG¹ ¹Nanyang Technological University

SE16-D2-PM2-329-005 | SE16-A011 (Invited)

The 2018 Mw7.5 Palu Earthquake, a Gradually Accelerating Super-shear Rupture Stopped by Stress Shadows in a Complex Fault System

Shengji WEI^{1‡+}, Guangcai FENG², Hongyu ZENG¹, Stacey MARTIN¹, Qibin SHI¹, Muzli MUZLI^{1,3}, Teng WANG⁴, Eric LINDSEY¹, Rahmat TRIYONO³, Judith HUBBARD¹, Paul TAPPONNIER⁵, Kerry SIEH¹

¹Nanyang Technological University, ²Central South University, ³Meteorological, Climatological, and Geophysical Agency, ⁴Peking University, ⁵China Earthquake Administration

SE16-D2-PM2-329-006 | SE16-A004

Hypocenter Relocation of the Aftershocks of the Palu Earthquake, Sulawesi, (Mw 7.5, September 28, 2018) Using Regional Seismic Station

Pepen SUPENDI¹⁺, Andri Dian NUGRAHA¹⁺, Sri WIDIYANTORO¹, Nanang T PUSPITO¹, Daryono DARYONO², Samsul H WIYONO², Shindy ROSALIA¹, Kadek PALGUNADI³, Hasbi Ash SHIDDIQI⁴

¹Bandung Institute of Technology, ²Agency for Meteorology, Climatology, and Geophysics (BMKG), ³King Abdullah University of Science and Technology, ⁴University of Bergen

PS18 / Science and Exploration of Mars and Venus

Tue - 30 Jul | MR310

Time 16:00-18:00

Chair(s) Shuanggen JIN, Nanjing University of Information Science & Technology

PS18-D2-PM2-310-001 | PS18-A002

A Study on Martian Atmospheric Dust and Water Ice Contributions and Their Inter-relations Using MCC, MCS and MARCI Observations Bijay GUHA¹⁺, Jagabandhu PANDA¹⁺

¹National Institute of Technology, Rourkela

PS18-D2-PM2-310-002 | PS18-A028

Localtime-dependent Structures in the Venusian Atmosphere Revealed by Akatsuki Radio Occultation Measurements Takeshi IMAMURA^{1#+}, Hiroki ANDO², Katsuyuki NOGUCHI³, Raj CHOUDHARY⁴, Bernd HÄUSLER⁵, Martin PÄTZOLD⁶, Silvia TELLMANN⁶

¹The University of Tokyo, ²Kyoto Sangyo University, ³Nara Women's University, ⁴Vikram Sarabhai Space Centre, ⁵Universität der Bundeswehr München, ⁶Rhenish Institute for Environmental Research

PS18-D2-PM2-310-003 | PS18-A017

Spatial and Temporal Variability of Venus Cloud Opacity as Viewed with Akatsuki IR2

Takehiko SATOH^{1*+}, Takao SATO², Choon Wei VUN³, Takeshi HORINOUCHI⁴, Javier PERALTA¹

¹Japan Aerospace Exploration Agency, ²Hokkaido Information University, ³SOKENDAI, ⁴Hokkaido University

PS18-D2-PM2-310-004 | PS18-A014

The VenSpec Suite on the ESA Envision Mission to Venus Jorn HELBERT^{1#+}, AnnCarine VANDAELE², Emmanuel MARCQ³, Thomas WIDEMANN⁴, Colin WILSON⁵, Richard GHAIL⁶

¹German Aerospace Center, ²Belgian Institute for Space Aeronomy, 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), ⁴Paris Observatory, ⁵Oxford University, ⁶University of London

PS18-D2-PM2-310-005 | PS18-A024

Ion Escape at Venus: Past, Present and Future Observations Shannon CURRY^{1#+}, Janet LUHMANN¹, Y.J. MA², Stuart BALE¹, Jacob GRUESBECK³, Trevor BOWEN¹, Phyllis WHITTLESEY¹, Roberto LIVI¹, Davin LARSON¹

¹University of California, Berkeley, ²University of California, Los Angeles, ³NASA Goddard Space Flight Center

PS18-D2-PM2-310-006 | PS18-A026

The Venus Ionosphere as Seen by the Akatsuki Radio Science Experiment

Martin PATZOLD^{1#+}, Takeshi IMAMURA², Hiroki ANDO³, Bernd HAEUSLER⁴, Silvia TELLMANN⁵, Michael K. BIRD⁶, Janusz OSCHLISNIOK⁵, Kerstin PETER⁵

¹University of Cologne, ²The University of Tokyo, ³Kyoto Sangyo University, ⁴Universität der Bundeswehr München, ⁵Rhenish Institute for Environmental Research, ⁶University of Bonn

PS18-D2-PM2-310-007 | PS18-A013

Comparison of Horizontal Distributions of Temperature and UV Absorbers at the Venus Cloud-tops Shinichiro KAWASE^{1#+}, Makoto TAGUCHI¹, Tetsuya FUKUHARA¹, Yeon Joo LEE², Atsushi YAMAZAKI³ ¹Rikkyo University, ²The University of Tokyo, ³Japan Aerospace Exploration Agency

PS11 / Exoplanets: Observations, Theories, and Modeling

Tue - 30 Jul | MR311

Time16:00-18:00Chair(s)Jun YANG, Peking University

PS11-D2-PM2-311-001 | PS11-A001 (Invited)

UVSPEX Onboard WSO-UV for Earth-like Upper Atmosphere Observation

Shingo KAMEDA^{1‡+}, Takanori KODAMA², Yui KAWASHIMA³, Masaki KUWABARA⁴, Go MURAKAMI⁴, Keigo ENYA⁴, Masahiro IKOMA⁵, Norio NARITA⁶, Alexander TAVROV⁷, Oleg KORABLEV^{7,8}, Mikhail SACHKOV⁹, Naoki TERADA¹⁰, Hitoshi FUJIWARA¹¹, Motohide TAMURA^{5,6}, Jun NISHIKAWA⁶ ¹Rikkyo University, ²Université de Bordeaux, ³SRON Netherlands Institute for Space Research, ⁴Japan Aerospace Exploration Agency, ⁵The University of Tokyo, ⁶National Astronomical Observatory of Japan, ⁷Space Research Institute of Russian Academy of Sciences, ⁸Moscow Institute of Physics and Technology, ⁹Institute of Astronomy of the Russian Academy of Sciences, ¹⁰Tohoku University, ¹¹Seikei University

PS11-D2-PM2-311-002 | PS11-A009

The Ozone Layer over Tidal-locking Exoplanets Around M Dwarfs

Yongyun HU^{1#+}, Jun YANG¹, Yangcheng LUO¹ ¹Peking University

PS11-D2-PM2-311-003 | PS11-A005 (Invited)

Formation of Super-earths by Tidally Forced Turbulence Cong YU^{1#+} ¹Sun Yat-sen University

PS11-D2-PM2-311-004 | PS11-A008 (Invited)

The Evolution of Planetary System After the Death of the Sun Di-Chang CHEN¹, Ji-Lin ZHOU^{1#}, Ji-Wei XIE¹⁺ ¹Nanjing University

PS11-D2-PM2-311-005 | PS11-A010

Oscillatory Re-orientation of a Slowly Rotating Planet Due to Continental Glaciation Yonggang LIU^{1#+} ¹Peking University

PS11-D2-PM2-311-006 | PS11-A002

Planetary Climate Dynamics over a Wide Range of Orbital and Atmospheric Characteristics Yohai KASPI^{1#+}, Ilai GUENDELMAN¹ ¹Weizmann Institute of Science

PS11-D2-PM2-311-007 | PS11-A003

Transition from Eyeball to Snowball Driven by Sea-ice Drift on Tidally Locked Terrestrial Planets Jun YANG^{1*+} ¹Peking University

AS18 / Organic Aerosols in the Atmosphere

Tue - 30 Jul | MR327

Time 16:00-18:00

Chair(s) Xiang DING, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences Kin Fai HO, The Chinese University of Hong Kong

AS18-D2-PM2-327-001 | AS18-A012 (Invited)

Amines in PM2.5 in Shanghai: Concentrations and Seasonal Variation Jialiang FENG^{1#+} ¹Shanghai University

AS18-D2-PM2-327-002 | AS18-A002

Size-segregated Characteristics of OC, EC and Organic Matters in PM Emitted from Different Types of Ships in China Fan ZHANG^{1#+}, Hai GUO¹ ¹The Hong Kong Polytechnic University

AS18-D2-PM2-327-003 | AS18-A011

Observation of SOA Tracers at a Mountainous Site in Hong Kong: Chemical Characteristics, Origins and Implication on Particle Growth Xiaopu LYU^{1#+}, Hai GUO¹ ¹The Hong Kong Polytechnic University

AS18-D2-PM2-327-004 | AS18-A005

Characteristics and Sources of Organic Aerosols in Hong Kong: Insights from the Measurement of High-resolution Time-of-flight Aerosol Mass Spectrometer

Dawen YAO¹⁺, Xiaopu LYU¹, Hai GUO^{1#}, Tao WANG¹, Allen GOLDSTEIN²

¹The Hong Kong Polytechnic University, ²University of California at Berkeley

AS18-D2-PM2-327-005 | AS18-A008 (Invited)

Isoprene SOA over China: Observation and Implication Xiang DING^{1#+} ¹Guangzhou Institute of Geochemistry, Chinese Academy of Sciences

AS18-D2-PM2-327-006 | AS18-A010

High-resolution Analysis of Vehicle-related Organic Aerosols Observed at a Roadside Site in Hong Kong with the Application of TAG-ToF-MS Hai GUO^{1#+} ¹The Hong Kong Polytechnic University

AS18-D2-PM2-327-007 | AS18-A007

1-octanol Water Partition Coefficient as a Predictor of Liquid-liquid Phase Separation in Mixed Organic/Inorganic Particles

Liudongqing YANG¹⁺, Mikinori KUWATA^{1#} ¹Nanyang Technological University

AS18-D2-PM2-327-008 | AS18-A003

Characterisation of SVOCs from Fuel, Lubricant and Diesel Engine Emissions Utilizing GC×GC-ToF-MS Zhirong LIANG¹⁵⁺, Hai GUO¹ ¹The Hong Kong Polytechnic University

OS15 / Regional Oceanic Numerical Modeling and Observations

Tue - 30 Jul | MR302

Time	16:00-18:00
Chair(s)	Yusuke UCHIYAMA, Kobe University Changming DONG, Nanjing University of Information Science & Technology

OS15-D2-PM2-302-001 | OS15-A038

Submesoscale Instability in Idealized Mesoscale Eddies Changming DONG^{1,2+}, Xingliang JIANG¹

¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles

OS15-D2-PM2-302-002 | OS15-A017

Joint Effects of Physical and Biogeochemical Processes on the Formation of Hypoxia in the Pearl River Estuary Zhongren ZHANG^{1#+}, Jia-Tang HU¹, Shiyu LI¹, Bin WANG² ¹Sun Yat-sen University, ²Dalhousie University

OS15-D2-PM2-302-003 | OS15-A021

Submesoscale-resolving Observations in South China Sea by Fast-sampling Underwater Gliders Ke MA¹⁺, Zhaohui CHEN^{1,2#}, Yanhui WANG³, Zhao JING¹, Shuxin WANG³, Lixin WU¹ ¹Ocean University of China, ²Qingdao National Laboratory for Marine

Science and Technology, ³Tianjin University

OS15-D2-PM2-302-004 | OS15-A024

Observational Study on Turbulent Heat Flux Within a Warm Eddy in the Kuroshio Extension

Yueqi ZHANG^{1,2+}, Zhaohui CHEN^{1,2#}, Bin WANG³ ¹Ocean University of China, ²Qingdao National Laboratory for Marine Science and Technology, ³National Ocean Technology Center

OS15-D2-PM2-302-005 | OS15-A026

Mapping of Sea Ice Leads and Melt Ponds from Multi-angle Imaging Spectro-radiometer Using Super-resolution Restoration

Yu TAO^{1#+}, Jan-Peter MULLER¹, Jennifer SUTHERLAND¹ ¹University College London

OS15-D2-PM2-302-006 | OS15-A027

Numerical Study of Coupled Air-sea Interaction During Typhoon Kalmaegi in the South China Sea Kenny T.C. LIM KAM SIAN^{1‡+}, Changming DONG^{1,2}, Hailong LIU³

¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles, ³Shanghai Jiao Tong University

OS15-D2-PM2-302-007 | OS15-A015

An Atmosphere-wave Regional Coupled Model over the East China Sea Delei Ll^{1#+}, Joanna STANEVA², Sebastian GRAYEK ², Arno

BEHRENS², Baoshu YIN¹ ¹Chinese Academy of Sciences, ²Helmholtz Zentrum Geesthacht

OS05 / Coastal and Estuarine Processes OS12 / Dynamic Coasts, Past, Present, Future

Tue - 30 Jul | Nicoll 1

Time	16:00-18:00
Chair(s)	Atsushi FUJIMURA, University of Guam Serena LEE, Griffith University

OS05-D2-PM2-Nicoll 1-001 | OS05-A013

Experimental Study of Periodic Waves Passing Through Floating Vegetation Domain Xiaochun TANG¹⁺, Pengzhi LIN², Philip Li-Fan LIU^{1#} ¹National University of Singapore, ²Sichuan University

OS05-D2-PM2-Nicoll 1-002 | OS05-A017

Recent Development in Coastal Oceanography Xiao Hua WANG^{1#+} ¹University of New South Wales

OS05-D2-PM2-Nicoll 1-003 | OS05-A018 (Invited)

Distribution and Source Estimation of Polycyclic Aromatic Hydrocarbons in the Coastal Sediment Cores from Seto Inland Sea, Japan

Hiroaki TSUJI¹⁺, Waqar JADOON^{1,2}, Yoko NUNOME¹, Hideo YAMAZAKI³, Kazuhiko TAKEDA¹, Hiroshi SAKUGAWA^{1‡} ¹Hiroshima University, ²Hazara University, ³Kindai University

OS12-D2-PM2-Nicoll 1-004 | OS12-A001

Rock Oyster 14C Chronologies for Comparing Relative Sea Levels in Thailand Since the Mid-Holocene James TERRY^{1‡+}, Grahame OLIVER² ¹Zayed University, ²Nanyang Technological University

OS12-D2-PM2-Nicoll 1-005 | OS12-A010

Tidal Responses to Future Sea-level Trend on the Shelf of the South Yellow Sea Xi FENG^{1±+} ¹Hohai University

OS12-D2-PM2-Nicoll 1-006 | OS12-A006

Extending Instrumental Sea-level Records in Southeast Asia Using Coral Microatolls

Jedrzej MAJEWSKI^{1*+}, Aron MELTZNER¹, Adam SWITZER¹, Danny NATAWIDJAJA², Bambang SUWARGADI², Benjamin HORTON^{1,3}

¹Nanyang Technological University, ²Indonesian Institute of Sciences, ³Rutgers University

AS17 / Atmospheric Chemistry in Highly Polluted Environments: Emissions, Fates, and Impacts

Tue - 30 Jul | MR309

Time 16:00-18:00

Chair(s) Lin ZHANG, Peking University Jianlin HU, Nanjing University of Information Science & Technology Shovan Kumar SAHU, Tsinghua University

AS17-D2-PM2-309-001 | AS17-A037 (Invited)

Background and Anthropogenic Source Contributions to 2016-2017 Surface Ozone Pollution over China Lin ZHANG^{1#+}, Xiao LU¹ ¹Peking University

AS17-D2-PM2-309-002 | AS17-A020

Top-down NOx Estimation from OMI Sensor over East Asia Kyung Man HAN¹⁺, Chul Han SONG^{1#} ¹Gwangju Institute of Science and Technology

AS17-D2-PM2-309-003 | AS17-A018

Surface Ozone Pollution and the Meteorological Influences in the Yangtze River Delta Region, China Min XIE^{1#+}, Tijian WANG¹, Gao DA¹, Lei SHU¹ ¹Nanjing University

AS17-D2-PM2-309-004 | AS17-A023

Behavior of Ground Level Ozone and its Association with Precursors and Meteorology in Delhi, India Komal SHUKLA¹⁺⁺, Mukesh kumar KHARE² ¹Indian Institute of Technology Delhi, India, ²Indian Institute of Technology Delhi

AS17-D2-PM2-309-005 | AS17-A012

Modeling Analysis of O3–precursor Relationships in the Nanjing Metropolitan Area of China Jianlin HU^{1‡+}, Jingyi LI¹, Lin LI¹ ¹Nanjing University of Information Science & Technology

AS17-D2-PM2-309-006 | AS17-A029

Effects of Climate Change and Emission Scenarios on Air Pollution in India Hao GUO¹⁺, Kaiyu CHEN¹, Sri KOTA², Hongliang ZHANG^{1#} ¹Louisiana State University, ²Indian Institute of Technology Delhi

AS17-D2-PM2-309-007 | AS17-A027

Source-apportionment of Black Carbon (BC) and Carbon Monoxide (CO) over South Asia Using Isotopic Constraints Sanjeev DASARI^{1‡+}, Orjan GUSTAFSSON¹, August ANDERSSON¹, Henry HOLMSTRAND¹, Elena POPA², Thomas ROCKMANN², Krishnakant BUDHAVANT¹ ¹Stockholm University, ²Utrecht University

AS17-D2-PM2-309-008 | AS17-A010

Aerosol Radiative Effects on Tropospheric Photochemistry with GEOS-Chem Simulations Rong TIAN¹⁺, Xiaoyan MA¹⁺ ¹Nanjing University of Information Science & Technology

IG04 / Natural Hazards and Disaster Risk: Current and Historical Perspectives

Tue - 30 Jul | MR323

Time 16:00-18:00

Chair(s) Yolanda LIN, Nanyang Technological University Vena Pearl BONGOLAN, University of the Philippines Diliman

IG04-D2-PM2-323-001 | IG04-A012

The Kabu-ido System: Climate Change and a Pioneering Collective Action in Groundwater Commons in Japan Takahiro ENDO¹⁵⁺, Kaoru KAMATANI², Masaki SANO³ ¹Osaka Prefecture University, ²Ritsumeikan University, ³Waseda University

IG04-D2-PM2-323-002 | IG04-A003

Approaching Disaster and Long-term Climate Records from a Humanities Perspective Fiona WILLIAMSON^{1#+}

¹Singapore Management University

IG04-D2-PM2-323-003 | IG04-A041

Integrated Threshold Development for Parametric Insurance Solutions (INPAIS) for Guangdong Province China Gregor C. LECKEBUSCH^{1#}, Kelvin NG¹⁺, Qian YE², Gary WEI³ ¹University of Birmingham, ²Beijing Normal University, ³Swiss Reinsurance Company Ltd Beijing Branch

IG04-D2-PM2-323-004 | IG04-A009

Research on 3D Simulation of Sea Level Rise Based on Digital Earth

Jian LIU^{1#+}, Xiangtao FAN¹, Hongdeng JIAN¹, Qingwen JIN¹ ¹Chinese Academy of Sciences

IG04-D2-PM2-323-005 | IG04-A028

DEM-based Morphometric Analysis of Sinkholes in Cebu City, Philippines Regina Martha LUMONGSOD^{1‡+}, Noelynna RAMOS¹, Carla DIMALANTA¹ ¹University of the Philippines Diliman

IG04-D2-PM2-323-006 | IG04-A026

Advance Catastrophe Risk Modelling Using the Innovative Numerical Algorithms Shuangcai LI^{1#+}, Arno HILBERTS¹, Christian MORTGAT¹ ¹Risk Management Solutions

IG04-D2-PM2-323-007 | IG04-A030

Seismic Risk in Singapore: An Extreme Disaster Scenario Study

Tao LAI¹⁺, Yizhong QU¹, Yue-Jun YIN^{1#}, Bingming SHEN-TUE¹ ¹AIR Worldwide

IG04-D2-PM2-323-008 | IG04-A029

Consequence-Driven Risk Framework for Uncovering Black Swans: Seismic Risk Assessment of Buildings in Singapore Yolanda LIN^{1#+}, David LALLEMANT¹, Susanna JENKINS¹ ¹Nanyang Technological University

HS Poster Presentations

Tue - 30 Jul, 13:30 - 15:30 | EXHIBITION HALL

HS01-D2-PM1-P-001 | HS01-A001

Flood Risk Assessment Based on Flood Damage Data for the Korean Peninsula Hyun Il CHOI^{1#+}, Jong Seok LEE¹, Yu Rim LEE¹, Yun Taek LIM¹, Yongwon SEO¹

¹Yeungnam University

HS01-D2-PM1-P-002 | HS01-A002

Application of AHP and GIS Model for Delineation of Groundwater Protection Area Near a Saline-fresh Water Mixed Waterway Gyoo-Bum KIM^{1±+} ¹Daeieon University

HS01-D2-PM1-P-003 | HS01-A004

Floodgates Effectiveness on the Alleviation of Flood Risk in Urban Areas

Jia-Yu WANG^{1#+}, Chia-Ho WANG¹, Tsang-Jung CHANG¹ ¹National Taiwan University

HS01-D2-PM1-P-004 | HS01-A005

Estimation and Comparative Analysis of Probability Rainfall Using the AWS Rain Data in Seoul

, Heeseong PARK¹, Gunhui CHUNG², Jung Hoon HYUN^{2*+} ¹Korea Institute of Civil Engineering and Building Technology, ²Hoseo University

HS01-D2-PM1-P-005 | HS01-A007

Snow Vulnerability Index in Jeolla-do, South Korea Using Entropy Theory Gunhui CHUNG^{1#}, Joonhyeok HA¹⁺ ¹Hoseo University

HS01-D2-PM1-P-006 | HS01-A010

Flood Risk Assessment on Life Casualties - A Case Study Through a Real Event in Taiwan Tsang-Jung CHANG^{1#+}, Albert S. CHEN² ¹National Taiwan University, ²University of Exeter

HS01-D2-PM1-P-008 | HS01-A012

The Study of Water Quality Influenced by Flow Rate Changes Due to Dam Discharge

Bomin YEOM¹⁺, Hye Won LEE¹, Yongseok LEE², Nakyoung KIM³, Jung Hyun CHOI^{1#}

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HS01-D2-PM1-P-009 | HS01-A013

Long-term Trend Analyses of Water Qualities of the River Influenced by Dam Discharge Jiwon KIM¹⁺, Hye Won LEE¹, Yongseok LEE², Jung Hyun CHOI^{1‡}

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HS01-D2-PM1-P-012 | HS01-A020

Development of a Vehicle Loss Assessment Method for Flood Damage Model

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HS01-D2-PM1-P-013 | HS01-A021

Development of the Probability of Occurrence of Disaster Victim Damage Seungjin HONG^{1‡+}, Gilho KIM², Cheonkyu CHOI¹, Kyung Tak KIM² ¹Korea Institute of Civil Engineering and Building Technology, ²Korea Institute of Construction Technology

HS01-D2-PM1-P-014 | HS01-A022

Water Environment Around Kusatsu-Shirane Volcano, Japan and Consideration of the Effect of Eruption in January 2018 Yoshihiro IGARI^{1#+}, Koji KODERA¹, Kazuki ASAMI¹, Go YAMAKI¹, Masaki HORIUCHI¹ ¹Hosei University

HS01-D2-PM1-P-015 | HS01-A024

Water Environment After the Eruption of Hakone Volcano (150629) Masaki HORIUCHI^{1#+}, Koji KODERA¹, Kazuki ASAMI¹, Yoshihiro IGARI¹, Go YAMAKI¹ ¹Hosei University

HS02-D2-PM1-P-016 | HS02-A003

Representing Reservoir Storage Dynamics and Operations in the Variable Infiltration Capacity (VIC) Model Thanh Duc DANG^{1*+}, Stefano GALELLI¹, A.F.M. Kamal CHOWDHURY¹ ¹Singapore University of Technology and Design

HS02-D2-PM1-P-018 | HS02-A008

Reservoir Regulation Could Significantly Influence Flooding Dynamics in the Chao Phraya Delta Dung VU TRUNG^{1#+}, Stefano GALELLI¹, Thanh Duc DANG¹ ¹Singapore University of Technology and Design

HS02-D2-PM1-P-019 | HS02-A012

On the Change of River Water Quality in Japan Viewed from the Nationwide Observation Record Koji KODERA^{1#+} ¹Hosei University

HS03-D2-PM1-P-020 | HS03-A004

A Unified Framework Toward Robust and Efficient Ensemble Flood Forecasting Vinh TRAN¹, Jongho KIM^{1#+} ¹University of Ulsan

HS03-D2-PM1-P-022 | HS03-A006

A Comparative Study of Short-term Streamflow Forecasting Models

Yuqing SUN¹⁺, Jun NIU^{1‡}, Bellie SIVAKUMAR^{2,3} ¹China Agricultural University, ²University of New South Wales, ³Indian Institute of Technology Bombay

HS03-D2-PM1-P-023 | HS03-A011

Global High-resolution River Discharge Based on the Algorithms of Drainage Network Extraction Jiaye LI^{1,2+}, Tiejian LI², Suning LIU³, Haiyun SHI^{3#} ¹The University of Hong Kong, ²Tsinghua University, ³Southern University of Science and Technology

HS03-D2-PM1-P-026 | HS03-A017

Usage of Machine Learning for Precipitation Forecast Daniel Hui Loong NG^{1,2*+}, Srivatsan VIJAYARAGHAVAN¹, Ngoc Son NGUYEN¹, Shie-Yui LIONG¹ ¹National University of Singapore, ²Tropical Marine Science Institute

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HS03-D2-PM1-P-027 | HS03-A021

Comparison of Short Term Runoff Simulation Based on Consecutive Rainfall Events Using CAT and ConSEB Model Deokhwan KIM¹⁺, Hyeonjun KIM^{1‡}, Cheol Hee JANG¹ ¹Korea Institute of Civil Engineering and Building Technology

HS03-D2-PM1-P-028 | HS03-A029

Investigation of Influences of Point Source and Non-point Source Pollution on the Pearl River Basin in South China Xiao FENG¹⁵⁺, Ji CHEN¹ ¹The University of Hong Kong

HS03-D2-PM1-P-029 | HS03-A032

Quantifying Uncertainty Sources on Main and Interaction Effect in an Ensemble of Hydrological Climate-impact Projections

Lin TIAN¹⁺, Aizhong YE^{1#}, Qingyun DUAN^{1,2} ¹Beijing Normal University, ²Hohai University

HS03-D2-PM1-P-030 | HS03-A034

Evaluation of Parameter Interaction Effect of a Hydrological Model Using the Sparse Polynomial Chaos Method Heng WANG^{1±+}, Qingyun DUAN^{1,2}, Wei GONG¹ ¹Beijing Normal University, ²Hohai University

HS03-D2-PM1-P-031 | HS03-A035

Quantitative Attribution of Natural and Human Factors for Dramatic Reduction in Streamflow and Sediment in a Representative Watershed in the Loess Plateau Pengcheng SUN^{1*+}, Yiping WU¹ ¹Xi'an Jiaotong University

HS04-D2-PM1-P-032 | HS04-A002

Recurrence Intervals of Landslides Triggered by Simulated Typhoon Events in Northern Taiwan Under Climate Change Jun-Jih LIOU^{1‡+}, Chi-Wen CHEN¹, Fang-Yi CHU¹ ¹National Science and Technology Center for Disaster Reduction

HS04-D2-PM1-P-033 | HS04-A003

Spatiotemporal Analysis of Standardized Precipitation Index in Jianan Irrigation District, Taiwan Ke-Sheng CHENG^{1#+} ¹National Taiwan University

HS04-D2-PM1-P-034 | HS04-A004

The Relationship Between Precipitation Extremes of Different Temporal Scales and Temperature Zhiyong YANG^{1#+}, Xichao GAO¹, Jiahong LIU¹, Weiwei SHAO¹ ¹China Institute of Water Resources and Hydropower Research

HS04-D2-PM1-P-036 | HS04-A006

Assessment of Weather Generators at Fine Spatiotemporal Scales

Yan-Cheng CHEN^{1#+}, Chia-Jeng CHEN¹ ¹National Chung Hsing University

HS05-D2-PM1-P-037 | HS05-A006

The Impact Assessment of Agricultural Non-point Source Pollution on Water Quality in Saemangeum Reservoir Chansung OH^{1s+}, Woohan RYU¹, Hanyong UM¹ ¹Korea Rural Community Corporation

HS05-D2-PM1-P-038 | HS05-A008

The Relationship Between Soil Moisture and Vegetation with Severe Droughts in California

Linghua QIU¹⁺, Ji CHEN^{1#}, Haiyun SHI², Liqun SUN³, Jun NIU⁴ ¹The University of Hong Kong, ²Southern University of Science and Technology, ³Chinese Academy of Sciences, ⁴China Agricultural University

HS05-D2-PM1-P-039 | HS05-A010

Comparison of Maize Water Consumption at Different Scales Between Mulched and Non-mulched Croplands Yu FENG^{1*+}, Daozhi GONG², Ji CHEN¹

¹The University of Hong Kong, ²Chinese Academy of Agricultural Sciences

HS05-D2-PM1-P-040 | HS05-A012

Study on the Discharge Characteristics of Pollutant Load from Upland in Reclaimed Saemangeum Area Chansung OH^{1#+}, Donguk SEO¹, Hanyong UM¹ ¹Korea Rural Community Corporation

HS05-D2-PM1-P-041 | HS05-A013

Underestimation of Soil Respiration in a Desert Ecosystem Keyu $FA^{1\sharp\ast}$

¹China Agricultural University

HS06-D2-PM1-P-044 | HS06-A005

Development of Sediment Caution Zone Risk Map Due to Climate Change Hiromichi SUZUKI¹, Yosuke SAITO¹, Thi Thanh Thuy LE¹, Seiki KAWAGOE^{1#+} ¹Fukushima University

HS06-D2-PM1-P-045 | HS06-A008

Assessment of Extreme Rainfall-induced Landslide Susceptibility by Using the Modified Logistic Regression and the Following Annual Landslide Susceptibility Based on Annual Landslide Evolution: A Case Study in Southwestern Taiwan Chunhung WU¹⁵⁺

¹Feng Chia University

HS06-D2-PM1-P-047 | HS06-A011

Comparison of Extreme Rainfall-induced Landslides in Taiwan Chunhung WU^{1#+} ¹Feng Chia University

HS06-D2-PM1-P-048 | HS06-A013

Frequency Analysis of Probable Precipitation for Hydraulic Structures Design Under Changing Climate in Seoul Sunkwon YOON^{1**} ¹Seoul Institute of Technology

HS06-D2-PM1-P-049 | HS06-A014

Generation of Regional Maximum Flood Using Spatial Runoff Data Extension Concept Kim KI HYEON¹⁺, Ga-Young CHOI¹, Jung YONG^{1‡} ¹Wonkwang University

HS06-D2-PM1-P-050 | HS06-A015

Accuracy Evaluation of Quadratic Resistance Model for Spread of Debris-flow Dong Hyun KIM¹⁺, Seok II JEONG¹, Chang Geun SONG², Seung Oh LEE^{1#} ¹Hongik University, ²Incheon National University

HS06-D2-PM1-P-051 | HS06-A016

Real-time Correct of Ensemble Numerical Weather Predictions Using Machine Learning Chia-Yen CHOU^{1*+}, Gwo-Fong LIN¹, Ming-Jui CHANG¹, I-Hang HUANG¹ ¹National Taiwan University

HS06-D2-PM1-P-052 | HS06-A017

Development of Rainfall-induced Shallow Landslide Warning System for Human Settlement in the Mountainous Area

Jui-Yi HO1²⁺, Xiu-Man HUANG¹, Chih-Hsin CHANG¹, Kwan Tun LEE², Gwo-Fong LIN³

¹National Science and Technology Center for Disaster Reduction, ²National Taiwan Ocean University, ³National Taiwan University

HS06-D2-PM1-P-053 | HS06-A018

A Study on the Establishment of Rainfall Criteria Using Probable Rainfall and Flood Damage Data Cheonkyu CHOI^{1#+}, Seungjin HONG¹, Gilho KIM², Kyung Tak KIM²

¹Korea Institute of Civil Engineering and Building Technology, ²Korea Institute of Construction Technology

HS07-D2-PM1-P-054 | HS07-A009

The Runoff and Sediment Processes Affected by Soil Freezing and Thawing Along Alpine Meadow Hillslope Xiaonan SHII^{±+}, Fan ZHANG¹, Li WANG¹ ¹Chinese Academy of Sciences

HS07-D2-PM1-P-055 | HS07-A011

Soil Erosion Risk Assessment and Climatic Impacts on it in the Mid-Yarlung Tsangpo River Region Li WANG¹⁺, Fan ZHANG^{1‡}, Xiaonan SHI¹, Xiong XIAO¹ ¹Chinese Academy of Sciences

HS07-D2-PM1-P-056 | HS07-A016

Analysis on Surface Heating Field by Using Different Methods over the Tibetan Plateau

Weiqiang MA^{1#+}, Yaoming MA¹, Yizhe HAN¹, Lei ZHONG² ¹Chinese Academy of Sciences, ²University of Science and Technology of China

HS07-D2-PM1-P-057 | HS07-A017

Development and Progress of High Resolution CMA Land Surface Data Assimilation System Shuai HAN¹⁺, Chunxiang SHI¹⁺, Bin XU¹, Lipeng JIANG¹, Shuai SUN¹, Tao ZHANG¹

¹China Meteorological Administration

HS07-D2-PM1-P-058 | HS07-A018

A Land Data Assimilation Study Based on LIS with FY3C Land Surface Temperature and Microwave Brightness Temperature

Chunxiang SHI^{1#+}, Binghao JIA², Shuai SUN¹, Shuai ZHANG³, Xiao LIANG¹, Lipeng JIANG¹

¹China Meteorological Administration, ²Chinese Academy of Sciences, ³Nanjing University of Information Science & Technology

HS07-D2-PM1-P-061 | HS07-A026

Variation of Carbon Dioxide and Heat Fluxes over the Southern Side of Central Himalayas, Nepal Madan SIGDEL^{1#+}, Ram Hari ACHARYA¹, Yaoming MA² ¹Tribhuvan University, ²Chinese Academy of Sciences

HS08-D2-PM1-P-063 | HS08-A006

A Study of Snowmelt Runoff Pollutions in Urban Catchment in Semi-arid Area of China Jingshu WANG¹, Jeanne Jinhui HUANG^{1#+} ¹Nankai University

HS08-D2-PM1-P-064 | HS08-A007

Characteristics of Heavy Metals and Nutrients Build-up with Road Sediments in Semi-arid Area of China Jingshu WANG¹, Jeanne Jinhui HUANG^{1#+} ¹Nankai University HS08-D2-PM1-P-065 | HS08-A008

An Assessment of Vegetation Stability in Saudi Arabia with Observation and Modeling Approach Hesham EL-ASKARY^{1‡+}, Wenzhao LI¹, Mohamed QURBAN², Mohammad H. Makkawi ASHRI² ¹Chapman University, ²King Fahd University of Petroleum and Minerals (KFUPM)

HS09-D2-PM1-P-067 | HS09-A003

Analysing Spatiotemporal Changes of Terrestrial Water Storage in Three Parallel Rivers Basin Based on Grace Data Yu ZHU¹⁺, Shiyin LIU¹⁺, Sidou ZHANG¹, Muhammad SAIFULLAH¹, Ying YI¹, Haijuan LI¹ ¹Yunnan University

HS09-D2-PM1-P-068 | HS09-A004

Geostatistical Models for Merging Radar and Gauge Data Sanghoo YOON^{1‡+} ¹Daegu University

HS09-D2-PM1-P-069 | HS09-A006

Pumping Pattern Recognition from Hot Spring Monitoring Data in Taiwan Hung-Jen LIU^{1‡+}, Nien-Sheng HSU¹ ¹National Taiwan University

HS09-D2-PM1-P-070 | HS09-A008

Develop the Calibration Method for Radar Surface Velocimeter Yi-Jun HUANG^{1#+}, Po-Hsu TSAI¹ ¹National Taiwan University

HS09-D2-PM1-P-071 | HS09-A010

The Impact of Tipping-bucket Mechanical Errors on Rainfall Measurements During Extreme Events in Taiwan Chen-Ho CHIEN^{1‡}, Li-Hui HSIEH¹⁺ ¹National Taiwan University

HS09-D2-PM1-P-072 | HS09-A012

Development and Evaluation of Quality Control Techniques for Global Climate Observations Jaeseung LEE¹⁺, Seon-Ho KIM¹, Deg-Hyo BAE^{1#} ¹Sejong University

HS09-D2-PM1-P-073 | HS09-A015

Comparison of Machine Learning Methodologies for Hourly Reservoir Inflow Forecasting Kuang-Chi SHIH^{1#+}, Gwo-Fong LIN¹, Ming-Jui CHANG¹, Peng-An CHEN¹ ¹National Taiwan University

HS09-D2-PM1-P-074 | HS09-A016

Evaluation of Rainfall Intensity from Measurement with Multiple Gauges Chan Joo LEE¹⁵⁺, Dong Gu KIM¹, Bong-Joo JANG¹, Won KIM¹

¹Korea Institute of Civil Engineering and Building Technology

HS09-D2-PM1-P-075 | HS09-A017

The Changing Trend and its Attribution of Global and Regional Continental Discharge: Results from Ten Global Land Models

Chen WANG1+, Qingyun DUAN2,3#

¹Chinese Academy of Sciences, ²Hohai University, ³Beijing Normal University

HS09-D2-PM1-P-076 | HS09-A021

Establishment of Water Quality Simulation and Assimilative Capacity Assessment Technology for Irrigation System in Taiwan

Wen-Sheng LIN^{1#+}, Chihhao FAN¹, Hung-Jen LIU¹ ¹National Taiwan University

HS09-D2-PM1-P-077 | HS09-A024

Prediction of Water Pollution at Okcheon Area of the Geumgang River Using RNN Model Hee Sung LIM^{1#+} ¹Chungnam National University

HS09-D2-PM1-P-078 | HS09-A025

The Role of Soil Moisture Variations in Changes of Groundwater Levels During Rainfall Events Ming-Hsu Ll^{1#+}, I-Chieh TSENG¹ ¹National Central University

HS10-D2-PM1-P-079 | HS10-A002

Extreme Hydrologic Events Response to Climate Change Scenario in Huaihe River Basin, China Junliang JIN¹⁸⁺, Cuishan LIU¹, Guoqing WANG¹, Jianyun ZHANG¹

¹Nanjing Hydraulic Research Institute

HS10-D2-PM1-P-080 | HS10-A005

Assimilated Hydrological Data at NASA GES DISC with Examples of Extreme Events

Hualan RUI^{1,2#+}, Carlee LOESER¹, William TENG¹, Dana OSTRENGA^{1,3}, Bruce VOLLMER¹, Jennifer WEI¹

¹NASA Goddard Earth Sciences Data and Information Services Center, ²ADNET Systems, INC., ³Adnet Systems

HS10-D2-PM1-P-081 | HS10-A006

Physically-based Empirical Models for Forecasting Meteorological Droughts During Major Crop Growing Season of Pakistan

Najeebullah KHAN¹, Young Hoon SONG²⁺, Shamsuddin SHAHID¹, Eun Sung CHUNG^{2#}

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HS10-D2-PM1-P-082 | HS10-A008

Analysis of Daily Wet Day Rainfall Distribution Across India

Lalit PAL^{1#+}, Chandra Shekhar Prasad OJHA¹, Ajay GAIROLA¹ ¹Indian Institute of Technology Roorkee

HS10-D2-PM1-P-083 | HS10-A009

Future Flood Risk Under the Climate Change Scenarios in Seomjingang River Basin, South Korea Sunghun KIM¹⁺, Younghun JUNG¹, Kyungwon JOO¹, Jun-Haeng HEO^{1‡} ¹Yonsei University

HS10-D2-PM1-P-084 | HS10-A011

Flood Risk Estimation Due to Climate Change Using Hybrid Downscaling Data

Yasutaka WAKAZUKI $^{1,2\sharp *},$ Shiori ABE3, Yousuke NAKAMURA4

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HS10-D2-PM1-P-085 | HS10-A012

Temporal Evolution of Precipitation and Temperature Based Climate Change Indices Across India Subhasmita DASH¹⁺, Rajib MAITY^{1#} ¹Indian Institute of Technology Kharagpur

HS10-D2-PM1-P-086 | HS10-A017

On Exploring Trends in Atmospheric River Induced Precipitation Extremes in the U.S. West Coast Lifeng LUO^{1‡+}, Leo PHAM¹ ¹Michigan State University

HS10-D2-PM1-P-087 | HS10-A022

Assessment of the Impact of Climate Change on Omo-Gibe Streamflow Characteristics Using CORDEX Africa Data Tewodros TESFAYE^{1#+}, C. T. DHANYA¹, Ashvani GOSAIN¹ ¹Indian Institute of Technology Delhi

HS10-D2-PM1-P-088 | HS10-A023

Non-stationary Modeling of Extreme Precipitation over Monsoon Asia

Meghana NAGARAJ¹⁺, Roshan SRIVASTAV^{2#}, Srinivasan KASTURIRENGAN¹

¹Indian Institute of Technology Madras, ²Indian Institute of Technology Tirupati

HS11-D2-PM1-P-090 | HS11-A003

A Real-time Flood Early Warning System Based on an Integrated Rainfall Forecasting Employing Global Datasets for Adapting Extreme Weather Events in Data-scarce Nile Delta

Chien-Nien CHEN^{1#+}, Dawei HAN¹, M. A. RICO-RAMIREZ¹, Khaled KHEIRELDIN², Mahmoud ROUSHDI² ¹University of Bristol, ²National Water Research Center

HS11-D2-PM1-P-091 | HS11-A006

Analysis of Integrated Basin Information to Relationship Between CIA and GIS Data

Yusuke HATAYA¹, Ken SUZUKI¹, Shiho YABUSAKI², Seiki KAWAGOE^{1#+}

¹Fukushima University, ²Research Institute for Humanity and Nature

HS11-D2-PM1-P-093 | HS11-A010

Real-time Flood Prediction by Combining Two-dimensional Hydraulic Model with Dynamic Neural Network in Urban Area

Hyun Il KIM¹⁺, Kun-Yeun HAN^{1#}, Ho Jun KEUM¹, Jae Yeong LEE¹, Beom Jin KIM¹

¹Kyungpook National University

HS11-D2-PM1-P-094 | HS11-A012

Estimation of Flood Vulnerable Area by Using Watershed Runoff Mechanism

Jae Yeong LEE¹⁺, Kun-Yeun HAN^{1#}, Ho Jun KEUM¹, Beom Jin KIM¹, Hyun II KIM¹ ¹Kyungpook National University

HS12-D2-PM1-P-097 | HS12-A006

The Impact of Hydro-Climatic Extremes on Water Security Due to Saltwater Intrusion Through Delta Channel Networks Xuan YU^{1‡+}, Bingjun LIU¹, Mingzhu ZHANG², Tongtiegang ZHAO¹

¹Sun Yat-sen University, ²Guangzhou Hydraulic Research Institute

HS12-D2-PM1-P-098 | HS12-A010

Climate Change Impact on Water Resources in Coastal Watersheds Along the Contiguous United States Kai DUAN^{1#+}, Xuan YU¹ ¹Sun Yat-sen University

HS13-D2-PM1-P-099 | HS13-A001

Parameter Uncertainty of Urban Storage Function Model by Bootstrap Approach Akira KAWAMURA^{1‡+}, Saritha PADIYEDATH GOPALAN¹, Hideo AMAGUCHI¹, Gubash AZHIKODAN¹

HS13-D2-PM1-P-100 | HS13-A002

¹Tokyo Metropolitan University

Using Environmental Auxiliary Data to Assess Fecal Pollution Sources and Impact on Water-related Recreation in the Highly Urbanized Tamsui River Watershed Cheng-Shin JANG^{1#+} ¹Kainan University

HS13-D2-PM1-P-101 | HS13-A007

Suggesting New Compost Mixed Halophiles in and its Effect to the Salt Damaged Soil Minori KOIZUMI¹⁺, Satoshi AKIBA^{1‡} ¹Sendai Nika High School

HS13-D2-PM1-P-103 | HS13-A012

Evaluation of the Applicability of Inundation Risk Index for Pre-flood Response on Jungrang-cheon Watershed Narae KANG^{1‡+}, Seok Hwan HWANG¹, Jungsoo YOON¹ ¹Korea Institute of Civil Engineering and Building Technology

HS13-D2-PM1-P-105 | HS13-A015

A Study on TN and TP Runoff Characteristics in the Kinokawa River Basin Based on High-frequency Nutrient Monitoring

Hiroto TANOUCHI^{1#+}, Akihisa IMOTO¹, Kouichi ISHIURA¹, Nobuyuki EGUSA¹

¹Wakayama University

HS13-D2-PM1-P-106 | HS13-A017

Optimum Inundation Mitigation Measures for a Coastal Basin

Kwang Ik SON^{1‡}, Won Bum KIM¹, In Jae LEE¹⁺ ¹Yeungnam University

HS13-D2-PM1-P-107 | HS13-A020

Development of Rainfall-runoff Model for Myohoji River Basin Considering Rainwater Sewage Channels Kenichiro KOBAYASHI¹, Atsushi TAMURA^{1‡+}, Ichiro FUJITA¹, Akinobu YAMAMOTO², Toshikazu KAGEYAMA² ¹Kobe University, ²Kobe City

HS13-D2-PM1-P-108 | HS13-A034

Identifying Human Safe Index During Urban Flood for Vulnerability Assessment with MCDM Methods Gyumin LEE^{1*+}, Kyung Soo JUN¹ ¹Sungkyunkwan University

HS13-D2-PM1-P-109 | HS13-A035

Evaluation of Water System Connectivity Based on Flow Resistance and Hydrological Processes Yuqin GAO^{1*+}, Yunping LIU¹, Xiaohua LU² ¹Hohai University, ²China North Water Survey Design and Research Co., Ltd.

HS13-D2-PM1-P-110 | HS13-A037

Occurrence of Hypoxia in a Reservoir Konosuke YAMAMOTO¹⁵⁺, Noriko HAYASHI¹, Shino SAKAGUCHI¹, Keisuke NAKAYAMA¹, Kenichiro KOBAYASHI¹ ¹Kobe University

HS14-D2-PM1-P-111 | HS14-A007

A GNSS-based Study of Four-dimensional Distribution of Water Vapor Fields in the Tibetan Plateau Zhen QIAO¹⁺, Jiahua WEI^{2‡}, Qiong LI¹, Shengchun WANG¹ ¹Qinghai University, ² Tsinghua University

HS14-D2-PM1-P-112 | HS14-A008

Estimation of Precipitation Rate Using Ka/Ku Band Radar Data: A Deep Learning Approach Qiong LI¹⁺, Jiahua WEI^{2#} ¹Qinghai University, ² Tsinghua University

HS14-D2-PM1-P-113 | HS14-A011

Research on the Cloud Liquid Water Content Inversion with Microt Rain Radar Xiaomei ZHU^{1#+} ¹13997127502

HS14-D2-PM1-P-114 | HS14-A013

Numerical Simulation of Precipitation Stimulation by Acoustic Wave Using COMSOL Linhao FAN^{1*+}, Mengyao WANG¹, Ji CHEN¹ ¹The University of Hong Kong

HS14-D2-PM1-P-115 | HS14-A014

Study of Features of Precipitation Change Along Global Warming in South-west China Using WRF Xinzheng TANG^{1*+}, Ji CHEN¹ ¹The University of Hong Kong

HS15-D2-PM1-P-116 | HS15-A002

Analysis of Water Quality Change and its Factors Before and After Natural Disasters in the Shimabara Springs Makoto KAGABU^{1#+}, Kei FUJISHIMA¹ ¹Nagasaki University

HS15-D2-PM1-P-117 | HS15-A004

The Present Situation of the Sponge City Construction in China and the Case Study of Xiamen City Weiwei SHAO^{1‡+}, Jiahong LIU¹, Jinjun ZHOU¹, Zhiyong YANG¹, Penggui XIE², Zhaohui YANG¹, Chao MEI¹, Dianyi YAN¹

¹China Institute of Water Resources and Hydropower Research, ²Xiamen Urban Planning & Design Institute

HS15-D2-PM1-P-118 | HS15-A007

Ecological Risk Assessment of the Coastal Area of Yancheng, China Huachun HE¹⁵⁺

¹Nanjing University

HS15-D2-PM1-P-119 | HS15-A010

Temporal and Spatial Variations in Water Discharge and Sediment Load on the Loess Plateau, China: A High-density Study

Haiyan ZHENG^{1#+}, Chiyuan MIAO¹, Qingyun DUAN^{1,2} ¹Beijing Normal University, ²Hohai University

HS15-D2-PM1-P-120 | HS15-A011

Using 137Cs and 210Pbex Measurements to Estimate Soil Erosion Rates Under Different Land Use in the Dry - Hot Valley Region, Southern China Yawen LI^{1#+}, Xingwu DUAN¹ ¹Yunnan University

HS15-D2-PM1-P-121 | HS15-A013

Dispersion, Sorption and Photodegradation of Petroleum Hydrocarbons in Dispersant-seawater-sediment Systems Xiao ZHAO^{1#+}

¹China Agricultural University

Day 02 - 30 Jul<mark>, Tue</mark>

HS15-D2-PM1-P-122 | HS15-A014

Evaluation of Impacts of Land Use and Land Cover Change on Watershed Response and Crop Yield Lichi CHIANG^{1‡+}, Yung-Chieh WANG², Chih-Mei LU¹, Ci-Jyun LIAO¹ ¹National United University, ²National Chung Hsing University

HS16-D2-PM1-P-124 | HS16-A001

Impact Analysis of Land Use Change on Spring Water Quality in Fukuoka Area Kei FUJISHIMA¹⁺, Makoto KAGABU^{1#} ¹Nagasaki University

HS16-D2-PM1-P-125 | HS16-A002

Impact of Climate Change on Water Resource - Compared Two Different Water Resource System in Taiwan Tzu-Ming LIU¹, Tse-Yu TENG^{1*+}, Ming-Hsu LI² ¹National Science and Technology Center for Disaster Reduction, ²National Central University

HS16-D2-PM1-P-126 | HS16-A005

Potential of Graphical Modelling in Long-lead Seasonal Prediction of Regional Summer Monsoon Rainfall in Context of Climate Change Riya DUTTA¹⁺, Rajib MAITY^{1#} ¹Indian Institute of Technology Kharagpur

HS16-D2-PM1-P-127 | HS16-A008

Separating the Impacts of Climate Change and Human Activities on Annual Streamflow Based on the Budyko Complementary Relationship at Small Scales in Southern Taiwan

Jyun TSAO¹⁺, Hsin-Fu YEH^{1#} ¹National Cheng Kung University

HS16-D2-PM1-P-128 | HS16-A009

Water Quality Characteristics and Factors in Islands of Nagasaki Prefecture, Japan Go YAMAKI¹⁵⁺, Koji KODERA¹, Yoshihiro IGARI¹ ¹Hosei University

HS16-D2-PM1-P-129 | HS16-A011

Impact of Climate Change on Groundwater in the Kurobe River Alluvial Fan, Japan

Matsuura TAKUYA^{I#+}, Taichi TEBAKARI¹, Tomigashi AKIRA², Ogata RIKU³, Maeda YOSHIE⁴, Watanabe SHIGERU⁴ ¹Toyama Prefectural University, ²National Institute of Advanced Industrial Science and Technology, ³Yachiyo Engineering Consulting Engineers & Architects, ⁴Japan Weather Association

HS16-D2-PM1-P-130 | HS16-A013

Impact and Consequences of Climate Change on Groundwater Resources - East Coast of South India, A Case Study

Banajarani PANDA^{1#+}, Chidambaram SABARATHINAM², Ganesh NAGAPPAN³, Thilagavathi RAJENDIRAN⁴ ¹RESEARCH SCHOLAR, ²Research Scientist, ³Assistant Professor, ⁴Postdoctoral Research Fellow

HS17-D2-PM1-P-131 | HS17-A001

Data Assimilation to Study the Influence of Uncertainty in Land Surface Model

Akhilesh NAIR^{1#+}, Ankita PRADHAN¹, Sooraj KRISHNAN¹, Indu J.¹

¹Indian Institute of Technology Bombay

HS17-D2-PM1-P-132 | HS17-A003

Understanding Hydropower Curtailment in Laos Rachel KOH^{1#+}, A.F.M. Kamal CHOWDHURY¹, Thanh Duc DANG¹, Stefano GALELLI¹ ¹Singapore University of Technology and Design

HS18-D2-PM1-P-134 | HS18-A001

NDVI Indicated Dynamic Variations in Vegetation and Their Responses to Climatic and Anthropogenic Factors in the Yarlung Zangbo River Basin of Southeastern Qinghai-Tibet Plateau, China Liu LIU^{1#}, Hao LI¹⁺, Zongxue XU², Jingxia HENG¹

¹China Agricultural University, ²Beijing Normal University

HS18-D2-PM1-P-135 | HS18-A002

Representing the Macropore Flow Processes in a Watershed Hydrological Model and Evaluating the Effect of Macropore Flow on the Flood Peaks

Dengfeng LIU^{1#+}, Hong-Yi LI², Man GAO³, L. Ruby LEUNG⁴, Guenter BLOESCHL⁵, Henry LIN⁶

¹Xi'an University of Technology, ²University of Houston, ³Tianjin University, ⁴Pacific Northwest National Laboratory, ⁵Vienna University of Technology, ⁶Pennsylvania State University

HS18-D2-PM1-P-136 | HS18-A004

Threshold Effect and Hysteresis of Runoff Generation Processes in Alpine Meadow Hill-slope Xiong XIAO^{1‡+}, Fan ZHANG¹ ¹Chinese Academy of Sciences

HS18-D2-PM1-P-138 | HS18-A009

Identification of Dead Zone in Constructed Wetlands for Evaluating the Related Hydraulic Performance Hung-Chih WANG¹⁺, Shang-Shu SHIH^{1‡} ¹National Taiwan University

HS18-D2-PM1-P-139 | HS18-A014

Impacts of Recent Climate Extremes on Spring Phenology in Arid-mountain Ecosystems in China Jun DU^{1#+} ¹Northwest Institute of Eco-Environment and Resources, Chinese

Academy of Sciences

HS18-D2-PM1-P-141 | HS18-A021

Mechanisms and Feedbacks for Evapotranspiration-induced Salt Accumulation and Precipitation in an Arid Wetland of China Bing LIU^{1\$+}, Zijuan WEN²

¹Chinese Academy of Sciences, ²Lanzhou University

HS18-D2-PM1-P-142 | HS18-A022

Evapotranspiration Modeling and Scale Transformation in the Qinghai-Tibetan Plateau Yu FENG¹⁺, Ji CHEN^{1‡}, Chunmiao ZHENG² ¹The University of Hong Kong, ²Southern University of Science and Technology

HS18-D2-PM1-P-143 | HS18-A025

Model Groundwater Change in Ejina Oasis Based on Linear and Non-linear State Space Approach Haiyang XI^{1#+}, Jianhua SI², Rui GUO¹ ¹Chinese Academy of Sciences, ²Cold and Arid Regions

Environmental and Engineering Research Institute, Chinese Academy of Sciences (CAS)

HS19-D2-PM1-P-144 | HS19-A002

The Characteristics of the Surface Energy Budget Between Regions of Seasonally Frozen Ground and Permafrost on the Northern Tibetan Plateau

Lianglei GU^{1‡+}, Jimin YAO¹, Zeyong HU², Lin ZHAO² ¹Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, ²Chinese Academy of Sciences

HS19-D2-PM1-P-145 | HS19-A006

Glacier Runoff and its Impact in the Hailuogou Catchment During 1988-2017: Observations and Simulations Yong ZHANG^{1*+}, Qiao LIU², Xin WANG¹, Shiyin LIU³

¹Hunan University of Science and Technology, ²Chinese Academy of Sciences, ³Yunnan University

HS19-D2-PM1-P-147 | HS19-A011

Spatiotemporal Variation of Snow Cover and its Relation to Climate Change in Upper Yarkant and Indus River Basins Since 2002 Ying YI¹⁺, Shiyin LIU^{1±}, Yu ZHU¹ ¹Yunnan University

HS20-D2-PM1-P-149 | HS20-A001

A Recursive Approach to Long-term Prediction of Monthly Precipitation in the Three-river Headwaters Region Haiyun SHI^{1±+}, Suning LIU¹ ¹Southern University of Science and Technology

HS20-D2-PM1-P-150 | HS20-A006

Seasonal Streamflow Forecasting Based on Ensemble Streamflow Prediction Technique Using Hindcast Data Shailesh SINGH^{1#+} ¹National Institute of Water and Atmospheric Research

Thurional Institute of Water and Tumospheric Res

HS21-D2-PM1-P-151 | HS21-A001

Analysis of Surface Flow Pattern on Road Using Large Particle Image Velocimetry Jung Soo KIM^{1#+}, Sung Ho LEE² ¹University of Bucheon, ²Kumoh National Institute of Technology

HS21-D2-PM1-P-152 | HS21-A002

Correlation Analysis of Rainfall Critical Duration and Time of Concentration by Road Surface Conditions and Rainfall Intensity

Sung Ho LEE¹⁺, Jung Soo KIM^{2‡}, Jae Joon LEE¹ ¹Kumoh National Institute of Technology, ²University of Bucheon

HS21-D2-PM1-P-153 | HS21-A004

Assessment of Drought Propagation Occurrence Probability Using Mixed Copula Functions in Soyang River Basin Ji-Yae SHIN¹, Ji-Eun KIM¹⁺, Hyun-Han KWON², Taesuk OH³, Tae-Woong KIM^{1#}

¹Hanyang University, ²Sejong University, ³Korea Meteorological Administration

HS21-D2-PM1-P-154 | HS21-A010

Development of a Livestock Weight Model and its Application to Winter Disaster Risk Assessment in Mongolia Kaoru TACHIIRI¹⁸⁺, Hiroshi KOMIYAMA², Yuki MORINAGA³, Masato SHINODA²

¹Japan Agency for Marine-Earth Science and Technology, ²Nagoya University, ³Meiji University

HS21-D2-PM1-P-155 | HS21-A013

Comparison of WRF Simulation Results and SCS-CN Method in Surface Runoff (A Case Study on Zavkhan-Guulin Watershed, Mongolia) Otgonsuren SHAR¹⁺, Jambajamts LKHAMJAV^{1‡}, Ganbold BOLDBAATAR¹ ¹National University of Mongolia

HS21-D2-PM1-P-156 | HS21-A014

Analysis and Compare of Agricultural, Meteorological and Hydrological Drought Characteristics in Longchuan River Basin, Yunnan Province, China Fan YANG^{1*}, Xingwu DUAN¹ ¹Yunnan University

HS21-D2-PM1-P-157 | HS21-A015

Similiarities Between Water Surface Level and Standardized Precipitation Index for Hydrologic Drought Monitoring Using Wavelet Transform Approach Jin-Guk KIM¹⁺, Minkyu JUNG¹, Jin-Young KIM², Hyun-Han KWON^{1#} ¹Sejong University, ²ISAN Corporation

HS21-D2-PM1-P-158 | HS21-A016

Study on the Development of Flood Depth Damage Functions for Public Buildings Chang Hee LEE¹⁺, Sang Ho KIM^{2#}, Shinbum HWANG², Junhyuk SIM² ¹Jungwon University, ²Sangji University

HS21-D2-PM1-P-159 | HS21-A017

Temporal and Spatial Variation of Seismic Activity Due to Hydrologic Cycle in South Korea Sukhwan JANG^{1#+}, Kyung Doo OH², Jae-Kyoung LEE¹, Junwon JO¹, Junsik HWANG³, Yoo Jung KWON³ ¹Daejin University, ²Korea Military Academy, ³Yeungnam University

HS22-D2-PM1-P-160 | HS22-A004

Ground-based and Space-borne Cases of Soil Moisture Estimation Using Navigational Reflection Signals Songhua YAN^{1#+} ¹Wuhan University

HS22-D2-PM1-P-162 | HS22-A013

A Remote Sensing-based Assessment of Water Resources in the Arabian Peninsula Marouane TEMIMI¹, Youssef WEHBE^{1#+} ¹Khalifa University of Science and Technology

HS23-D2-PM1-P-163 | HS23-A003

Very Short-term Typhoon Rainfall Forecasting by Post-processing Ensemble Forecasts from an Ensemble Numerical Weather Prediction System Ming-Chang WU^{1s+} ¹National Applied Research Laboratories

HS23-D2-PM1-P-164 | HS23-A005

A Method to Predict Water Level Based on Analogical Reasoning Algorithm Sheng-Chi YANG^{1#+} ¹National Applied Research Laboratories

HS23-D2-PM1-P-165 | HS23-A007

Evaluation of the ECMWF System 4 Climate Forecasts for Streamflow Forecasting in the Upper Hanjiang River Basin Fuqiang TIAN^{1#+} ¹Tsinghua University

HS23-D2-PM1-P-166 | HS23-A008

Comparison of Statistical Post-processing Methods for Short-to-medium Term Precipitation Forecasts Wentao LI¹⁺, Qingyun DUAN^{1,2†} ¹Beijing Normal University, ²Hohai University

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HS24-D2-PM1-P-167 | HS24-A002

Assisting Decision Making on Water Management by Hydrological Simulation with Consideration of Future Climate Change: A Catchment Example from Eastern Taiwan Li-Chun PENG^{1‡+}, Yu-Pin LIN¹, Wan-Yu LIEN¹, Wei-Chih LIN¹ ¹National Taiwan University

HS24-D2-PM1-P-168 | HS24-A006

Improving Watershed Water Cycle Under Future Climate Change Using Catchment Hydrologic Cycle Assessment Tool Cheol Hee JANG^{1#+}

¹Korea Institute of Civil Engineering and Building Technology

HS24-D2-PM1-P-169 | HS24-A010

A Bayesian Framework for the Spatial Downscaling Based on Kriging and Quantile Delta Mapping Approach Yong-Tak KIM¹⁺, Hojun KIM¹, Tae-Woong KIM², Hyun-Han KWON^{1‡}

¹Sejong University, ²Hanyang University

HS26-D2-PM1-P-170 | HS26-A003

The Winter Baseflow Variations and Causes in Eurasia over the Past 100 Years

Jia QIN^{1#+}, Yongjian DING^{1,2}, Tianding HAN³ ¹Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, ²University of Chinese Academy of Sciences, ³Chinese Academy of Sciences

HS26-D2-PM1-P-171 | HS26-A010

A Comprehensive Evaluation of 4-parameter Diurnal Temperature Cycle Models with In-situ and MODIS LST over Alpine Meadow in the Tibetan Plateau Yaping CHANG¹⁺, Yongjian DING^{2,3}, Qiudong ZHAO¹, Zhang SHIQIANG^{4#}

¹Chinese Academy of Sciences, ²Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, ³University of Chinese Academy of Sciences, ⁴Northwest University

HS26-D2-PM1-P-175 | HS26-A018

Acceleration of Glacier Mass Loss on Global and Regional Scales During 1960-2015

Yaojun LI^{1*+}, Yongjian DING^{2,3}, Donghui SHANGGUAN² ¹Chinese Academy of Sciences, ²Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, ³University of Chinese Academy of Sciences

HS26-D2-PM1-P-176 | HS26-A019

Improved Modeling of Snow and Glacier Melting by Stepwise Calibration with Multisource Data: A Case Study in the Yigong Tsangpo River Basin Hongkai GAO^{1#+}, Zhihao JIN² ¹East China Normal University, ²Wuhan University

HS26-D2-PM1-P-177 | HS26-A020

Spatial and Temporal Characteristics of Permafrost Changes over the Qinghai-Tibet Plateau from 1980 to 2010 Zhuotong NAN^{1#+}, Shuping ZHAO¹ ¹Nanjing Normal University

HS27-D2-PM1-P-178 | HS27-A010

Testing the Maximum Entropy Production Approach for Estimating Evapotranspiration from Closed Canopy Shrubland in a Low - energy Humid Environment Hailong WANG¹⁵⁺

¹Sun Yat-sen University

HS27-D2-PM1-P-180 | HS27-A015

Assessment of Evapotranspiration in the Haihe Plain of China Using Hydrological Model

Chen SUN1#+, Songcai YOU2, Li REN3

¹Institute of Environment and Sustainable Development in Agriculture, Chinese Academy of Agricultural Sciences, ²Chinese Academy of Agricultural Sciences, ³China Agricultural University

HS28-D2-PM1-P-181 | HS28-A001

Using GSFLOW Model to Evaluate Spatio-temporal Patterns of Groundwater-surface Water Interactions Under Scenarios of Climate Change in Northeastern Taiwan Yung-Chia CHIU^{1#+}, Chun-Kuo YEH¹ ¹National Taiwan Ocean University

HS28-D2-PM1-P-182 | HS28-A005

Long-term Monitoring of Impacts of Winds on a Hinoki Cypress Plantation, Japan Yoshiyuki INAGAKI^{1‡+}, Atsushi SAKAI¹ ¹Forestry and Forest Products Research Institute

HS28-D2-PM1-P-183 | HS28-A007

The Effects of Typhoon-induced River Fragmentation on the Downstream Water Chemistry Tsung-Yu LEE^{1‡+}, Yung-Chia CHIU², Shao-Yiu HSU¹ ¹National Taiwan Normal University, ²National Taiwan Ocean University

HS28-D2-PM1-P-184 | HS28-A009

Quantifying the Impacts of Typhoon Rainfall on the Sediment Supply and Removal for Kaoping Watershed Yichin CHEN^{1‡+}, En-Ru LIU¹, Hsin-Hung WU¹ ¹National Changhua University of Education

HS28-D2-PM1-P-186 | HS28-A012

Rainfall-runoff Characteristics in a Tropical Forest Watershed, Puchong, Selangor, Malaysia Mariko SAITO^{1#+}, Maki TSUJIMURA¹, Siti NURHADAYU², Siti FATIMAH², Faizal HAKIM² ¹University of Tsukuba, ²Universiti Putra Malaysia

HS32-D2-PM1-P-187 | HS32-A001

Using the Image of Unmanned Aerial Vehicle to Estimating the Soil Water Content with the Color Calibration Method Hong-Yi LI^{1#+}, Hong Ru LIN¹, Jyun-Lin CHEN¹, Shao-Yang HUANG¹, Jet-Chau WEN¹ ¹National Yunlin University of Science and Technology

HS32-D2-PM1-P-188 | HS32-A003

Improvement of Mean Areal Rainfall Accuracy Using Radar Rainfall Estimation Method by Considering Orographic Effects in Dam Basin Seongsim YOON¹⁸⁺ ¹Korea Institute of Civil Engineering and Building Technology

HS32-D2-PM1-P-189 | HS32-A006

Measurement of Snow Distribution Using RTK-UAV Hiroyuki OBANAWA^{1#+} ¹National Agriculture and Food Research Organization

HS32-D2-PM1-P-190 | HS32-A007

Application of LSPIV Technology for Discharge Measurement During the Flooding Season Hyeonseok CHOI¹⁸⁺ ¹Seoul Institute of Technology

HS32-D2-PM1-P-191 | HS32-A008

Development of High Resolution Multipurpose Precipitation Gauge for Measuring Spatial Distribution of Precipitation Jeongho CHOI^{1‡+}, Sanghun LIM², Myoungsun HAN², Bong-Joo JANG²

¹Chosun College of Science & Technology, ²Korea Institute of Civil Engineering and Building Technology

HS32-D2-PM1-P-193 | HS32-A011

Influence of Precipitation Seasonality on Radar Reflectivity and Rain Rate Relationship over South Korea Tae Jeong KIM¹⁺, Hyun-Han KWON^{2‡} ¹Korea Institute of Hydrological Survey, ²Sejong University

HS32-D2-PM1-P-194 | HS32-A014

The Influence of Climate Change on Distribution of Soil Erosion and Deposition in Kaoping River Watershed Ching-Nuo CHEN^{1#+}, Chih-Heng TSAI², Samkele TFWALA³ ¹National Pingtung University of Science and Technology, ²Chia Nan University of Pharmacy and Science, ³University of Swaziland

HS32-D2-PM1-P-195 | HS32-A015

Scour Depth Forecasting Around Bridge Pier Using Numerical Simulation and Artificial Neural Network Siang-Ying CHEN^{1#+}, Peng-An CHEN¹, Fong-Zuo LEE¹, Ming-Jui CHANG¹, Jihn-Sung LAI¹, Yih-Chi TAN¹, Ming-Daw SU¹

¹National Taiwan University

HS33-D2-PM1-P-196 | HS33-A003

Assessment of Hydrological Application of X-band Dual-polarization Radar in Seoul City

Jungsoo YOON
12+, Seok Hwan HWANG¹, Narae KANG¹, Byung-Hwa OH^{1,2}, Jeongha LEE²

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

HS33-D2-PM1-P-197 | HS33-A005

Analysis of Spatial Distribution Characteristics in Small Area by dense Precipitation Observation Hyunjung KIM^{1#+}, Dong Gu KIM¹, Chan Joo LEE¹, Bong-Joo JANG¹, Won KIM¹

¹Korea Institute of Civil Engineering and Building Technology

HS33-D2-PM1-P-198 | HS33-A006

Forecast of Local Precipitation Using Radar Data and Deep Learning for Flash Flood Prediction Hui-Seong NOH¹⁺⁺, Dong-Ryul LEE¹, Seok Hwan HWANG¹, Narae KANG¹

 ${}^{\scriptscriptstyle 1}\!{\it Korea}$ Institute of Civil Engineering and Building Technology

HS33-D2-PM1-P-199 | HS33-A009

Prediction of Rainfall Erosivity in Ungauged Regions in South Korea Joon-Hak LEE^{1#}, Hong-Hyun KIM¹⁺

¹Korea Military Academy

HS33-D2-PM1-P-200 | HS33-A010

A Prediction Technique of Stream Discharge at Tide Affected Zone

Seok Hwan HWANG^{1‡+}, Byung-Hwa OH^{1,2}, Jeongha LEE^{1,2}, Jungsoo YOON¹, Narae KANG¹, Hui-Seong NOH¹ ¹Korea Institute of Civil Engineering and Building Technology, ²University of Science and Technology

ST Poster Presentations

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ST02-D2-PM1-P-201 | ST02-A002

Topside Ionospheric Conditions During the 7-8 September 2017 Geomagnetic Storm Oluwaseyi JIMOH^{1#+}, Jiuhou LEI¹, Jiahao ZHONG¹ ¹University of Science and Technology of China

ST02-D2-PM1-P-203 | ST02-A010

Simulation of Geomagnetically Induced Current (GIC) Flowing in 500 kV Power Grid in Japan Including a Three-dimensional Ground Inhomogeneity Satoko NAKAMURA^{1‡+}, Y EBIHARA¹, Tadanori GOTO¹, Shigeru FUJITA², Shinichi WATARI³ ¹Kyoto University, ²Japan Meteorological Agency, ³National Institute of Information and Communications Technology

ST02-D2-PM1-P-204 | ST02-A011

Magnetospheric Responses to Interplanetary Phenomena Yuri YERMOLAEV^{1**}, Irina LODKINA¹, Michael YERMOLAEV¹, Natalia BORODKOVA¹, Maria RIAZANTSEVA¹, Liudmila RAKHMANOVA¹ ¹Russian Academy of Sciences

ST02-D2-PM1-P-206 | ST02-A015

Relationship Between the Temperatures of Solar Corona and Planetary Magnetosheaths Chao SHEN¹⁵⁺ ¹Harbin Institute of Technology

ST02-D2-PM1-P-207 | ST02-A016

Anomaly Distribution of Ionospheric Responses to Solar Flares Huijun LE^{1#+}, Libo LIU¹, Yiding CHEN¹, Hui ZHANG¹

¹Chinese Academy of Sciences

ST02-D2-PM1-P-208 | ST02-A018

Asymmetric Deformation of the Earth's Magnetosphere Under Low-density Solar Wind Masaki N. NISHINO¹⁵⁺, Yoshifumi SAITO¹, Kazuo SHIOKAWA², Masaki FUJIMOTO¹ ¹Japan Aerospace Exploration Agency, ²Nagoya University

ST02-D2-PM1-P-209 | ST02-A021

Dependence of the Intensity of Major Geomagnetic Storms on the Associated Solar Wind Parameters Guiming LE^{1#+} ¹China Meteorological Administration

ST03-D2-PM1-P-213 | ST03-A009

Field-aligned Structures of the Poloidal-mode ULF Wave Electric Field: Phase Relationship Implications Jie REN^{1#+}, Qiugang ZONG¹, Yifan ZHU¹, Xuzhi ZHOU¹ ¹Peking University

ST03-D2-PM1-P-214 | ST03-A010

The Effect of the Birkeland Current System on Intermediate-scale Plasma Characteristics in the High-latitude Ionosphere Magnus IVARSEN^{1±+}, Lasse CLAUSEN¹, Andres SPICHER¹, Yaqi JIN¹ ¹University of Oslo

Day 02 - 30 Jul, Tue

ST03-D2-PM1-P-215 | ST03-A013

Ion Flux Modulations Associated with Poloidal Mode ULF Waves in a Dawnside Plasmaspheric Plume

Shuai ZHANG^{1‡+}, Anmin TIAN¹, Alexander DEGELING¹, Quanqi SHI¹, Yixin HAO², Jie REN², Wenlong LIU³, Qiugang ZONG², Xuzhi ZHOU², Wei-Jie SUN⁴, Xiaochen SHEN¹, Shichen BAI¹

¹Shandong University, ²Peking University, ³Beihang University, ⁴University of Michigan

ST03-D2-PM1-P-217 | ST03-A016

Ionospheric Response to Solar Wind Dynamic Pressure Increases: Event Analysis and Statistical Results Jinyan ZHAO^{1#+}, Quanqi SHI¹, Anmin TIAN¹ ¹Shandong University

ST03-D2-PM1-P-218 | ST03-A017

Earth's Polar Cap Auroral Arc Growing from Dayside and Nightside Quanqi SHI^{1#+} ¹Shandong University

ST03-D2-PM1-P-219 | ST03-A018

Pressure Characteristics and Their Roles of Spontaneous Hot Flow Anomalies: MMS Observations Mengmeng WANG¹⁺, Quanqi SHI^{1#}, Hui ZHANG², Anmin TIAN¹, Shuai ZHANG¹ ¹Shandong University, ²University of Alaska Fairbanks

ST04-D2-PM1-P-221 | ST04-A001

Solar Wind Suprathermal Electrons

Linghua WANG^{1‡+}, Liu YANG¹, Jiawei TAO¹, Qiugang ZONG¹, Gang LI², Robert WIMMER-SCHWEINGRUBER³, Jiansen HE¹, Hui TIAN¹, Chuanyi TU¹, Stuart BALE⁴, Quanqi SHI⁵

¹Peking University, ²The University of Alabama in Huntsville,

³University of Kiel, ⁴University of California, Berkeley, ⁵Shandong University

ST04-D2-PM1-P-222 | ST04-A002

PKU Energetic Particle Instrument

Liu YANG¹, Linghua WANG¹⁺⁺, Xiangqian YU¹, Yongfu WANG¹, Qiugang ZONG¹, Weihong SHI¹, Zixuan LIU¹, Wen WANG¹, Robert WIMMER-SCHWEINGRUBER² ¹Peking University, ²University of Kiel

ST04-D2-PM1-P-223 | ST04-A008

Solar Energetic Electrons Associated with Extreme Ultraviolet Jets

Wen WANG^{1#+}, Linghua WANG¹, Sam KRUCKER², Radoslav BUCIK^{3,4}, Hui TIAN¹, Jiansen HE¹, Chuanyi TU¹

¹Peking University, ²FHNW, ³University of Kiel, ⁴Max Planck Institute for Solar System Research

ST04-D2-PM1-P-224 | ST04-A009

A High Temporal, Spatial and Energy Resolution Grid-based Energetic Neutral Atom (ENA) Imager: The Physical Design Yongfu WANG^{1#+}, Qiugang ZONG¹, Linghua WANG¹, Hongfei CHEN¹, Zou HONG¹ ¹Peking University

ST04-D2-PM1-P-225 | ST04-A012

Shock Acceleration of ~1-100 Kev Electrons at Earth Bow Shock

Zixuan LIU¹⁺, Linghua WANG^{1‡}, Liu YANG¹, Jiansen HE¹, Quanqi SHI², Hui TIAN¹, Chuanyi TU¹ ¹Peking University, ²Shandong University

ST04-D2-PM1-P-226 | ST04-A014

Microwave Turn-over Frequencies, Emission Temperatures, and Impulsivity for White-light Solar Flares

Kyoko WATANABE1*, Kosuke TSURUDA1, Satoshi MASUDA2, Sam KRUCKER3

¹National Defense Academy of Japan, ²Nagoya University, ³FHNW

ST04-D2-PM1-P-227 | ST04-A016

How Meandering are Interplanetary Magnetic Field Lines? Gang LI¹⁺, Lulu ZHAO², Linghua WANG³, Ashraf MORADI⁴ ¹The University of Alabama in Huntsville, ²Florida Institute of Technology, ³Peking University, ⁴University of Alabama in Huntsville

ST05-D2-PM1-P-228 | ST05-A004

The Monte Carlo Simulation of PKU Energetic Particle Instrument

Xiangqian YU¹[#], Linghua WANG¹, Zixuan LIU¹⁺, Huang XIN¹, Qiugang ZONG¹, Yongfu WANG¹, Weihong SHI¹, Hongfei CHEN¹, Zou HONG¹, Fu HAOBO¹ ¹Peking University

ST05-D2-PM1-P-229 | ST05-A005

The Deflection Magnet Design for PKU Energetic Particle Instrument

Xiangqian YU^{1#}, Linghua WANG¹, Fu HAOBO¹, Zixuan LIU¹⁺, Qiugang ZONG¹, Weihong SHI¹, Yongfu WANG¹, Hongfei CHEN¹, Zou HONG¹, Huang XIN¹ ¹Peking University

ST06-D2-PM1-P-231 | ST06-A004

Damping of Slow Surface Sausage Modes in Photospheric Waveguides Bo L1^{1±+}, Shao-Xia CHEN¹ ¹Shandong University

ST06-D2-PM1-P-232 | ST06-A014

Magnetic Structure of a Solar Dark Filament

Yukio KATSUKAWA¹, Takaaki YOKOYAMA^{2#+}, Masumi SHIMOJO¹

¹National Astronomical Observatory of Japan, ²The University of Tokyo

ST06-D2-PM1-P-233 | ST06-A015

Physical Origin of Spiraling Wave Patterns in a Pore Juhyung KANG^{1*+}, Jongchul CHAE¹, Valery NAKARIAKOV² ¹Seoul National University, ²University of Warwick

ST06-D2-PM1-P-234 | ST06-A019

A New Approach to Identifying MHD Wave Modes in Sunspots and Pores

Gary VERTH^{1#+}, Viktor FEDUN¹, David JESS², Anwar ALDHAFEERI¹, Marco STANGALINI³, Wernher BREVIS⁴, Cristian ESCAURIAZA⁴

¹The University of Sheffield, ²Queen's University (Belfast), ³National Institute for Astrophysics, ⁴Pontificia Universidad Catolica de Chile

ST06-D2-PM1-P-235 | ST06-A020

A New Shock-based Mechanism for Transferring Energy Between the Chromosphere and Corona Viktor FEDUN^{1#+}, Ben SNOW², Frederick GENT³, David JESS⁴, Samuel GRANT⁴, Samuel SKIRVIN¹, Gary VERTH¹ ¹The University of Sheffield, ²University of Exeter, ³Aalto University, ⁴Queen's University (Belfast)

ST06-D2-PM1-P-236 | ST06-A022

Magnetic Loops Above a Small Flux-emerging Region Observed by Iris, Hinode and SDO Zhenghua HUANG^{1#+} ¹Shandong University

ST08-D2-PM1-P-238 | ST08-A001

Relativistic HPIC-LBM and its Application in Large Temporal-spatial Turbulent Magnetic Reconnection Bojing ZHU^{1#+} ¹Chinese Academy of Sciences

ST08-D2-PM1-P-240 | ST08-A008

MMS Study of the Structure and Evolution of Ion-scale Flux Ropes in Earth's Magnetotail Plasma Sheet Wei-Jie SUN^{1*+}, James SLAVIN¹, Gangkai POH^{2,3} ¹University of Michigan, ²NASA Goddard Space Flight Center, ³University of Maryland Baltimore County

ST08-D2-PM1-P-241 | ST08-A009

Low-twisted Interplanetary Flux Ropes Marek VANDAS^{1#+} ¹Czech Academy of Sciences

ST08-D2-PM1-P-242 | ST08-A011

Contribution of Helium Ions in Electric Current of Magnetic Cloud

Yuri YERMOLAEV¹^{#+}, Irina LODKINA¹, Michael YERMOLAEV¹, Natalia BORODKOVA¹, Maria RIAZANTSEVA¹, Liudmila RAKHMANOVA¹ ¹Russian Academy of Sciences

ST08-D2-PM1-P-243 | ST08-A013

Dissipation of Earthward Propagating Flux Rope Through Re-reconnection with Geomagnetic Field: A MMS Case Study Gangkai POH^{1,2#+}, James SLAVIN³, San LU⁴, Guan LE⁵, Doga OZTURK³, Wei-Jie SUN³, Shasha ZOU³, Jonathan EASTWOOD⁶, Rumi NAKAMURA⁷, Wolfgang BAUMJOHANN⁷, Chris RUSSELL⁴, Daniel GERSHMAN¹, Barbara GILES¹, Craig POLLOCK⁸, Thomas MOORE¹, James BURCH⁹, Roy TORBERT¹⁰ ¹NASA Goddard Space Flight Center, ²University of Maryland

Baltimore County, ³University of Michigan, ⁴University of California, Los Angeles, ⁵National Aeronautics and Space Administration, ⁶Imperial College London, ⁷Austrian Academy of Sciences, ⁸Denali Scientific, ⁹Southwest Research Institute, ¹⁰University of New Hampshire

ST08-D2-PM1-P-247 | ST08-A023

Numerical Simulations of Stealth CMEs: How Are They Different From "Usual" CMEs?

Dana-Camelia TALPEANU^{1,2*}, Emmanuel CHANÉ¹, Stefaan POEDTS¹, Elke D'HUYS², Ilia ROUSSEV³⁺, Marilena MIERLA² ¹KU Leuven, ²Royal Observatory of Belgium, ³National Science Foundation

ST09-D2-PM1-P-248 | ST09-A008

Dynamics and Structures of the Alfven Transition Layer: 3D PIC Global Simulation of the Solar Wind – Terrestrial Magnetosphere Interaction

Dongsheng CAI1#+, Bertrand LEMBEGE2

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ST09-D2-PM1-P-249 | ST09-A009

Magnetic Dissipation Due to Electromagnetic Turbulence in Reconnection Current Layer Keizo FUJIMOTO^{1#+}, Richard SYDORA² ¹Beihang University, ²University of Alberta

ST09-D2-PM1-P-250 | ST09-A010

2D PIC Simulation of Wave Emissions Excited within the Front of a Quasi-perpendicular Shock: From the Lower-hybrid to the Electron Cyclotron Frequency

Bertrand LEMBEGE^{1#+}, Laurent MUSCHIETTI², Viktor DECYK³ ¹National Center for Scientific Research/University of Versailles Saint-Quentin-en-Yvelines/Institute Pierre Simon Laplace, ²University of California, Berkeley, ³University of California, Los Angeles

ST10-D2-PM1-P-251 | ST10-A001

Application of Homogeneous Bernoulli Integral to Calculating the Polytropic Index of Ion in the Magnetosphere and the Solar Wind Near the Earth Xuexia PANG^{1#+}, Jinbin CAO², Zhan Guo LIU¹, Feida WANG¹ ¹Hebei University, ²Beihang University

ST11-D2-PM1-P-253 | ST11-A006

Energetic Electron Detector Onboard Chinese MEO Navigation Satellite Yuguang YE^{1#+}, Zou HONG¹, Qiugang ZONG¹ ¹Peking University

ST11-D2-PM1-P-254 | ST11-A010

Parametric Sensitivity of the Formation of Reversed Energy Spectrum Caused by Plasmaspheric Hiss Wenxun ZHANG¹⁺, Binbin NI^{1#}, He HUANG¹, Xudong GU¹, Hong ZHAO², Xinlin LI², Dan BAKER², Fu SONG¹ ¹Wuhan University, ²University of Colorado Boulder

ST11-D2-PM1-P-255 | ST11-A011

Global Morphology of Low-band Chorus Wave Intensity Reconstructed Using 5-year POES Electron Measurements Yang ZHANG¹⁺, Binbin NI^{1‡}, Xudong GU¹, Fu SONG¹, Xing CAO¹, Zheng XIANG¹ ¹Wuhan University

ST11-D2-PM1-P-256 | ST11-A012

Global Distribution of Dayside ECH Waves Observed by MMS

Xudong GU^{1#+}, Lou YUEQUN¹, Binbin NI¹, Fu SONG¹, Zheng XIANG¹, Xing CAO¹

¹Wuhan University

ST11-D2-PM1-P-257 | ST11-A013

Transient Three-belt Structure Below 1 MeV in the Earth's Radiation Belt: Energy Dependence and its Evolutions Yixin HAO^{1#+}, Qiugang ZONG¹, Xuzhi ZHOU¹, Alexander DEGELING², Robert RANKIN², Seth CLAUDEPIERRE³, Geoffrey REEVES⁴

¹Peking University, ²University of Alberta, ³The Aerospace Corporation, ⁴Los Alamos National Laboratory

ST11-D2-PM1-P-259 | ST11-A017

The Impressive Correlation Between Substorm Activity and the Rebuilding of Earth's Radiation Belts Allison JAYNES^{1*+}, David MALASPINA², Veronica DIKE³ ¹The University of Iowa, ²University of Colorado Boulder, ³University of California, Los Angeles

ST12-D2-PM1-P-261 | ST12-A005

Modulation of Whistler Mode Waves Yifan WU¹⁺, Xin TAO^{1#} ¹University of Science and Technology of China

ST12-D2-PM1-P-262 | ST12-A007

Examining Minimum Cyclotron Resonant Electron Energy of EMIC Waves with MMS Si LIU^{1#+}, Qinghua ZHOU¹, Chang YANG¹ ¹Changsha University of Science and Technology

Day 02 - 30 Jul, Tue

ST12-D2-PM1-P-263 | ST12-A008

Precipitation of Relativistic Electrons Under Resonant Interaction with Electromagnetic Ion-cyclotron Wave Packets Veronika GRACH^{1#+}, Andrei DEMEKHOV^{1,2}

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ST12-D2-PM1-P-264 | ST12-A010

Study on Interactions Between Electrons and Observed Whistler-mode Waves at Dipolarization Sites in the Inner Plasma Sheet

Kaiti WANG^{1#+}, Fumiko OTSUKA², Tohru HADA³, Ching-Huei LIN⁴

¹Tamkang University, ²National Institute of Technology, Kurume College, ³Kyushu University, ⁴Chien-Hsin University of Science and Technology

ST12-D2-PM1-P-265 | ST12-A012

Nonlinear Drift Resonance Between Charged Particles and ULF Waves

Xuzhi ZHOU¹^{#+}, Li LI¹, Yoshiharu OMURA², Qiugang ZONG¹, Yixin HAO¹, Seth CLAUDEPIERRE³

¹Peking University, ²Kyoto University, ³The Aerospace Corporation

ST12-D2-PM1-P-266 | ST12-A013

The Effect of Poloidal Mode Field Line Resonance Structure on Drift Resonant Electron Dynamics Alexander DEGELING^{1#}, Robert RANKIN², Yongfu WANG³⁺, Quanqi SHI¹, Anmin TIAN¹ ¹Shandong University, ²University of Alberta, ³Peking University

ST12-D2-PM1-P-268 | ST12-A015

Two-dimensional Simulation of Whistler Mode Wave Packets Interacting with Energetic Electrons Takeshi NOGI^{1#+}, Yoshiharu OMURA¹ ¹Kyoto University

ST12-D2-PM1-P-269 | ST12-A016

Cross-reference Simulations by Scalable Communication Library for the Study of Wave-particle Interactions in Planetary Magnetospheres

Yuto KATOH^{1#+}, Keiichiro FUKAZAWA², Takeshi NANRI³, Yohei MIYAKE⁴

¹Tohoku University, ²Kyoto University, ³Kyushu University, ⁴Kobe University

ST13-D2-PM1-P-270 | ST13-A004

The Current Sheet Flapping Motions Induced by Non-adiabatic Ions: Case Study Xinhua WEI^{1‡+}, Chunlin CAI¹ ¹Chinese Academy of Sciences

ST13-D2-PM1-P-271 | ST13-A008

Study on Radial Diffusion of Protons in the Inner Magnetosphere Lv XINGZHI¹, Wenlong LIU^{1#+} ¹Beihang University

ST13-D2-PM1-P-272 | ST13-A010

An Optimal Algebraic Approach to Multi-spacecraft Field Analysis Gerard CHANTEUR^{1#+} ¹National Center for Scientific Research/ Laboratoire de Physique des

Plasmas

ST13-D2-PM1-P-273 | ST13-A011

Source, Loss, and Solar Cycle Variations of Inner Belt Electrons and Protons Xinlin LI^{1#+}, Kun ZHANG¹, Zheng XIANG² ¹University of Colorado Boulder, ²University of Colorado Boulder

ST14-D2-PM1-P-274 | ST14-A004

Low Thermosphere Temperature Variations Observed by TIMED/GUVI Yongliang ZHANG¹⁵⁺, Larry PAXTON¹, Robert SCHAEFER¹

¹The Johns Hopkins University Applied Physics Laboratory

ST14-D2-PM1-P-275 | ST14-A006

Dst Index Prediction Model Combining Empirical Model and Neural Network Algorithm Jaejin LEE^{1#+}, Wooyeon PARK¹ ¹Korea Astronomy and Space Science Institute

ST14-D2-PM1-P-276 | ST14-A017

In-orbit Test Result for Korea Space Environment Monitor (KSEM) on GEO-KOMPSAT-2A

Go Woon NA^{1‡+}, Jongho SEON¹, Kyu-Sung CHAE¹, Yuchul SHIN¹, Ju WOO¹, Woohyeong SEOL¹, Chanhaeng LEE¹, Sungmin PAK¹, Seung-hyuk SHIN¹, Hans-Ulrich AUSTER², Christian STRAUCH³, Werner MAGNES⁴, David FISCHER⁴ ¹Kyung Hee University, ²Technical University of Braunschweig, ³Magson GmbH, ⁴Austrian Academy of Sciences

ST14-D2-PM1-P-277 | ST14-A018

A Statistical Analysis of the Swarm Satellites Orbit Decay Caused by Geomagnetic Storms Yonghui MA¹⁵⁺, Ziqi ZHAO² ¹Harbin Institute of Technology, Shenzhen, ²Harbin Institute of Technology

ST14-D2-PM1-P-278 | ST14-A020

Model Development for the Thermosphere and Ionosphere Weather Forecasting

Tzu-Wei FANG¹⁴⁺, Naomi MARUYAMA¹, Tim FULLER-ROWELL¹, Joe SCHOONOVER¹, Zhuxiao LI¹, George MILLWARD¹, Houjun WANG²

¹University of Colorado Boulder, ²National Oceanic and Atmospheric Administration

ST14-D2-PM1-P-279 | ST14-A021

Monitoring the Global Evolution of the Storm-ring Current and the Storm Indices from Confined Ground Geomagnetic Observatories

Gang ZENG^{1#+}, Chao SHEN², Zhaojin RONG³, Xinlin LI⁴, Tao CHEN³, Zhiqing CHEN³, Yonghui MA¹

¹Harbin Institute of Technology, Shenzhen, ²Harbin Institute of Technology, ³Chinese Academy of Sciences, ⁴University of Colorado Boulder

ST15-D2-PM1-P-280 | ST15-A004

A New Localised Tornado Model for a Magnetised Plasma Oleg ONISHCHENKO¹, Viktor FEDUN^{2#+}, Gary VERTH², Oleg POKHOTELOV¹

¹Russian Academy of Sciences, ²The University of Sheffield

ST15-D2-PM1-P-281 | ST15-A005

New Code for Identification of Curvilinear Structures in the Solar Atmosphere

Yuyang YUAN^{1#+}, Gary VERTH¹, Viktor FEDUN¹ ¹The University of Sheffield

ST15-D2-PM1-P-282 | ST15-A008

Do Flux Pile-up Models of Solar Photospheric Reconnection Work?

Sergiy SHELYAG^{1#+}, Yuri LITVINENKO², Viktor FEDUN³, Gary VERTH³, José Juan GONZÁLEZ⁴, Francisco GUZMÁN⁵ ¹Deakin University, ²Waikato University, ³The University of Sheffield, ⁴National Autonomous University of Mexico, ⁵Universidad Michoacana de San Nicolás de Hidalgo

ST16-D2-PM1-P-283 | ST16-A001

Diamagnetic Plasmoids as a Part of Diamagnetic Structures of the Slow Solar Wind and Their Impact on the Earth's Magnetosphere

Vladimir PARKHOMOV^{1#}, Alexei DMITRIEV²⁺, Eselevich VICTOR³, Eselevich MAKSIM³, Vedernikova TATYANA¹ ¹Baikal State University, ²National Central University, ³Institute of Solar-Terrestrial Physics

ST16-D2-PM1-P-284 | ST16-A002

Collisionless Plasmas' Processes at Magnetospheric Boundaries: Strong Nonlinear Interactions

Sergey SAVIN^{1#}, Alexei DMITRIEV², Alla SUVOROVA²⁺ ¹Russian Academy of Sciences, ²National Central University

ST16-D2-PM1-P-286 | ST16-A007

Geosynchronous Magnetopause Crossings in the 24 Solar Cycle Alexei DMITRIEV^{1#+}

¹National Central University

ST17-D2-PM1-P-287 | ST17-A005

Rapid Precipitation by EMIC Rising-tone Emissions of Relativistic Electrons Observed by the Van Allen Probes Mission

Satoko NAKAMURA^{1,*}, Yoshiharu OMURA¹, Daniel BAKER², Craig KLETZING³

¹Kyoto University, ²University of Colorado Boulder, ³The University of Iowa

ST18-D2-PM1-P-288 | ST18-A002

On the Energy Conversion Rate During Collisionless Magnetic Reconnection

Yongyuan YI¹⁺, Meng ZHOU^{1,2#}, Liangjin SONG¹, Xiaohua DENG³

¹Nanchang University, ²University of California, Los Angeles, ³Wuhan University

ST18-D2-PM1-P-289 | ST18-A004

MMS Observations of a Kinetic-scale Electron Vortex Magnetic Hole in a Reconnection Diffusion Region Zhihong ZHONG¹⁺, Meng ZHOU^{1,2#}, Shiyong HUANG³, Rongxin TANG^{1,4}, Xiaohua DENG³, Ye PANG¹, Haotian CHEN¹ ¹Nanchang University, ²University of California, Los Angeles, ³Wuhan University, ⁴Memorial University of Newfoundland

ST18-D2-PM1-P-290 | ST18-A005

The Anisotropic Electron Distributions and Associated Whistler Waves in a Series of the Flux Transfer Events at the Magnetopause

Shimou WANG¹⁺⁺, Rongsheng WANG¹, Quanming LU¹ ¹University of Science and Technology of China

ST18-D2-PM1-P-291 | ST18-A006

Energy Release During Several M and X Class Flares Jianxia CHENG^{1*+}, Jiong QIU² ¹Shanghai Astronomical Observatory, ²Montana State University

ST18-D2-PM1-P-292 | ST18-A008

Electron Magnetohydrodynamics Magnetic Reconnection Experiment on Keda Linear Magnetized Plasma Device Feibin FAN^{1#+}, Xiancai YU¹

¹University of Science and Technology of China

ST18-D2-PM1-P-293 | ST18-A010

Super-efficient Electron Acceleration by an Isolated Magnetic Reconnection Huishan FU^{1#+}, Yin XU¹

¹Beihang University

ST18-D2-PM1-P-294 | ST18-A014

Extending the FOTE Method to Three-dimensional Flow Fields Zhe WANG^{1#+}, Huishan FU¹

Zhe WANG^{1#+}, Huishan FU¹ ¹Beihang University

ST18-D2-PM1-P-295 | ST18-A016

Statistical Study of the Interaction Regions Between Earthward Propagating Flux Ropes and the Geomagnetic Field Hengyan MAN¹⁺, Meng ZHOU^{1,2#}, Xiaohua DENG³, Zhihong ZHONG¹, Christopher RUSSELL², William PATERSON⁴, Barbara GILES⁵, Per-Arne LINDQVIST⁶, James BURCH⁷, Huishan FU⁸

¹Nanchang University, ²University of California, Los Angeles, ³Wuhan University, ⁴National Aeronautics and Space Administration, ⁵NASA Goddard Space Flight Center, ⁶KTH Royal Institute of Technology, ⁷Southwest Research Institute, ⁸Beihang University

ST18-D2-PM1-P-296 | ST18-A017

SOTE: A Nonlinear Method for Magnetic Topology Reconstruction in Space Plasmas Yangyang LIU^{1#+}, Huishan FU¹, V. OLSHEVSKY², D. PONTIN³,

Chengming LIU¹, Zhe WANG¹ ¹Beihang University, ²KTH Royal Institute of Technology, ³University of Dundee

ST18-D2-PM1-P-297 | ST18-A021

Electron-scale Vertical Current Sheets in a Bursty Bulk Flow in the Terrestrial Magnetotail Meng ZHOU^{1,2#+}

¹Nanchang University, ²University of California, Los Angeles

ST18-D2-PM1-P-298 | ST18-A022

Electron Acceleration and Formation of Power-law Spectra of Energetic Electrons During the Merging Process of Multiple Magnetic Islands: Particle-in-cell Simulations Yu LIU¹, Quanming LU^{1‡}, Rongsheng WANG¹, Kai HUANG¹, Huanyu WANG¹⁺, Shui WANG¹ ¹University of Science and Technology of China

ST18-D2-PM1-P-299 | ST18-A023

Formation of Power Law Spectra of Energetic Electrons During Multiple X Line Magnetic Reconnection with a Guide Field Quanming LU^{1#}, Huanyu WANG¹⁺, Kai HUANG¹, Yu LIU¹,

Rongsheng WANG¹, Shui WANG¹ ¹University of Science and Technology of China

ST19-D2-PM1-P-301 | ST19-A004

The Hemispheric Asymmetry of Thermospheric Density Responses to Solar Activity Huijun LE^{1*+}, Libo LIU¹, Yiding CHEN¹, Hui ZHANG¹ ¹Chinese Academy of Sciences

ST19-D2-PM1-P-302 | ST19-A005

Hemispheric Asymmetry in the Postnoon and Premidnight Auroral Intensity: An Interplanetary by Effect Kan LIOU^{1‡}, Elizabeth MITCHELL¹⁺ ¹The Johns Hopkins University Applied Physics Laboratory

ST20-D2-PM1-P-303 | ST20-A002

Detect CME from Solar Disk (SDO/AIA) Using Deep Learning Long XU^{1#+}, Yihua YAN^{1,2}, Sixuan LIU¹ ¹Chinese Academy of Sciences, ²University of Chinese Academy of

Sciences

ST20-D2-PM1-P-304 | ST20-A003 (Invited)

Solar Flares and Magnetic Flux in Active Regions Huaning WANG¹ ¹Chinese Academy of Sciences

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ST20-D2-PM1-P-305 | ST20-A004

Visual Attention on the Sun: What Do Existing Models Actually Predict? Jia LI^{1#+}, Daowei LI¹, Kui FU¹, Long XU²

¹Beihang University, ²Chinese Academy of Sciences

ST21-D2-PM1-P-306 | ST21-A002

High Performance Ionosphere Plasma Probe, TeNeP Koichiro OYAMA^{1,2#+}

¹National Cheng Kung University, ²Asia Space Environment Research Consortium

ST21-D2-PM1-P-307 | ST21-A007

Solar Extreme Ultraviolet Intensity and Plasma Density Measurements Onboard the Cubesat Phoenix Hui-Kuan FANG^{1*+}, Alfred CHEN¹, Tsu-Wei TSAU¹, Wen-Hao CHEN¹, Ming-Yang HONG¹, Jyh-Ching JUANG¹, Jiun-Jih MIAU¹ ¹National Cheng Kung University

ST21-D2-PM1-P-308 | ST21-A008

INSPIRESat-1 and IDEASSat - Small Satellites for Ionospheric Science and Capacity Building Loren CHANG^{1‡}, Tzu-Ya TAI¹⁺ ¹National Central University

ST21-D2-PM1-P-309 | ST21-A009

Mission Design of Cubesat Constellation for Studying Atmospheric and Ionospheric Coupling : Impendence Probe for Plasma Measurement

K. RYU^{1*f*+}, Eojin KIM¹, Goohwan SHIN², Sun Mie PARK¹, Koichiro OYAMA^{3,4}, Hui Kwan FANG³

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ST21-D2-PM1-P-310 | ST21-A011

Analysis of Radiation Penetration and Shielding of Charged Particle Detector

Seung-hyuk SHIN1+, Jongho SEON1#, Sungmin PAK1, Yuchul SHIN1

¹Kyung Hee University

ST21-D2-PM1-P-311 | ST21-A012

Operation Concept and Initial Results of instruments for the Study of Space Storms(ISSS) Onboard the Next Generation Small Satellite-1 (NEXTSat-1)

Eojin KIM^{1#+}, K. RYU¹, Kyoung Wook MIN¹, Junchan LEE², Young-Soo JO³, Hoonkyu SEO¹, Jongdae SOHN³, Gowoon NA⁴ ¹Korea Advanced Institute of Science and Technology, ²York

University, ³Korea Astronomy and Space Science Institute, ⁴Kyung Hee University

ST21-D2-PM1-P-312 | ST21-A014

Discrimination of Electrons and Protons by Pulse Shaping in the Energy Range of 100 to 200 KeV in Silicon Detectors Woohyeong SEOL¹⁺, Jongho SEON^{1#}, Chanhaeng LEE¹ ¹Kyung Hee University

ST21-D2-PM1-P-313 | ST21-A016

Inter-coupling Mechanism Between Space Weather and Earthquake: Nano Satellites Observations a Step in Framing of Predictive Model

Devi MINAKSHI^{1#+}, Samiran PATGIRI¹, Ananda BARBARA¹, Anna DEPUEVA², Victor DEPUEV², Ya Yu RUZHIN²

¹Gauhati University, ²Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation

ST21-D2-PM1-P-314 | ST21-A017

Virtual Reconfiguration of Integrated Satellite Systems Oleg BREKHOV¹⁵⁺, Pavel ZHDANOV¹ ¹Moscow Aviation Institute (National Research University)

ST22-D2-PM1-P-316 | ST22-A006

Update of Japanese Space Weather Research and Operation Activities

Mamoru ISHII^{1#+} ¹National Institute of Information and Communications Technology

ST22-D2-PM1-P-317 | ST22-A008

On Application of Geostationary BeiDou Satellites in Ionospheric TID Interferometry for Near-Equatorial Ionosphere Ekaterina KOZLOVTSEVA¹⁵⁺, Nikita TERESHIN¹ ¹Lomonosov Moscow State University

ST22-D2-PM1-P-318 | ST22-A010

Ionospheric Space Weather Data Product of FORMOSAT-7/COSMIC-2 Charles LIN^{1#+}, P. K. RAJESH¹, Chi-Yen LIN², Chia-Hung CHEN¹, Jia-Ting LIN¹ ¹National Cheng Kung University, ²National Central University

ST22-D2-PM1-P-319 | ST22-A012

Real-time Solar Flare Prediction by Deep Flare Net Naoto NISHIZUKA^{1#+}, Yuki KUBO¹, Komei SUGIURA¹, Mitsue DEN¹, Mamoru ISHII¹ ¹National Institute of Information and Communications Technology

ST23-D2-PM1-P-320 | ST23-A002

A New Analytical Chorus Wave Model Derived from Van Allen Probe Observations Dedong WANG^{1#+}, Yuri SHPRITS¹, Irina ZHELAVSKAYA¹ ¹GFZ German Research Center for Geosciences

ST23-D2-PM1-P-321 | ST23-A006

DyFK Model Simulations of Plasma Transport Between SED Plume and Plasmaspheric Plume Zheng QIAO¹⁷⁺ ¹Wuhan University

ST23-D2-PM1-P-322 | ST23-A007

Properties of Whistler Mode Waves in Earth's Plasmasphere and Plumes Run SHI^{1‡+}, Wen LI^{2,3} ¹Wuhan University, ²Boston University, ³University of California, Los Angeles

ST23-D2-PM1-P-324 | ST23-A010

Statistic Analysis of Fast Magnetosonic Waves with Observations of the Van Allen Probes Fei YAO¹⁸⁺ ¹Wuhan University

ST23-D2-PM1-P-325 | ST23-A013

Energetic Ions Scattered into the Loss Cone with Observations of the Cluster Satellite Ying XIONG^{1*+}, Zhigang YUAN² ¹Hubei University of Technology, ²Wuhan University

ST24-D2-PM1-P-326 | ST24-A003

Magnetosphere-ionosphere Coupling Through Ionospheric Conductivity Mei-Ching FOK^{1‡+}, Suk-Bin KANG², Natalia BUZULUKOVA^{1,3}, Alex GLOCER¹ ¹NASA Goddard Space Flight Center, ²NASA/GSFC, ³University of Maryland, College Park

ST24-D2-PM1-P-327 | ST24-A005

Warm Plasma Cloak and Wave-particle Interaction in the Inner Magnetosphere

Natalia BUZULŪKOVA^{1,2#+}, Shannon HILL², Mei-Ching FOK¹, Scott BOARDSEN³

¹NASA Goddard Space Flight Center, ²University of Maryland, College Park, ³University of Maryland, Baltimore

ST24-D2-PM1-P-328 | ST24-A007

Quantifying an Impact of the Cross-energy Coupling in the Inner Magnetosphere on Plasmaspheric Composition Naomi MARUYAMA^{1#}, Mei-Ching FOK²⁺, Phil RICHARDS³, Dmytro KOTOV⁴, Yuki OBANA⁵, Yoshizumi MIYOSHI⁶, George KHAZANOV²

¹University of Colorado Boulder, ²NASA Goddard Space Flight Center, ³George Mason University, ⁴Institute of Ionosphere, Kharkiv, ⁵Osaka Electro-Communication University, ⁶Nagoya University

ST25-D2-PM1-P-329 | ST25-A003

Difference of Intermittency Between Electric Field and Magnetic Field Fluctuations from Ion Scale Down to Sub-electron Scale in the Magnetosheath Turbulence Xingyu ZHU¹⁺, Jiansen HE¹⁺, Ying WANG¹, Luca SORRISO-VALVO²

¹Peking University, ²Italian Research Council

ST25-D2-PM1-P-330 | ST25-A005

Unified Quantitative Description of Solar Wind Turbulence Intermittency in Both Inertial and Kinetic Ranges Jiansen HE^{1‡+}, Ying WANG¹, Luca SORRISO-VALVO² ¹Peking University, ²Italian Research Council

ST25-D2-PM1-P-331 | ST25-A008

Observations of Coherent Structures in the Turbulent Magnetosheath Plasma Kui JIANG¹^{*+}, Shiyong HUANG¹ ¹Wuhan University

ST25-D2-PM1-P-332 | ST25-A011 (Invited)

The Peculiar Properties of Plasma Turbulence in Fast Solar Wind Streams of Different Nature

Maria RIAZANTSEVA^{1#+}, Liudmila RAKHMANOVA¹, Georgy ZASTENKER¹, Yuri YERMOLAEV¹, Irina LODKINA¹, Vyacheslav BUDAEV², Jana SAFRANKOVA³, Zdenek NEMECEK³, Lubomir PRECH³

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ST26-PS17-D2-PM1-P-334 | ST26-PS17-A008

Design of Visible and Ultraviolet Imagers for FACTORS - A Future Satellite Mission for Understanding the Coupling and Transportation Processes in the Upper Atmosphere Takeshi SAKANOI^{1±+}, Masafumi HIRAHARA², Kazushi ASAMURA³, Yoshizumi MIYOSHI², Tomohiko WATANABE², Takanori NISHIYAMA⁴, Shin-Ichiro OYAMA⁵, Yoshifumi SAITO³, Keisuke HOSOKAWA⁶, Masatoshi YAMAUCHI⁷, Hirotsugu KOJIMA⁸, Naritoshi KITAMURA⁹, Yasunobu OGAWA⁴, Ayako MATSUOKA³

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for Space-Earth Environmental Research, 6University of

Electro-Communications, ⁷IRF Kiruna, ⁸Kyoto University, ⁹The University of Tokyo

ST26-PS17-D2-PM1-P-335 | ST26-PS17-A009

An All-sky Heliospheric Imager (ASHI) for Viewing Thomson-scattered Light: Status and Near-future Plans Mario BISI^{1‡+}, Bernard JACKSON², Andrew BUFFINGTON², Philippe LEBLANC², Hsiu-Shan YU², Paul HICK², William GRAINGER¹

¹United Kingdom Research and Innovation - Science & Technology Facilities Council, ²University of California, San Diego

ST26-PS17-D2-PM1-P-336 | ST26-PS17-A010

Development of Telescopic Camera (TENGOO) Performance Evaluation Device for MMX

Hiroki KATO¹⁵⁺, Shingo KAMEDA¹, Masanobu OZAKI², Takeshi TAKASHIMA², Keigo ENYA², Ko ISHIBASHI³, Takahiro ISHIMARRU², Naoya OSADA¹ ¹Rikkyo University, ²Japan Aerospace Exploration Agency, ³Chiba

-Nikkyo university, -Japan Aerospace Exploration Agency, "Chiba Institute of Technology

ST26-PS17-D2-PM1-P-337 | ST26-PS17-A011

Interpretation on Slight Asymmetry of Analyzer Characteristics of MIA On-board the Mio by Means of a Model Calculation of 3-D Potential Distribution Wataru MIYAKE^{1*+}, Yoshifumi SAITO², Shoichiro YOKOTA³ ¹Tokai University, ²Japan Aerospace Exploration Agency, ³Osaka

University

ST26-PS17-D2-PM1-P-338 | ST26-PS17-A014

High-resolution Ground Penetrating Radar for Mapping Structures of Putative Ice Deposits on the Moon Hideaki MIYAMOTO^{1#+}, Atsushi KUMAMOTO², Toshiyuki NISHIBORI³, Takafumi NIIHARA¹, Motoyuki SATO², Hiroki SENSHU⁴, Takahiro IWATA³, Makito KOBAYASHI¹, Fuminori TSUCHIYA², Takeshi TSUJI⁵

¹The University of Tokyo, ²Tohoku University, ³Japan Aerospace Exploration Agency, ⁴Chiba Institute of Technology, ⁵Kyushu University

ST26-PS17-D2-PM1-P-339 | ST26-PS17-A015

Alpha Particle X-ray Spectrometer On-board Chandrayaan-2 Rover

M. SHANMUGAM^{1**}, Santosh VADAWALE¹, Arpit PATEL¹, Mithun N.P.S.¹, Hitesh ADALJA¹, Tinkal LADIYA¹, Shiv Kumar GOYAL¹, Neeraj Kumar TIWARI¹, Arup Kumar HAIT², Nishant SINGH¹, Sushil KUMAR¹, Amit Basu SARBADHIKARI¹, Garima ARORA¹, Saleem Basha M³, Anil BHARDWAJ¹ ¹Physical Research Laboratory, ²Space Applications Centre, ³U. R. Rao Satellite Centre, Bengaluru

ST26-PS17-D2-PM1-P-341 | ST26-PS17-A017

Observation Plans in the Cruising Phase of the Solar Power Sail: OKEANOS

Takahiro IWATA^{1#+}, Tatsuaki OKADA¹, Shuji MATSUURA², Kohji TSUMURA³, Hajime YANO^{1,4}, Takayuki HIRAI⁵, Ayako MATSUOKA¹, Daisuke YONETOKU⁶, Tatehiro MIHARA⁷, Toshihiro CHUJO¹, Osamu MORI¹

¹Japan Aerospace Exploration Agency, ²Kwansei Gakuin University, ³Tohoku University, ⁴Massachusetts Institute of Technology, ⁵Chiba Institute of Technology, ⁶Kanazawa University, ⁷RIKEN Advanced Institute for Computational Science

ST27-D2-PM1-P-343 | ST27-A001

Electromagnetic Linear Dispersion Relation for Plasma with a Drift Across Magnetic Field

Takayuki UMEDA^{1#+}, Takuma NAKAMURA² ¹Nagoya University, ²Austrian Academy of Sciences

Day 02 - 30 Jul, Tue

ST27-D2-PM1-P-344 | ST27-A002

Modeling of Magnetic Field in the Magnetosheath Using Elliptic Coordinates Marek VANDAS^{1#+} ¹Czech Academy of Sciences

ST27-D2-PM1-P-345 | ST27-A005

Time-variable Magnetic Field Responses at Ceres and the Moon

Yingdong JIA^{1#+}, Julie CASTILLO-ROGEZ², Carol RAYMOND², Michaela VILLARREAL¹, Christopher RUSSELL¹ ¹University of California, Los Angeles, ²Jet Propulsion Laboratory, California Institute of Technology

ST27-D2-PM1-P-346 | ST27-A006

Interaction of Sun-grazing Comets and the Solar Coronal Plasma and Magnetic Field

Yingdong JIA^{1#+}, William PESNELL², Wei LIU^{3,4}, Cooper DOWNS⁵, Paul BRYANS⁶

¹University of California, Los Angeles, ²NASA Goddard Space Flight Center, ³Lockheed Martin Solar and Astrophysics Laboratory,

⁴Stanford University, ⁵Predictive Science Inc., ⁶University Corporation for Atmospheric Research

ST27-D2-PM1-P-347 | ST27-A011

Development of Coupling Framework for Macro and Micro Scale Simulations of the Magnetosphere

Keiichiro FUKAZAWA^{1‡+}, Yuto KATOH², Takeshi NANRI³, Yohei MIYAKE⁴

¹Kyoto University, ²Tohoku University, ³Kyushu University, ⁴Kobe University

ST28-D2-PM1-P-348 | ST28-A003

Pre-flare Radio Signatures and Their Solar Associations Ya-Hui YANG^{1,*}, Yung-Chi YANG¹, Shao-Fu HSIEH¹, Baolin

TAN², Chengming TAN², Yihua YAN^{2,3} ¹National Central University, ²Chinese Academy of Sciences,

³University of Chinese Academy of Sciences

ST28-D2-PM1-P-349 | ST28-A004

Observations of Interplanetary Scintillation (IPS) of the 13 May 2005 Eruption: Numerical Models

Oyuki CHANG^{1#+}, Ricardo F. GONZALEZ², Mario BISI¹, Richard FALLOWS³

¹United Kingdom Research and Innovation - Science & Technology Facilities Council, ²Universidad Nacional Autónoma de México, ³ASTRON - The Netherlands Institute for Radio Astronomy

ST28-D2-PM1-P-350 | ST28-A005

The Array for MUSER in Lower Frequency

Cang SU^{1*+}, Yihua YAN^{1,2}, Wei WANG¹ ¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

ST28-D2-PM1-P-351 | ST28-A006

Complex Electromagnetic Environment and RFI Mitigation Measures at Mingantu Observing Station Lihong GENG^{1#+}, Donghao LIU¹, Cang SU¹, Sha LI¹, Zhijun

CHEN1, Yihua YAN^{1,2}

¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

ST28-D2-PM1-P-352 | ST28-A008

The Electromagnetic Compability of MUSER

Zhijun CHEN^{1#+}, Yihua YAN^{1,2}, Sha LI¹, Wei WANG¹ ¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

ST29-D2-PM1-P-353 | ST29-A002

Geant4 Model Calculation and Energetic Particle Observation with HEP/Arase in the Inner Radiation Belt Honoka TODA¹⁵⁺, Wataru MIYAKE¹, Takefumi MITANI², Takeshi TAKASHIMA², Yoshizumi MIYOSHI³, Inchun PARK³, Tomoaki HORI³

¹Tokai University, ²Japan Aerospace Exploration Agency, ³Nagoya University

ST29-D2-PM1-P-354 | ST29-A004

Observations of Very Narrow Band Structures of Ions with Energies from ~0.1 to ~20 KeV in the Plasmaspheric Region Junhyun LEE^{1#+}, Ensang LEE¹, Khan-Hyuk KIM¹ ¹Kyung Hee University

ST29-D2-PM1-P-355 | ST29-A008

Chorus Element Properties: Statistics from Automated Detection Craig KLETZING^{1#+}, Ananya SEN GUPTA¹ ¹The University of Iowa

ST30-D2-PM1-P-356 | ST30-A001

Global Plasma Density Irregularity Distributions Observed by Advanced Ionospheric Probe Onboard FORMOSAT-5 Satellite Chi-Kuang CHAO^{1#+} ¹National Central University

ST30-D2-PM1-P-357 | ST30-A002

Automatic Identification of Spread F Using Decision Tree Ting LAN^{1*+}, Chunhua JIANG¹, Guobin YANG¹, Zhao ZHENGYU¹ ¹Wuhan University

ST30-D2-PM1-P-358 | ST30-A003

A Novel Ionospheric Sounding Network Based on Complete Complementary Code Tongxin LIU¹³⁺, Guobin YANG¹, Chunhua JIANG¹, Zhao ZHENGYU¹ ¹Wuhan University

ST30-D2-PM1-P-359 | ST30-A005

The Polar Ionospheric Large-scale Structures and Dynamics Revealed by the TEC Keogram Extracted from TEC Maps Yong WANG¹⁺, Qing-He ZHANG^{1#}, Yu-Zhang MA¹, P. T. JAYACHANDRAN², Zanyang XING¹, Shunrong ZHANG³ ¹Shandong University, ²University of New Brunswick, ³Massachusetts Institute of Technology

ST30-D2-PM1-P-360 | ST30-A011

Interhemispheric Conjugate Effect in Longitude Variations of Mid-latitude Ion Density Yiding CHEN^{1‡+}, Libo LIU¹, Huijun LE¹, Hui ZHANG¹ ¹Chinese Academy of Sciences

ST31-D2-PM1-P-361 | ST31-A004

Dynamical Network Quantification of the Spatio-temporal Pattern of Substorm Ground Magnetic Perturbations Using SuperMAG

Lauren ORR^{1#}, Sandra CHAPMAN¹⁺, Jesper GJERLOEV² ¹University of Warwick, ²The Johns Hopkins University Applied Physics Laboratory

ST31-D2-PM1-P-362 | ST31-A006

The Ion/Electron Temperature Characteristics of Polar Cap Classical and Hot Patches and Their Influence on Ion Upflow Yu-Zhang MA¹⁺, Qing-He ZHANG¹⁺, Zanyang XING¹, Roderick HELLIS², Kjellmar OKSAVIK³, Yong WANG¹ ¹Shandong University, ²The University of Texas at Dallas, ³University of Bergen

ST31-D2-PM1-P-363 | ST31-A008

Transient Ionospheric Convection Response to Negative Dynamic Pressure Pulse Jianjun LIU^{1#+} ¹Polar Research Institute of China

ST31-D2-PM1-P-364 | ST31-A011

Direct Evidence for the Dissipation of Small-scale Ionospheric

Plasma Structures by a Conductive E-region Magnus IVARSEN^{1#+}, Yaqi JIN¹, Andres SPICHER¹, Lasse CLAUSEN¹

¹University of Oslo

ST31-D2-PM1-P-365 | ST31-A012

Conjugate Observations of the Evolution of Polar Cap Arcs in Both Hemispheres

Zanyang XING^{1*+}, Qing-He ZHANG¹, Desheng HAN², Yongliang ZHANG³, Natsuo SATO⁴, Shunrong ZHANG⁵, Zejun HU⁶, Yong WANG¹, Yu-Zhang MA¹

¹Shandong University, ²Tongji University, ³The Johns Hopkins University Applied Physics Laboratory, ⁴National Institute of Polar

Research, ⁵Massachusetts Institute of Technology, ⁶Polar Research Institute of China

ST31-D2-PM1-P-366 | ST31-A013

Statistical Study of the Relationship Between Ion Upflow and Field-aligned Current in the Topside Ionosphere for Both Hemispheres During Disturbed and Quiet Times Shanyu ZHOU¹, Qing-He ZHANG^{1‡}, Kjellmar OKSAVIK², Larry LYONS³, Zanyang XING¹⁺, Yu-Zhang MA¹, Marc HAIRSTON⁴, Yong WANG¹

¹Shandong University, ²University of Bergen, ³University of California, Los Angeles, ⁴The University of Texas at Dallas

ST31-D2-PM1-P-367 | ST31-A015

Polar Wind Outflow Modulated by Geomagnetic Dipole Tilt Through Magnetosphere-ionosphere Coupling Kun LI¹²⁺

¹Sun Yat-sen University

ST32-D2-PM1-P-368 | ST32-A001

Acoustic Resonant Oscillations Following Large Earthquakes Observed by Cosmic Data

Xiangxiang YAN^{1#+}, Tao YU¹, Yang-Yi SUN², Yifan QI¹ ¹China University of Geosciences, ²China University of Geosciences (Wuhan)

ST32-D2-PM1-P-369 | ST32-A002

Analysis of Ionospheric Changes Caused by Thunderstorm Effects

Yu Cheng LIN^{1#+}, Alfred CHEN¹, Chia wen CHUANG¹ ¹National Cheng Kung University

ST32-D2-PM1-P-370 | ST32-A003

Ionospheric and Thermospheric Disturbances Triggered Rocket Launches

Charles LIN^{1#+}, Min-Yang CHOU¹, Ming Hsueh SHEN¹, Jia YUE², Chia-Hung CHEN¹, Mitsuru MATSUMURA³ ¹National Cheng Kung University, ²Hampton University, ³Nagoya University

ST32-D2-PM1-P-371 | ST32-A004

Comparison of Global Morphologies of Vertical Ion Convergence and Sporadic E Occurrence Rate Lihui QIU¹⁺, Xiaomin ZUO^{1‡}, Tao YU¹, Y. SUN¹, Yifan QI¹ ¹China University of Geosciences

ST32-D2-PM1-P-372 | ST32-A005

Spacial Correlation of the Day-to-day Variability from Ground-based GPS Tao YU^{1‡}, Shuo LIU¹⁺ ¹China University of Geosciences

ST33-D2-PM1-P-373 | ST33-A002

Comparisons of Co-incident Ionospheric Plasma Observations Between FORMOSAT-5 and Millstone Hill Incoherent Scatter Radar

Chi-Kuang CHAO^{1‡+}, Yi-Wun CHEN¹, Jann-Yenq (Tiger) LIU¹ ¹National Central University

ST33-D2-PM1-P-374 | ST33-A005

Unusual Electromagnetic Observations by the Search Coil Magnetometer Onboard CSES Prior to M>7.0 Earthquakes Qiao WANG¹⁺⁺, Rui YAN¹, Jianping HUANG¹, Xuhui SHEN¹ ¹China Earthquake Administration

ST33-D2-PM1-P-375 | ST33-A007

Validation of Geospheres Interaction During Large-scale Natural Disasters Utilizing Space-borne Multi-parameter Observations. The LAIMC Concept

Dimitar OUZOUNOV^{1‡+}, Sergey PULINETS², Michel PARROT³, Xuhui SHEN⁴, Xuemin ZHANG⁴, Valerio TRAMUTOLI⁵, Francesco MARCHESE⁶, Nicola GENZANO⁵, Jann-Yenq (Tiger) LIU⁷, Katsumi HATTORI⁸

¹Chapman University, ²Russian Academy of Sciences, ³National Center for Scientific Research, ⁴China Earthquake Administration, ⁵University of Basilicata, ⁶National Research Council, ⁷National Central University, ⁸Chiba University

ST33-D2-PM1-P-376 | ST33-A010

Temporal and Spatial Correlation Analyses Between Precursory Ionospheric Parameters and Earthquake Energy by Using Global Ionosphere Maps Yung-Chih SU^{1#+}, Jann-Yenq LIU², Jinming SHA¹

¹Fujian Normal University, ²National Central University

ST33-D2-PM1-P-377 | ST33-A011

Seismo-ionospheric Precursors Associated with the 5 August 2018 M6.9 Loloan Earthquake Observed by China Seismo-electromagnetic Satellite

Jann-Yenq (Tiger) LIU^{1#+}, F.Y. CHANG¹, Dimitar OUZOUNOV², Katsumi HATTORI³, Valerio TRAMUTOLI⁴, Xuhui SHEN⁵, Sergey PULINETS⁶, Da-Peng LIU⁵, Rui YAN⁵

¹National Central University, ²Chapman University, ³Chiba University, ⁴University of Basilicata, ⁵China Earthquake

Administration, ⁶Russian Academy of Sciences

Day 03 31 Jul, Wed

Day 03 - 31 Jul 2019, Wednesday Program Overview

	AM1	AM2	PM1	PM2
Time / Room	08:30 - 10:30	11:00 - 12:30	13:30 - 15:30	16:00 - 18:00
MR308	ST08 p.M95	ST08 p.M102	ST18 p.M107	ST18 <i>p.M113</i>
MR304	ST06 <i>p.M96</i>	ST06 p.M103	ST29 <i>p.M108</i>	ST11 <i>p.M114</i>
MR303	SE21 p.M96	SE20 p.M103	SE22 p.M108	SE22 p.M114
MR330	HS13 <i>p.M</i> 96	HS08 p.M103	HS13 p.M109	HS13 <i>p.M115</i>
MR329	HS09 <i>p.M</i> 97	HS09; HS11 <i>p.M104</i>	HS11 p.M109	HS23 p.M115
MR328	HS22 <i>p.M</i> 97	HS22; HS27 <i>p.M104</i>	HS27 p.M110	HS24 p.M116
MR310	PS12 <i>p.M98</i>	PS12 p.M105	PS16 p.M110	PS16 p.M116
MR311	SE13 p.M99		AS07 p.M111	AS07 p.M117
MR327	SE09 p.M99	SE23 p.M105	SE09 p.M111	IG19 p.M117
MR302	OS14; OS17 <i>p.M100</i>	OS17 p.M106	OS02 p.M111	OS02 p.M118
MR301	OS08 p.M100	OS08 p.M106	OS09; OS19 <i>p.M112</i>	OS07 p.M118
MR300	BG06; BG10 p.M101	KL-BG p.F13 DL-BG p.F12	WS03 <i>p.F23</i>	
MR309	ST27 p.M102	ST16 p.M106	ST26-PS17 p.M113	ST26-PS17 p.M119
MR323	IG12 p.M102	IG24 p.M107	Belmont Forum	SE24 p.M120
Nicoll 1	AS03 p.M101	SS05 p.M106	SS03 p.M112	AS11 p.M119
Nicoll 2	AS19 p.M95	KL-AS p.F12 DL-AS p.F11	Meet-the	e-Experts
EXHIBITION HALL			AS2 Posters <i>p.M122</i> BG Posters <i>p.M121</i>	

Sessions & Conveners

* Main Convener

AS03-Monsoon Climates Over South, East and Southeast Asia in a Warming Environment

*Ramesh KRIPALANI Indian Institute of Tropical Meteorology, Kyung-Ja HA Pusan National University, Jaiho OH Pukyong National University, Venkatraman PRASANNA Meteorological Service Singapore, Renguang WU Zhejiang University

AS07-Origin, Evolution, and Distribution of Atmospheric

Pollutions and Their Impact on Ecosystem in Eastern China *Xuexi TIE National Center for Atmospheric Research, Guohui LI Chinese Academy of Sciences, Jianming XU Yangtze River Delta Center for Environmental Meteorology Prediction and Warning

AS11-Exploration and Science of the Earth's Lower and

Middle Atmosphere: Past, Present and Future Perspectives *Som Kumar SHARMA Physical Research Laboratory, Anoop MISHRA Sathyabama University, Chennai, Sumit Kumar MISHRA CSIR-National Physical Laboratory, D. V. PHANIKUMAR Aryabhatta Research Institute of Observational Sciences, Shikha RAIZADA Arecibo Observatory

AS19-Anthropogenic and Natural Aerosol: Modeling, Measurement, and Source Apportionment

*Cheol-Hee KIM Pusan National University, Mizuo KAJINO Japan Meteorological Agency, Fan MENG Chinese Research Academy of Environmental Sciences, Wei TANG Chinese Research Academy of Environmental Sciences, Chung-Shin YUAN National Sun Yat-sen University

BG06-The Role of Trace Metals in Shaping Biological Communities in Modern Oceans

*Anwesha GHOSH Indian Institute of Science Education and Research Kolkata, Punyasloke BHADURY Indian Institute of Science Education and Research Kolkata, Prasun GOSWAMI National Institute of Ocean Technology

BG10-Coastal Blue Carbon: Recent Assessments, New

Methods, Data Syntheses and Advance in Carbon Finance *Raghab RAY The University of Tokyo, Punyasloke BHADURY Indian Institute of Science Education and Research Kolkata, Rupesh Kumar BHOMIA Center For International Forestry Research, Bogor, Sahadev SHARMA Institute of Ocean and Earth Sciences, University of Malaya, Kuala Lumpur

HS08-Urban Development and Climate Change

*Jeanne Jinhui HUANG Nankai University, James LI Ryerson University

HS09-Hydrometric Monitoring and Data Analysis

*Ke-Sheng CHENG National Taiwan University, Chen-Ho CHIEN National Taiwan University, Jihn-Sung LAI National Taiwan University

HS11-Hydroinformatics

*Dawei HAN University of Bristol, Jeanne Jinhui HUANG Nankai University, Gwo-Fong LIN National Taiwan University

HS13-Urban Water-Related Problems

*Kenichiro KOBAYASHI Kobe University, Ronny BERNDTSSON Lund University, Akira KAWAMURA Tokyo Metropolitan University, So KAZAMA Tohoku University, Kei NAKAGAWA Nagasaki University

HS22-Satellite Remote Sensing Data Products for Water Cycle Studies and Societal Applications

*Xiwu ZHAN National Oceanic and Atmospheric Administration, Rong LIU Chinese Academy of Sciences, Marouane TEMIMI Khalifa University of Science and Technology, Jun WEN Chengdu University of Information Technology, Huan WU Sun Yat-sen University

HS23-Approaches for Post-processing Meteorological and Hydrological Forecasts for Improved Predictions of High-impact Weather Conditions

*Sanjeev Kumar JHA Indian Institute of Science Education and Research Bhopal, Safat SIKDER University of Washington, Fuqiang TIAN Tsinghua University

HS24-Modeling of Hydrologic Processes at Catchment Scales in the Context of Climate Change

*Van-Thanh-Van NGUYEN McGill University, Shie-Yui LIONG National University of Singapore, Laxmi SUSHAMA McGill University

HS27-Evapotranspiration Estimation from Plot to Global Scale Using Instruments, Models and Remote Sensing *Xuan YU Sun Yat-sen University, Hongkai GAO East China Normal University, Hailong WANG Sun Yat-sen University, Jianhui WEI Karlsruhe Institute of Technology, Ke ZHANG Hohai University

IG12-Global and Societal Impacts of Geohazards

*Yasukuni OKUBO Japan Space Systems, Antonio CORREIA University of Evora, Kazuhisa GOTO The University of Tokyo, Yujiro OGAWA N.A, Anawat SUPPASRI Tohoku University

IG19-Volcanic Gas Surveillance: Applications to Monitoring and Hazard Mitigation

*Philipson BANI The French Research Institute for Development, Nia HAERANI Center for Volcanology and Geological Hazard Mitigation, Kristianto KRISTIANTO Center for Volcanology and Geological Hazard Mitigation, Estu KRISWATI Center for Volcanology and Geological Hazard Mitigation, Devy Kamil SYAHBANA Center for Volcanology and Geological Hazard Mitigation

IG24-Geo-science Education, Geo-heritage and Geo-conservation

*Mega Fatimah ROSANA Padjadjaran University, Than HTUN Myanmar Precious Resources Group, Soojae LEE JeJu UNESCO Global Geopark, I-Te LEE Central Weather Bureau, Hoe Teck TAN School of Science and Technology

OS02-Tropical Climate Variability, Modelling, Prediction, and Application

*Jing-Jia LUO Nanjing University of Information Science & Technology, Swadhin BEHERA Japan Agency for Marine-Earth Science and Technology, Dietmar DOMMENGET Monash University, June-Yi LEE Pusan National University

OS07-Tropical Cyclone-Ocean Interactions

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

OS08-Future Coastal Oceans Under Increasing Climate Change and Anthropogenic Stresses

*Daidu FAN Tongji University, Guan-hong LEE Inha University, Jingping XU Southern University of Science and Technology, Zai-Jin YOU Ludong University

OS09-Atmospheric and Oceanic Forcing on Biogeochemistry in the North Pacific Subtropical Gyre

*Wee CHEAH University of Malaya, Chun Hoe CHOW National Taiwan Ocean University, Jen-Hua TAI Academia Sinica

OS14-Marine Debris – from Modelling to Management to Microplastics

*Serena LEE Griffith University, Venkatachalapathy RAMADOSS Annamalai University

OS17-Advances in Oceanic Data Assimilation Methodologies, Forecasting and Reanalysis

*Shiqiu PENG Chinese Academy of Sciences, Zhijin LI Jet Propulsion Laboratory, California Institute of Technology, Yasumasa MIYAZAWA Japan Agency for Marine-Earth Science and Technology, Shaoqing ZHANG GFDL/NOAA, Jiang ZHU Chinese Academy of Sciences

OS19-Artificial Intelligence (AI) Oceanography

*Changming DONG Nanjing University of Information Science & Technology, Cheng CHENG Univer, Qinshan LIU Nanjing University of Information Science and Technology, Bin ZOU National Satellite Ocean Application Service

PS12-Juno at Jupiter and the Earth-based Observation Campaign

*Alessandro MURA National Institute for Astrophysics, Frederic ALLEGRINI Southwest Research Institute, Scott BOLTON Southwest Research Institute, Glenn ORTON Jet Propulsion Laboratory, California Institute of Technology, Marzia PARISI NASA Jet Propulsion Laboratory

PS16-Microwave and Infrared Remote Sensing of Solar System Objects

*Paul HARTOGH Max Planck Institute for Solar System Research, Scott BOLTON Southwest Research Institute, Yasuko KASAI National Institute of Information and Communications Technology, Yi-Jehng KUAN National Taiwan Normal University

ST06-Magnetohydrodynamic Waves in Solar Magnetic Structures: Seismology and Heating

*Bo LI Shandong University, Dipankar BANERJEE Indian Institute of Astrophysics, Marcel GOOSSENS KU Leuven, Rekha JAIN The University of Sheffield, Takaaki YOKOYAMA The University of Tokyo

ST08-Magnetic Flux Ropes Throughout the Solar System: Theory, Simulations and Observations

*Gangkai POH NASA Goddard Space Flight Center, San LU University of California, Los Angeles, James SLAVIN University of Michigan, Andrew SMITH University of Southampton, Wei-Jie SUN University of Michigan

ST11-Radiation Belt Physics in the Sun-earth Connection Context

*Binbin NI Wuhan University, Xudong GU Wuhan University, Allison JAYNES The University of Iowa, Yuto KATOH Tohoku University, Hong ZHAO University of Colorado Boulder

ST16-Peculiar nonlinear phenomena in the modern solar-terrestrial physics

*Alexei DMITRIEV National Central University, Bo LI Shandong University

ST18-Multi-scale Diagnosis of Magnetic Reconnection

*Meng ZHOU Nanchang University, Keizo FUJIMOTO Beihang University, Kyoung-Joo HWANG Southwest Research Institute, Yuri KHOTYAINTSEV Swedish Institute of Space Physics, Rongsheng WANG University of Science and Technology of China

ST26-PS17-Future and Current Space Missions and Instrumentation for Space and Planetary Science

*Takeshi SAKANOI Tohoku University, Anil BHARDWAJ Physical Research Laboratory, Yoshifumi SAITO Japan Aerospace Exploration Agency, Jongho SEON Kyung Hee University, Andrew YAU University of Calgary

ST27-General Session in Solar and Terrestrial Sciences

*Mario BISI United Kingdom Research and Innovation - Science & Technology Facilities Council, Gang LI The University of Alabama in Huntsville, Quanqi SHI Shandong University, Linghua WANG Peking University, Shasha ZOU University of Michigan

ST29-Seven Years of Van Allen Probes and Two Years of Arase: New and Recent Results on Radiation Belt and Inner Magnetosphere Physics

*Craig KLETZING The University of Iowa, Ondrej SANTOLIK Czech Academy of Sciences

SE09-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, Helena ALBERT Nanyang Technological University

SE13-Landslide Identification, Prediction, and Monitoring Using Multi-Disciplinary Emerging Technologies and Early Warning Systems in a Multi-Hazard Framework

*Chih-Chung CHUNG National Central University, Jia-Jyun DONG National Central University, Mauro ROSSI National Research Council (CNR), Ying-Hsin WU Kyoto University, Che-Ming YANG National Chiao Tung University

SE20-Crustal Mechanics Integrations: Observations, Models and Implications

*Liqing JIAO Nanyang Technological University, Chung-Han CHAN Nanyang Technological University, Hung-Yu WU Japan Agency for Marine-Earth Science and Technology

SE21-Understanding the Geodynamics of Subduction Zones

*Rebecca FARRINGTON The University of Melbourne, Dan SANDIFORD The University of Melbourne, Ting YANG Southern University of Science and Technology

SE22-Emerging Trends in Ore Deposit Studies in the Asia Oceania Region

*Jillian Aira GABO-RATIO University of the Philippines Diliman, Chun-Kit LAI Universiti Brunei Darussalam, Betchaida PAYOT University of the Philippines Diliman, Mega Fatimah ROSANA Padjadjaran University, Kotaro YONEZU Kyushu University

SE23-Oceanic Lithosphere: from Ridge to Arc

*Betchaida PAYOT University of the Philippines Diliman, Norikatsu AKIZAWA The University of Tokyo, Biswajit GHOSH Calcutta University

SE24-Geotechnical and Geophysical Site Characterization

*Sung-Woo MOON Nazarbayev University, Taeseo KU National University of Singapore

SS03-Mineral Desert Dust

*Sang-Woo KIM Seoul National University, Jack KAYE NASA Earth Science Division, Barry LEFER NASA

SS05-Space Agency Remote Sensing of the Earth

*Wenjian ZHANG World Meteorological Association, Richard ECKMAN National Aeronautics and Space Administration

ST08 / Magnetic Flux Ropes Throughout the Solar System: Theory, Simulations and Observations Wed - 31 Jul | MR308

Time 08:30-10:30

Chair(s) Gangkai POH, NASA Goddard Space Flight Center

ST08-D3-AM1-308-001 | ST08-A021 (Invited)

On the Twist of Magnetic Flux Ropes (MFRs) in the Corona and Solar Wind Yuming WANG^{1‡+}, Rui LIU¹, Chenglong SHEN¹, Jiajia LIU², Ake

ZHAO¹

¹University of Science and Technology of China, ²The University of Sheffield

ST08-D3-AM1-308-002 | ST08-A006 (Invited)

A Comparison of Magnetic Flux Rope Observations at Mercury, Venus, and Mars Gina DI BRACCIO^{1#+} ¹NASA Goddard Space Flight Center

ST08-D3-AM1-308-003 | ST08-A005

A New Mechanism for the Field Line Twisting in the Ionospheric Magnetic Flux Rope Lianghai XIE^{1±+}, L. C. LEE² ¹Macau University of Science and Technology, ²Academia Sinica

ST08-D3-AM1-308-004 | ST08-A004 (Invited)

Large-scale Solar Eruptions and Small-scale Magnetic Reconnection Mingde DING^{1#+}, Xin CHENG¹ ¹Nanjing University

ST08-D3-AM1-308-005 | ST08-A020

Solar Eruption Generated by Interaction of Magnetic Flux Ropes Sibaek YI¹⁺, Gwang-Son CHOE^{1#}, Hongdal JUN¹ ¹Kyung Hee University

ST08-D3-AM1-308-006 | ST08-A012

Reconstruction of Plasma Structure with Pressure Anisotropy in the Magnetosphere Anmin TIAN^{1#+}, Kai XIAO¹, Alexander DEGELING¹, Quanqi SHI¹ ¹Shandong University

ST08-D3-AM1-308-007 | ST08-A007

Comparison of Cylindrical Interplanetary Flux Rope Model Fittings with Different Boundary Pitch Angle Treatments Nobuhiko NISHIMURA^{1‡+}, Katsuhide MARUBASHI², Munetoshi TOKUMARU³

¹Institute for Space Earth Environmental Research, ²National Institute of Information and Communications Technology, ³Nagoya University

AS19 / Anthropogenic and Natural Aerosol: Modeling, Measurement, and Source Apportionment

Wed - 31 Jul | Nicoll 2

Time08:30-10:30Chair(s)Cheol-Hee KIM, Pusan National University

AS19-D3-AM1-Nicoll 2-001 | AS19-A009 (Invited)

Transpacific Transport of Asian Dust and Pollution by Mid-latitude Cyclones as Revealed by NASA Fine-resolution Satellites and Model Hongbin YU^{1#+}, Qian TAN², Huisheng BIAN¹, Tianle YUAN^{1,3}, Mian CHIN¹, John YORKS¹ ¹NASA Goddard Space Flight Center, ²Bay Area Ennvironmental Research Institute, ³University of Maryland, Baltimore County

AS19-D3-AM1-Nicoll 2-002 | AS19-A010

Vertical Structure of Heating Rate Due to Mineral Dust and Carbonaceous Aerosols over the Indian Region Lakshmi N.B.^{1,2#+}, Vijayakumar S. NAIR¹, S. Suresh BABU¹ ¹Vikram Sarabhai Space Centre, ²Cochin University of Science and Technology

AS19-D3-AM1-Nicoll 2-003 | AS19-A001

Study on the Radiation Characteristics and Transport of Dust and Anthropogenic Aerosols over the Tibetan Plateau in Summer Yuzhi LIU¹⁵⁺

¹Lanzhou University

AS19-D3-AM1-Nicoll 2-004 | AS19-A003

Preliminary Environmental Magnetic Results from Atmospheric Aerosol Particles Caught on Quartz-filters in the Noto Peninsula, Ishikawa, Japan Kazuo KAWASAKI¹⁺⁺, Atsushi MATSUKI², Nozomu TSUCHIYA² ¹University of Toyama, ²Kanazawa University

AS19-D3-AM1-Nicoll 2-005 | AS19-A014

Impacts of Climate Change and Land Use Change on Dust Emission in East Asia Chenglai WU^{1‡+}, Zhaohui LIN¹, Xiaohong LIU^{1,2} ¹Chinese Academy of Sciences, ²University of Wyoming

AS19-D3-AM1-Nicoll 2-006 | AS19-A016

Investigation of the Volcanic Aerosols: The Contribution to the Stratospheric Aerosols and the Transport Pathways Xue WU^{1,2#+}, Sabine GRIESSBACH², Lars HOFFMANN³ ¹Institute of Atmospheric Physics, Chinese Academy of Sciences, ²Forschungszentrum Jülich GmbH, ³Forschungszentrum Juelich GmbH

AS19-D3-AM1-Nicoll 2-007 | AS19-A020

Trend Assessment of PM2.5 Inorganic Species in Background and Urban Area in South Korea During Higher Episodes: Observation and Simulations Yu-Jin JO¹⁺, Cheol-Hee KIM^{1#}, Hyo-Jung LEE¹, Hyun-Young JO¹, Geum-Hee YANG¹, Jongmin KIM¹ ¹Pusan National University

ST06 / Magnetohydrodynamic Waves in Solar Magnetic Structures: Seismology and Heating Wed - 31 Jul | MR304

Time	08:30-10:30
Chair(s)	Takaaki YOKOYAMA, The University of Tokyo
	Bo LI, Shandong University

ST06-D3-AM1-304-001 | ST06-A002

Mixed Properties of MHD Waves in Non-uniform Plasmas Marcel GOOSSENS^{1#+}, Inigo ARREGUI², Tom VAN DOORSSELAERE¹ ¹KU Leuven, ²Instituto de Astrofísica de Canarias

ST06-D3-AM1-304-002 | ST06-A007 (Invited)

Are Coronal-loop Oscillations Confined to the Visible Loop? Bradley HINDMAN¹³⁺

¹University of Colorado Boulder

ST06-D3-AM1-304-003 | ST06-A003 (Invited)

The Effect of Thermal Misbalance on Compressive Oscillations in Solar Coronal Loops Valery NAKARIAKOV^{1±+} ¹University of Warwick

ST06-D3-AM1-304-004 | ST06-A006 (Invited)

Investigating Hidden Energy in the Solar Corona Using Forward Modeling of Magnetohydrodynamic Waves Vaibhav PANT^{1‡+}, Norbert MAGYAR¹, Tom VAN DOORSSELAERE¹, Richard MORTON² ¹KU Leuven, ²Northumbria University

ST06-D3-AM1-304-005 | ST06-A011

Nature of Oscillations in Solar Coronal Arcades Rekha JAIN^{1#+} ¹The University of Sheffield

ST06-D3-AM1-304-006 | ST06-A010

Fast Magnetohydrodynamic Modes of a Semi-cylindrical Waveguide Hope THACKRAY^{1#+}, Rekha JAIN¹ ¹The University of Sheffield

ST06-D3-AM1-304-007 | ST06-A008

Coronal Loop Seismology Using Kink Oscillations in Loops with Wide Inhomogeneous Layers David PASCOE^{1#+} ¹KU Leuven

ST06-D3-AM1-304-008 | ST06-A012

Numerical Simulations of Coronal Loop Transverse Oscillations Excited by Random Driver Andrei AFANASEV¹⁵⁺, Tom VAN DOORSSELAERE¹ ¹KU Leuven

SE21 / Understanding the Geodynamics of Subduction Zones

Wed - 31 Jul | MR303

Time 08:30-10:30

Chair(s) Rebecca FARRINGTON, The University of Melbourne Ting YANG, Southern University of Science and Technology

SE21-D3-AM1-303-001 | SE21-A006

Strain Accumulation and Release During the Mega-thrust Earthquake Cycle: Insight from Upper Plate Behavior Kevin P. FURLONG^{1#+}, Kirsty MCKENZIE¹, Matthew HERMAN² ¹Penn State University, ²Utrecht University

SE21-D3-AM1-303-002 | SE21-A007

Dynamics of Arc-continent Collision: Implications for Basin Formation in the Overriding Plate Andres RODRIGUEZ^{1#+}, Sara MORON¹, Romain BEUCHER¹, Camilo MONTES², Rebecca FARRINGTON¹, Louis MORESI¹ ¹The University of Melbourne, ²Universidad del Norte, Colombia

SE21-D3-AM1-303-003 | SE21-A004

Lubrication Dynamics for Exhumation of High Pressure and Ultra High Pressure Rocks in Subduction Zones Giridas MAITI^{1#+}, Nibir MANDAL¹ ¹Jadavpur University

SE21-D3-AM1-303-004 | SE21-A002

Creep of Majorite-ringwoodite Model and its Role in Stress Development for Deep Earthquakes at Around 600 Km Depth Junshan XU^{1±+} ¹China Earthquake Administration

SE21-D3-AM1-303-005 | SE21-A005 (Invited)

Genesis of Intermediate-depth and Deep Intraslab Earthquakes Beneath Japan Constrained by Seismic Tomography, Seismicity, and Thermal Modeling Min CHEN^{1&+}, Vlad CONSTANTIN MANEA², Fenglin NIU^{3,4}, Songqiao WEI¹, Eric KISER⁵ ¹Michigan State University, ²Universidad Nacional Autónoma de México, ³Rice University, ⁴China University of Petroleum-Beijing, ⁵University of Arizona

HS13 / Urban Water-Related Problems

Wed - 31 Jul | MR330

Time	08:30-10:30
Chair(s)	Kenichiro KOBAYASHI, Kobe University
	So KAZAMA. Tohoku Universitu

HS13-D3-AM1-330-001 | HS13-A024

Spatio-temporal Evaluation of Windfield Dynamics over a Reservoir in Downtown Singapore Mohammad ASHRAFI^{1#+}, Lloyd CHUA², Kim IRVINE³

¹Nanyang Technological University, ²Deakin University, ³National Institute of Education

HS13-D3-AM1-330-002 | HS13-A005

Paddy Field Dam Effect Estimation for Flood Mitigation Focusing on Nishiharima Hyogo Japan Kenichiro KOBAYASHI^{1#+}, Takanori KONO¹, Takao KIMURA² ¹Kobe University, ²local farmer

Day 03 - 31 Jul, Wed

HS13-D3-AM1-330-003 | HS13-A014

Estimation of the Flood Damage Caused by Climate Change and Effect of the Adaptation Tao YAMAMOTO^{1#+}, So KAZAMA¹, Yoshiya TOUGE¹ ¹Tohoku University

HS13-D3-AM1-330-004 | HS13-A009 (Invited)

Application of Convolutional Neural Network to Rainfall Forecasting and Sensitivity Analysis on Input Factors and Regional Characteristics

Tsuguaki SUZUKI^{1#+}, Sunmin KIM¹, Yasuto TACHIKAWA¹ ¹Kyoto University

HS13-D3-AM1-330-005 | HS13-A031 (Invited)

Numerical Analysis on Water Behaviour of Inundaiton Due to River Flood and Heavy Rain in Urban Area Makoto TAKEDA^{1#+}, Masataka MURASE¹, Naoki MATSUO¹ ¹Chubu University

HS13-D3-AM1-330-006 | HS13-A006 (Invited)

High-resolution Simulation of Full-scale Fluvial and Pluvial Flooding Using a High-performance Hydrodynamic Model Qiuhua LIANG¹³⁺, Xilin XIA¹, Qian LI¹

¹Loughborough University

HS13-D3-AM1-330-007 | HS13-A018 (Invited)

High-resolution Numerical Weather Simulation with a Large Domain for Water-related Disaster Prevention and Mitigation Tsutao OIZUMI^{1+*}, Kazuo SAITO², Junshi ITO³, Le DUC¹ ¹Japan Agency for Marine-Earth Science and Technology, ²The

University of Tokyo, ³Japan Meteorological Agency

HS13-D3-AM1-330-008 | HS13-A019

Development of Operational Urban Flood Guidance System for Bangkok Area

Apimook MOOKTAREE¹⁵⁺, Ticha LOLUPIMAN², Theerapol CHAROENSUK², Watin THANATHANPHON², Narongrit LUANGDILOK², Piyamarn SISOMPHON² ¹Hydro-Informatics Institute, ²Hydro and Agro Informatics Institute

HS09 / Hydrometric Monitoring and Data Analysis

Wed - 31 Jul | MR329

 Time
 08:30-10:30

 Chair(s)
 Ke-Sheng CHENG, National Taiwan University

HS09-D3-AM1-329-001 | HS09-A022

The Hydro-geomorphic Baseline of Four Forested Catchments in Singapore

Canh Tien Trinh NGUYEN^{1‡+}, Jiandong LIU¹, Dongeon KIM^{1,2}, Mengjie LIEW¹, Yixiong CAI³, Shie-Yui LIONG¹ ¹National University of Singapore, ²University of Nice Sophia Antipolis, ³National Parks Board

HS09-D3-AM1-329-002 | HS09-A013

Effect of In-stream Variable on the Lower Mahanadi River, India

Amit SIDDHARTH^{1#+}, Chandan PRADHAN¹, Modalavalasa SURESH¹, Subashisa DUTTA¹ ¹Indian Institute of Technology Guwahati

HS09-D3-AM1-329-003 | HS09-A001

Flow Field Measurement and Movement Estimation of Turbidity Current in a Reservoir Fong-Zuo LEE^{1*+}, Jihn-Sung LAI¹, Wen-Yi CHANG², Shu-Yuan YANG¹, Cheng-Chi LIU¹, Hsing-Jui WANG¹, Jen-Yu HAN¹, Chih-Hsien YANG¹ ¹National Taiwan University, ²National Center for High-Performance Computing

HS09-D3-AM1-329-004 | HS09-A002

UAV Application on the Flow Field Measurement Between the Upstream and Downstream of Bitan Weir

Jihn-Sung LAI¹, Fong-Zuo LEE¹, Shu-Yuan YANG^{1‡+}, Wen-Yi CHANG², Cheng-Chi LIU¹, Hsing-Jui WANG¹, Jen-Yu HAN¹, Chih-Hsien YANG¹

¹National Taiwan University, ²National Center for High-Performance Computing

HS09-D3-AM1-329-005 | HS09-A005

Hydrological Investigation and Water Budget Model Development of a Mountain Wetland in Northern Taiwan Yao-Wen HSU¹⁺, Shang-Shu SHIH^{1#} ¹National Taiwan University

HS09-D3-AM1-329-006 | HS09-A007

Flow Regime Analysis Using Wavelet Methods Considering Weir Effects

Chi-Hsin LIU¹⁺, Shang-Shu SHIH^{1#} ¹National Taiwan University

HS09-D3-AM1-329-007 | HS09-A011

The Effects of Water Gate Operations on Wu-Wei-Kang Wetland by Intensive Field Measurements and Hydrodynamic Model Simulations

Gwowen HWANG^{1#}, Fong-Zuo LEE¹⁺, Shang-Shu SHIH¹, Szu-Yu KO¹, Ming-Hsiu CHAN¹ ¹National Taiwan University

HS09-D3-AM1-329-008 | HS09-A009

Certified Accuracy and Requirements for Rainfall Measurements and Instruments in Scientific Investigations Chen-Ho CHIEN^{1#+}, Li-Hui HSIEH¹ ¹National Taiwan University

HS22 / Satellite Remote Sensing Data Products for Water Cycle Studies and Societal Applications

Wed - 31 Jul | MR328

00 20 10 20

1 ime	08:30-10:30
Chair(s)	Xiwu ZHAN, National Oceanic and Atmospheric
	Administration
	Nergui NANDING, Sun Yat-sen University
	Youssef WEHBE, Khalifa University of Science and
	Technology

HS22-D3-AM1-328-001 | HS22-A002

Bias Correction of Satellite Precipitation: TRMM and GPM of Singapore for Hydrological Model Huong TRINH DIEU^{1‡+}, Serene TAY², Seng Keat OOI¹ ¹National University of Singapore, ²Senior Consultant

HS22-D3-AM1-328-002 | HS22-A006

IMERG V06: 20 Years of High Resolution Global Precipitation Data

Jackson TAN^{1#+}, George HUFFMAN², David BOLVIN³, Eric NELKIN³

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

HS22-D3-AM1-328-003 | HS22-A009 (Invited)

Integrating SMAP Soil Moisture and Rainfall Data with an Analytic Model for Drought Monitoring at the Continental Scale

Lifeng LUO^{1#+}, Feng MA², Aizhong YE², Yang LANG³ ¹Michigan State University, ²Beijing Normal University, ³Yunnan University

HS22-D3-AM1-328-004 | HS22-A001

A Lagrangian Analysis of Moisture Transport Pathways During Drought and Wet Year over the Source Region of the Yellow River, China

Rong LIU^{1#+}, Jun WEN², Xin WANG¹, Li ZHU¹ ¹Chinese Academy of Sciences, ²Chengdu University of Information Technology

HS22-D3-AM1-328-005 | HS22-A012

Integration of Satellite Soil Moisture and Evapotranspiration Observations for Regional and Global Drought Monitoring Xiwu ZHAN¹⁺⁺, Jicheng LIU², Li FANG², Jifu YIN³, Mitch SCHULL³, Limin ZHAO⁴, Satya KALLURI²

¹National Oceanic and Atmospheric Administration, ²NOAA-NESDIS Center for Satellite Applications and Research, ³University of Maryland, ⁴NOAA-NESDIS Office of Satellite and Product Operations

HS22-D3-AM1-328-006 | HS22-A011

Development of Snow Cover Detection Algorithm Using Himawari-8 AHI Data Hyeon Su KIM^{1#+}, Jae Gwan KIM¹, Chu Yong CHUNG¹ ¹National Meteorological Satellite Center

HS22-D3-AM1-328-007 | HS22-A010

Monitoring the Progress of Urbanization and its Impact on Runoff Generation in Beijing Yibing WANG¹⁺, Xianhong XIE^{1#} ¹Beijing Normal University

HS22-D3-AM1-328-008 | HS22-A003

Using Grace Gravimetry to Detect Groundwater Storage in an Island Watershed

Chung-Chieh HUANG^{1#+}, Jyun-Lin CHEN¹, Hong Ru LIN¹, Shao-Yang HUANG¹, Jet-Chau WEN¹, Pat YEH², Ben JARIHANI³ ¹National Yunlin University of Science and Technology, ² Monash University, ³University of the Sunshine Coast

PS12 / Juno at Jupiter and the Earth-based Observation Campaign

Wed - 31 Jul | MR310

Time	08:30-10:30
Chair(s)	Glenn ORTON, Jet Propulsion Laboratory, California Institute of Technology

PS12-D3-AM1-310-001 | PS12-A011

Juno's Surprising Results and the Impact to Future Exploration

Scott BOLTON^{1#+}, Steven LEVIN², Jack CONNERNEY³ ¹Southwest Research Institute, ²Jet Propulsion Laboratory, California Institute of Technology, ³Space Research Corporation

PS12-D3-AM1-310-002 | PS12-A001 (Invited)

Jupiter's Magnetic Field and Magnetosphere at the Midpoint of Juno's Mapping Mission

J. E. P. CONNERNEY^{1,2‡+}, Stavros KOTSIAROS², Daniel GERSHMAN², John JORGENSEN³, Peter JORGENSEN³, Jose M.G. MERAYO³, Jeremy BLOXHAM⁴, Kimberly MOORE⁴, Scott BOLTON⁵, Steven LEVIN⁶

¹Space Research Corporation, ²NASA Goddard Space Flight Center,

³Technical University of Denmark, ⁴Harvard University, ⁵Southwest Research Institute, ⁶Jet Propulsion Laboratory, California Institute of Technology

PS12-D3-AM1-310-003 | PS12-A008 (Invited)

Auroral Field Aligned Currents in Jupiter's Magnetosphere Stavros KOTSIAROS^{1*+}, J. E. P. CONNERNEY^{1,2}, George CLARK³, Frederic ALLEGRINI^{4,5}, Randy GLADSTONE⁴, William KURTH⁶, Barry MAUK³, Thomas GREATHOUSE⁴, Joachim SAUR⁷, Emma BUNCE⁸, Yasmina M MARTOS¹, Scott BOLTON⁴, Steven LEVIN⁹

¹NASA Goddard Space Flight Center, ²Space Research Corporation, ³The Johns Hopkins University Applied Physics Laboratory, ⁴Southwest Research Institute, ⁵University of Texas at San Antonio, ⁶The University of Iowa, ⁷University of Koeln, ⁸University of Leicester, ⁹Jet Propulsion Laboratory, California Institute of Technology

PS12-D3-AM1-310-004 | PS12-A003

Observing Low-frequency Electromagnetic Waves Related to Jovian Lightning with the Juno Waves Instrument Masafumi IMAI^{1#+}, Ivana KOLMASOVA^{2,3}, Ondrej SANTOLIK^{2,3}, William KURTH¹, George HOSPODARSKY¹, Donald GURNETT¹, Scott BOLTON⁴, John CONNERNEY⁵

¹The University of Iowa, ²Czech Academy of Sciences, ³Charles University, ⁴Southwest Research Institute, ⁵NASA Goddard Space Flight Center

PS12-D3-AM1-310-005 | PS12-A002

Longitudinal and Time Variations of 3-micron CH4 and C2H6 Emissions in the North-polar Region of Jupiter Sang Joon KIM^{1#+}, Chae Kyung SIM¹, Tom GEBALLE², Yuk YUNG³, Steve MILLER⁴, Thomas GREATHOUSE⁵, Sungho LEE⁶ ¹Kyung Hee University, ²Gemini Observatory, ³California Institute of Technology, ⁴University College London, ⁵Southwest Research Institute, ⁶Korea Astronomy and Space Institute

PS12-D3-AM1-310-006 | PS12-A007

Results from JIRAM: The Jovian Infrared Auroral Mapper Alessandro MURA^{1#+}, Alberto ADRIANI¹ ¹National Institute for Astrophysics **The Newest Results from the Juno MWR Instrument** Virgil ADUMITROAIE^{1#}, Steven LEVIN¹, Michael JANSSEN¹, J. E. P. CONNERNEY^{2,3}, Michael ALLISON³, John ARBALLO¹, Sushil ATREYA⁴, Heidi BECKER¹, Shannon BROWN¹, Samuel GULKIS¹, Amoree HODGES⁵, Andrew INGERSOLL⁶, Cheng LI¹, Jonathan LUNINE⁷, Sidharth MISRA¹, Fabiano OYAFUSO¹, Daniel SANTOS-COSTA⁸, Edwin SARKISSIAN¹, Paul STEFFES⁵, J. Hunter WAITE, JR.⁸, Zhimeng ZHANG¹, Scott BOLTON⁸⁺

¹Jet Propulsion Laboratory, California Institute of Technology, ²Space Research Corporation, ³NASA Goddard Space Flight Center,

⁴University of Michigan, ⁵Georgia Institute of Technology, ⁶Geological and Planetary Sciences, California Institute of Technology, ⁷Cornell University, ⁸Southwest Research Institute

PS12-D3-AM1-310-008 | PS12-A014

The Determination of the He/H2 Ratio in the Atmospheres of Saturn and Jupiter and Implications for Giant Planet Formation and Evolution

J. Hunter WAITE, JR.^{1‡+}, Jared BELL², Kelly MILLER¹, David STEVENSON³, Sandrine GUERLET⁴, Tommi KOSKINEN⁵, Chris GLEIN¹, Rebecca PERRYMAN¹, Scott BOLTON¹, Roger YELLE⁵ ¹Southwest Research Institute, ²NASA Goddard Space Flight Center, ³Geological and Planetary Sciences, California Institute of Technology, ⁴Dynamic Meteorology Laboratory, ⁵The University of Arizona

SE13 / Landslide Identification, Prediction, and Monitoring Using Multi-Disciplinary Emerging Technologies and Early Warning Systems in a Multi-Hazard Framework

Wed - 31 Jul | MR311

Time 08:30-10:30

Chair(s) Ying-Hsin WU, Kyoto University Mauro ROSSI, National Research Council (CNR) Chih-Chung CHUNG, National Central University

SE13-D3-AM1-311-001 | SE13-A010

Improvement of Intensity-duration Threshold in Southern Tagalog Region of the Philippines Using Hourly and Daily Rainfall Data and Interpolation Method

Wilbur MANIBO¹⁴⁺, Decibel FAUSTINO-ESLAVA², Nathaniel BANTAYAN¹, Beth Zaida UGAT², Joey Philip TORRES¹, Ryan CASTANETO², Loucel CUI², Jenielyn PADRONES¹, Cristino Jr. TIBURAN¹, Carla DIMALANTA³

¹University of the Philippines, ²University of the Philippines Los Baños, ³University of the Philippines Diliman

SE13-D3-AM1-311-002 | SE13-A004

Landslides Induced by the 2018 Tomakomai, Japan MW 6.6 Earthquake

Chong XU^{1#+}, Xiaoyi SHAO¹, Siyuan MA¹ ¹China Earthquake Administration

SE13-D3-AM1-311-003 | SE13-A009

Structurally-controlled Landslide Hazard Analysis of the Naga City, Cebu Landslide

Carmille Marie ESCAPE^{1+*}, Alfredo Mahar LAGMAY^{2,3}, Francesca LLANES², Krichi May CABACABA⁴, Camille CUADRA¹, LiaAnne GONZALO¹, John Kenneth SUAREZ³ ¹University of the Philippines Resilience Institute, ²University of the Philippines Diliman, ³University of the Philippines Nationwide Operational Assessment of Hazards (UP-NOAH), ⁴Project NOAH (Nationwide Operational Assessment of Hazards)

SE13-D3-AM1-311-004 | SE13-A012

Experimental Study of Bend Scour and its Protections for River Embankment Tzu-Yi LAI^{1±+}

¹National Chung Hsing University

SE13-D3-AM1-311-005 | SE13-A014

On the Application of High Resolution Radar Rainfall Observation on Regional Early Warning of Landslide Hazards Ying-Hsin WU^{1*+}, Eiichi NAKAKITA¹ ¹Kyoto University

SE13-D3-AM1-311-006 | SE13-A016

Landslide Early Warning: Lessons Learned After 10 Year Experience in Italy

Mauro ROSSI^{1‡+}, Ivan MARCHESINI¹, Maria Elena MARTINOTTI¹, Maria Teresa BRUNETTI¹, Silvia PERCCACCI¹, Vinicio BALDUCCI¹, Fausto GUZZETTI¹ ¹National Research Council (CNR)

SE13-D3-AM1-311-007 | SE13-A017

Landslide Early Warning System in Fiji: Prospects and Challenges

Arishma RAM^{1#+}, Mark STEPHENS², Martin BROOK¹, Shane CRONIN¹

¹The University of Auckland, ²University of The Bahamas

SE13-D3-AM1-311-008 | SE13-A002

Modification of TDR Penetrometer for Water Content Profiling in Shallow Landslide Monitoring Chih-Chung CHUNG^{1‡+}, Shih-Kai WEI¹ ¹National Central University

SE09 / Active Volcanic Processes from the Mantle to the Atmosphere: Multidisciplinary Approaches to Monitoring, Hazards, and Impacts

Wed - 31 Jul | MR327

Time 08:30-10:30

Chair(s) Florian M. SCHWANDNER, Jet Propulsion Laboratory, California Institute of Technology Philipson BANI, The French Research Institute for Development

SE09-D3-AM1-327-001 | SE09-A003

Characterization of Volcanic Features Within Benham Plateau and its Implications on the Evolution of the Benham Rise Paola Jayme ROMAGUERA^{1#}, Jannine VASQUEZ²⁺, Jamie Mary Loise TAN², Angela MASONGSONG², Ma. Criselda BALDAGO¹, Richard YBAÑEZ¹, Audrei Anne YBAÑEZ¹, Alfredo Mahar LAGMAY^{1,3}

¹University of the Philippines Diliman, ²University of the Philippines, ³University of the Philippines Nationwide Operational Assessment of Hazards (UP-NOAH)

SE09-D3-AM1-327-002 | SE09-A018

Morphology and Petrology Analysis of Pillow Lava in Karangsambung: Implication for Tectonic Karangsambung, Central Java Province, Indonesia

Dina GUNARSIH^{1‡+}, Mirzam ABDURRACHMAN¹, Wildan HAMZAH¹, Zulfiah ZULFIAH¹ ¹Bandung Institute of Technology Day 03 - 31 Jul, Wed

SE09-D3-AM1-327-003 | SE09-A012

Petrogenesis of Gede Volcanic Complex, West Java, Indonesia and its Implication to Ciletuh and Karangsambung Melange Complex Lineament Erza WINANTO^{1‡+}, Mirzam ABDURRACHMAN¹, Wildan HAMZAH¹

¹Bandung Institute of Technology

SE09-D3-AM1-327-004 | SE09-A010

Time Makes a Difference: Time Interval Controls on Magma Migration Geometry Stephen PANSINO¹⁵⁺, Adel EMADZADEH¹, Benoit TAISNE¹

¹Nanyang Technological University

SE09-D3-AM1-327-005 | SE09-A001 (Invited)

Buffering of Magma Intrusions: A New Way to Classify Volcanoes Chris NEWHALL^{1#+} ¹Mirisbiris Garden and Nature Center

SE09-D3-AM1-327-006 | SE09-A014 (Invited)

Petrological Studies from 2012, 2014 and 2017 Lava Products of Anak Krakatau, Indonesia

Idham Andri KURNIAWAN¹^{‡*}, Mirzam ABDURRACHMAN¹, Taufik ISMAIL², M. Nugraha KARTADINATA³, Uut Ihsan Maulana SUPARMAN⁴, Firman SAUQI¹

¹Bandung Institute of Technology, ²Mineral Technology College of Indonesia, ³Center for Volcanology and Geological Hazard Mitigation, ⁴Jenderal Soedirman University

OS14 / Marine Debris – from Modelling to Management to Microplastics OS17 / Advances in Oceanic Data Assimilation Methodologies, Forecasting and Reanalysis

Wed - 31 Jul | MR302

Time	08:30-10:30
Chair(s)	Serena LEE, Griffith University
	Yineng LI, Chinese Academy of Sciences

OS14-D3-AM1-302-001 | OS14-A004

Microplastic Concentrations in Urban Beach Sediment, Gold Coast, Australia

Serena LEE^{1*+}, Shima ZIAJAHROMI¹, Maggie MUURMANS¹ ¹Griffith University

OS14-D3-AM1-302-002 | OS14-A002

Influence of Oceanographic and Meteorological Factors on Accumulation of Marine Debris on Agatti Island, India Mugilarasan M¹⁵⁺, Veerasingam S², Venkatachalapathy RAMADOSS¹, Ranjani M¹ ¹Annamalai University, ²CSIR-National Institute of Oceanography

OS14-D3-AM1-302-003 | OS14-A006

Trapping of Microplastics in the Semi-enclosed Bohai Sea Yanfang LI $^{\rm I\sharp +}$

¹Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences

OS17-D3-AM1-302-004 | OS17-A017

Research on Application of Ocean Big Data Analysis and Forecast Qingsheng MIAO^{1#+}, Yang YANG¹ ¹National Marine Data and Information Service

OS17-D3-AM1-302-005 | OS17-A012

Quantifying Irreversible Mixing Using Contour Coordinates Yu-Kun QIAN^{1#+}, Shiqiu PENG¹, Chang-Xia LIANG² ¹Chinese Academy of Sciences, ²South China Sea Marine Prediction Center

OS17-D3-AM1-302-006 | OS17-A010

Parameterization of Tidal Mixing in the Andaman Sea Based on the Internal Tide Energetics Jiawen LIAO¹⁺, Shiqiu PENG^{2#} ¹Ocean Science, ²Chinese Academy of Sciences

OS17-D3-AM1-302-007 | OS17-A011

Estimation of the Baroclinic Tidal Energy Dissipation in the Timor Sea Based on a General Circulation Model Xixi WEN^{1*+}, Shiqiu PENG¹ ¹Chinese Academy of Sciences

OS17-D3-AM1-302-008 | OS17-A008

The Tidal Effects on the Upper Sea Temperature Cooling Northeast Off the Hainan Island

Yineng LI^{1*+}, Enrique CURCHITSER², Shiqiu PENG¹, Jia WANG³ ¹Chinese Academy of Sciences, ²Rutgers University, ³National Oceanic and Atmospheric Administration

OS08 / Future Coastal Oceans Under Increasing Climate Change and Anthropogenic Stresses

Wed - 31 Jul | MR301

Time	08:30-10:30
Chair(s)	Guan-hong LEE, Inha University
	Zai-Jin YOU, Ludong University

OS08-D3-AM1-301-001 | OS08-A016 (Invited)

Recent Changes of the Asian Major Deltas: Rapid Shoreline and Seafloor Erosions Jingpu (Paul) LIU^{1#+} ¹North Carolina State University

OS08-D3-AM1-301-002 | OS08-A002

Tug of War - Climate Control vs Human Intervention Reflected in Yellow River's Sediment Discharge: From the Mid-Holocene to the Anthropocene Xiao WU^{1#+} ¹Ocean University of China

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OS08-D3-AM1-301-003 | OS08-A012

Mid Holocene Coastal Flooding and Response of the Neolithic Culture on the South Yangtze Coast, East China Zhanghua WANG¹⁺⁺ ¹East China Normal University

OS08-D3-AM1-301-004 | OS08-A004

Seasonal Variations in Trace Element Geochemistry of Sediments Discharged by the Minjiang River, Southeastern China: Implications for Sediment Transport of Mountainous Rivers Xing JIAN^{1#+} ¹Xiamen University

OS08-D3-AM1-301-005 | OS08-A007

Responses of Sedimentary Organic Matter in a Small River Estuary to the Typhoon Process: A Case Study of Quanzhou Bay Yunhai LI^{1#+}, Yunpeng LIN²

¹Third Institute of Oceanography, Ministry of Natural Resources, ²Ministry of Natural Resources

OS08-D3-AM1-301-006 | OS08-A008 (Invited)

Recent Sediment Organic Carbon Sequestration Along the Asia Coasal Seas Under the Natural Climate Forcing and Anthropogenic Impacts Limin HU^{1*}, Xuefa SHI¹ ¹State Oceanic Administration

OS08-D3-AM1-301-007 | OS08-A017

Sediment Suspension Affected by Rigid Vegetation Sha LOU¹⁵⁺, Ming CHEN¹, Hongzhe LIU¹, Shuguang LIU¹, Guihui ZHONG¹ ¹Tongji University

OS08-D3-AM1-301-008 | OS08-A015 (Invited)

Impacts of Intensive Human Activities on the Coast of China in the Last Decades Zai-Jin YOU^{1,2#+} ¹Ludong University, ²University of Queensland

AS03 / Monsoon Climates Over South, East and Southeast Asia in a Warming Environment

Wed - 31 Jul | Nicoll 1

Time	08:30-10:30
Chair(s)	Jing-Jia LUO, Nanjing University of Information Science & Technology Kyung-Ja HA, Pusan National University Ramesh KRIPALANI, India Institute of Tropical Meteorology

AS03-D3-AM1-Nicoll 1-001 | AS03-A036 (Invited)

Hierarchical Modeling Approach to Study the South Asian Monsoon Dynamics Using an Interactive Vegetation Continent Muhammad Adnan ABID^{1#+}, Fred KUCHARSKI¹, Simona BORDONI², In-Sik KANG³, Mansour ALMAZROUI⁴ ¹International Centre for Theoretical Physics, ²California Institute of Technology, ³Second Institute of Oceanography, ⁴King Abdulaziz University

AS03-D3-AM1-Nicoll 1-002 | AS03-A017

The Asymmetric Influence of the South China Sea Biweekly SST on the Abnormal Indian Monsoon Rainfall of 2002 Bakshi Hardeep VAID^{1#+}, Preethi BHASKAR², Ramesh KRIPALANI^{2,3}

¹Nanjing University of Information Science & Technology, ²Indian Institute of Tropical Meteorology, ³Pukyong National University

AS03-D3-AM1-Nicoll 1-003 | AS03-A034

Impact of Indian Ocean Warming on the Increasing Trend in Pre-monsoon Rainfall and Hadley Circulation over Bay of Bengal

Devanil CHOUDHURY¹⁵⁺, Debashis NATH¹, Wen CHEN¹ ¹Chinese Academy of Sciences

AS03-D3-AM1-Nicoll 1-004 | AS03-A037

Moisture Transport Associated with Southwest Monsoon Rainfall over Sri Lanka in Strong and Weak Monsoon Years Sherly SHELTON¹⁺, Zhaohui LIN¹⁺ ¹Chinese Academy of Sciences

AS03-D3-AM1-Nicoll 1-005 | AS03-A021 (Invited)

ENSO-related Asian Summer Monsoon Changes over the Last Half Millennium Fei LIU^{1‡+}

¹Nanjing University of Information Science & Technology

AS03-D3-AM1-Nicoll 1-006 | AS03-A028 (Invited)

Causal Links on Interannual Timescale Between ENSO and the IOD in CMIP5 Future Simulations Thanh LE^{1#+}, Deg-Hyo BAE¹

¹Sejong University

AS03-D3-AM1-Nicoll 1-007 | AS03-A054

Asian Monsoon Variation Following the 1783 Laki Eruption Chaochao ${\rm GAO}^{{\scriptscriptstyle 1\sharp}*}$

¹Zhejiang University

BG06 / The Role of Trace Metals in Shaping Biological Communities in Modern Oceans BG10 / Coastal Blue Carbon: Recent Assessments, New Methods, Data Syntheses and Advance in Carbon Finance

Wed - 31 Jul | MR300

Time 08:30-10:30

Chair(s) Anwesha GHOSH, Indian Institute of Science Education and Research Kolkata Raghab RAY, The University of Tokyo

BG06-D3-AM1-300-001 | BG06-A002

Sources and Bioaccumulation of Rare Earth Elements in the Sediment and Dominant Mangrove Plants in the Indian Sundarban

Raghab RAY^{1#+}, Sanjay Kumar MANDAL², Tapan Kumar JANA³ ¹The University of Tokyo, ²Sundarban Hazi Desarat College, ³University of Calcutta

BG06-D3-AM1-300-002 | BG06-A008 (Invited)

Variability of Paleoredox Conditions in Sediments from Two Modern Basins Located within the Oxygen Minimum Zone of the Eastern Sub-tropical North Pacific Karla MEJIA-PIÑA¹⁺, Miguel Angel HUERTA-DIAZ^{1#}, Oscar GONZALEZ-YAJIMOVICH¹ ¹Universidad Autónoma de Baja California

BG06-D3-AM1-300-003 | BG06-A007

Spatial Distribution and Ecological Risk Assessment of Trace Metals in Different Marine and Coastal Environments of Andaman Islands Prasun GOSWAMI^{1‡+}, Nambali Valsalan VINITHKUMAR¹, Gopal DHARANI¹

¹National Institute of Ocean Technology

BG10-D3-AM1-300-004 | BG10-A002 (Invited)

An Empirical Model for Morphological Structures in Mangrove Areal Root System with Multiple-order Roots Masaya YOSHIKAI^{1‡+}, Takashi NAKAMURA¹, Rempei SUWA², Reginald ARGAMOSA³, Ariel BLANCO³, Eugene HERRERA³, Ronald MALIAO⁴, Yasmin PRIMAVERA-TIROL⁴, Kazuo NADAOKA¹

¹Tokyo Institute of Technology, ²Japan International Research Center for Agricultural Sciences, ³University of the Philippines Diliman, ⁴Aklan State University

BG10-D3-AM1-300-005 | BG10-A004

Synthesis of Advances in Knowledge to Reconcile Science and Policy in Driving Seagrass Blue Carbon Studies for the Indo-pacific Region

Mohammad ROZAIMI^{1#+}, Natasha ARINA¹, Nur HIDAYAH¹, Mohammad FAIROZ¹, Mohd Shahrul MOHD NADZIR¹ ¹Universiti Kebangsaan Malaysia

ST27 / General Session in Solar and Terrestrial Sciences

Wed - 31 Jul | MR309

Time 08:30-10:30

Chair(s) Shasha ZOU, University of Michigan Mario BISI, United Kingdom Research and Innovation -Science & Technology Facilities Council

ST27-D3-AM1-309-001 | ST27-A003 (Invited)

Comparison of Data-driven Coronal Field Models of the Sun Using a Flux-emergence Simulation as a Ground-truth Data Set Shin TORIUMI^{1#+}, Shinsuke TAKASAO², Satoshi INOUE², Mark CHEUNG³, Chaowei JIANG⁴

¹Japan Aerospace Exploration Agency, ²Nagoya University, ³Lockheed Martin Solar and Astrophysics Laboratory, ⁴Harbin Institute of Technology

ST27-D3-AM1-309-002 | ST27-A008

Formation of Filamentary Structures of Solar Prominences by Condensation of Coronal Plasmas with Shear Flows Gwang-Son CHOE^{1s+}, Inhyeok SONG¹, Sibaek YI¹, Hongdal JUN¹, Minhwan JANG¹ ¹Kyung Hee University

ST27-D3-AM1-309-003 | ST27-A010

Baseline Oscillations and Grand Solar Cycles of Solar Magnetic Field in the Past 100k Years Valentina ZHARKOVA^{1#+}, Simon SHEPHERD², Sergei ZHARKOV³, Elena POPOVA^{4,5} ¹Northumbria University, ²Bradford University, ³University of Hull, ⁴Institute of the Physics of Earth, ⁵Moscow State University

ST27-D3-AM1-309-004 | ST27-A004

Structure of the Interplanetary Shock Front from the Solar Wind Plasma Measurements

Natalia BORODKOVA^{1#+}, Victor ESELEVICH¹, Olga SAPUNOVA¹, Yuri YERMOLAEV¹, Georgy ZASTENKER¹ ¹Russian Academy of Sciences

ST27-D3-AM1-309-005 | ST27-A014

Statistical Survey of Solar Wind Dynamic Pressure Pulses Based on Wind Observations Pingbing ZUO1^{#+}, Xueshang FENG²

¹Harbin Institute of Technology, Shenzhen, ²Chinese Academy of

Sciences

ST27-D3-AM1-309-006 | ST27-A012

Beyond the Mini-solar Maximum of Solar Cycle 24: Declining Solar Magnetic Fields, Response of the Terrestrial Magnetosphere and the Amplitude of Solar Cycle 25 Susanta Kumar BISOI^{1#+}, Janardhan PADMANABHAN², Madhusudan INGALE³ ¹Chinese Academy of Sciences, ²Physical Research Laboratory, ³Indian

Institute of Science Education and Research

ST27-D3-AM1-309-007 | ST27-A013 (Invited)

Global Study of Ionospheric Plasma Irregularities with Swarm Satellites

Wojciech MILOCH¹⁵⁺, Yaqi JIN¹, Chao XIONG², Andres SPICHER¹, Guram KERVALISHVILI², Lasse CLAUSEN¹, Claudia STOLLE²

¹University of Oslo, ²Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences

IG12 / Global and Societal Impacts of Geohazards

Wed - 31 Jul | MR323

Time08:30-10:30Chair(s)Yasukuni OKUBO, Japan Space Systems

IG12-D3-AM1-323-001 | IG12-A003

Regional Plate Boundary Controls on the Potential for Future Earthquakes Within Thailand and Surrounding Regions Passakorn PANANONT^{1#+}, Matthew HERMAN², Kevin P. FURLONG³, Beth MEYERS³, Patinya PORNSOPIN⁴ ¹Kasetsart University, ²Utrecht University, ³Penn State University, ⁴Thai Meteorological Department

IG12-D3-AM1-323-002 | IG12-A002

Tectonic Interpretation of Active Fault Extending in Myanmar, Laos and China by Relief Map of ASTER GDEM and Harmonized Geological Map Yasukuni OKUBO¹⁷⁺, Yutaka TAKAHASHI², Myint SOE³,

Sompob WONGSOMSAK⁴, Masaru FUJITA¹

¹Japan Space Systems, ²Geological Survey of Japan, ³Department of Geological Survey and Mineral Exploration, ⁴Department of Mineral Resources

ST08 / Magnetic Flux Ropes Throughout the Solar System: Theory, Simulations and Observations Wed - 31 Jul | MR308

 Time
 11:00-12:30

 Chair(s)
 Gangkai POH, NASA Goddard Space Flight Center

ST08-D3-AM2-308-001 | ST08-A014 (Invited)

Understanding the Evolution and Structure of Magnetic Flux Ropes Using Data-driven Time-dependent Magnetofrictional Modelling

Daniel PRICE^{1#+}, Jens POMOELL¹, Erkka LUMME¹, E. KILPUA¹ ¹University of Helsinki

ST08-D3-AM2-308-002 | ST08-A010 (Invited)

Dynamics of Magnetic Flux Ropes Associated with Magnetic Reconnection in the Earth's Magnetosphere

Meng ZHOU^{1,2#+}, Xiaohua DENG³, Zhihong ZHONG¹, Jean BERCHEM², Mostafa EL-ALAOUI², Hengyan MAN¹, Raymond WALKER²

¹Nanchang University, ²University of California, Los Angeles, ³Wuhan University

ST08-D3-AM2-308-003 | ST08-A015 (Invited)

Upstream Magnetopause Dynamics at Ganymede: **Reconnection in a Sub-Alfvenic System** Hongyang ZHOU1#+, Gabor TOTH1, Xianzhe JIA1, Yuxi CHEN1 ¹University of Michigan

ST08-D3-AM2-308-004 | ST08-A003

FTE Growth Mechanisms: A Comparative Analysis Mojtaba AKHAVAN-TAFTI1#+, Minna PALMROTH2, James SLAVIN¹, Markus BATTARBEE², Urs GANSE², Yann PFAU-KEMPF², Maxime GRANDIN², Guan LE³, Daniel GERSHMAN⁴

¹University of Michigan, ²University of Helsinki, ³National Aeronautics and Space Administration, 4NASA Goddard Space Flight Center

ST08-D3-AM2-308-005 | ST08-A019

Formation of Magnetic Flux Ropes at Mercury Observed with MESSENGER Jun ZHONG1#+

¹Institute of Geology and Geophysics, Chinese Academy of Sciences

ST06 / Magnetohydrodynamic Waves in Solar Magnetic Structures: Seismology and Heating

Wed - 31 Jul | MR304

Time	11:00-12:30
Chair(s)	Rekha JAIN, The University of Sheffield Marcel GOOSSENS, KU Leuven

ST06-D3-AM2-304-001 | ST06-A018 (Invited)

Wave Mode Conversion in the Solar Corona Peng-Fei CHEN1#+ ¹Nanjing University

ST06-D3-AM2-304-002 | ST06-A013

A New Analysis Procedure for Detecting Periodicities within **Complex Solar Coronal Arcades** Farhad ALLIAN1#+, Rekha JAIN1 ¹The University of Sheffield

ST06-D3-AM2-304-003 | ST06-A005 (Invited)

Apparent Cross-field Superslow Propagation of Magnetohydrodynamic Waves in a Flux Rope Hosting Prominence Takafumi KANEKO1#+ ¹Nagoya University

ST06-D3-AM2-304-004 | ST06-A017

Oscillations of Tornado Observed By SDO/AIA Yuzong ZHANG1#+ ¹Chinese Academy of Sciences

ST06-D3-AM2-304-005 | ST06-A009

Three-dimensional MHD Simulation of the Fast Solar Wind Acceleration Munehito SHODA1#+, Takaaki YOKOYAMA2, Takeru SUZUKI2

¹National Astronomical Observatory of Japan, ²The University of Tokyo

ST06-D3-AM2-304-006 | ST06-A016

The Observational Evidence for the Internally Excited 3 **Minute Umbral Oscillations** Kyuhyoun CHO1#+, Jongchul CHAE1 ¹Seoul National University

SE20 / Crustal Mechanics Integrations: **Observations**, Models and Implications

Wed - 31 Jul | MR303

Time	11:00-12:30
Chair(s)	Chung-Han CHAN, Nanyang Technological University

SE20-D3-AM2-303-001 | SE20-A002

Ductile Deformation Explains the Physics of Friction and Genesis of Earthquakes James Daniel Paul MOORE1#+, Giacomo POZZI2, Lars HANSEN3, Nicola DE PAOLA², Stefan NIELSEN² ¹Nanyang Technological University, ²University of Durham, ³University of Oxford

SE20-D3-AM2-303-002 | SE20-A005

Fem Simulations of Spontaneous Rupture Propagations Along the Fault with Dissimilar Anisotropic Materials Shoubiao ZHU1,2#

¹China Earthquake Administration, ²University of Chinese Academy of Sciences

SE20-D3-AM2-303-003 | SE20-A010

Earth Crust Density Model Creation Based on Joint Inversion Petr MARTYSHKO1#+

¹The Ural Branch of Russian Academy of Sciences

SE20-D3-AM2-303-004 | SE20-A009

Discrete Element Modeling of a Subduction Zone with a Seafloor Irregularity and its Impact on the Seismic Cycle Liqing JIAO1#, Chung-Han CHAN1+, Paul TAPPONNIER1 ¹Nanyang Technological University

SE20-D3-AM2-303-005 | SE20-A001

Probabilistic Seismic Hazard Assessment for Myanmar and its Metropolitans Chung-Han CHAN1#+, Yu WANG1,2, Myo THANT3,4, Aung Kyaw MYAT⁵, Phyo Maung MAUNG¹ ¹Nanyang Technological University, ²National Taiwan University, ³University of Yangon, ⁴Myanmar Earthquake Committee, ⁵Pyay Technological University

HS08 / Urban Development and Climate Change

Wed - 31 Jul | MR330

Time 11:00-12:30 Chair(s) Jeanne Jinhui HUANG, Nankai University

HS08-D3-AM2-330-001 | HS08-A005 (Invited)

Spatiotemporal Trends of Precipitation in Two Mega Cities of North China Plain Jeanne Jinhui HUANG1#+, Chao WANG2

¹Nankai University, ²Chongqing Jiaotong University

HS08-D3-AM2-330-002 | HS08-A004

Stormwater Quality and Road Sediments Build-up Process in Semi-arid Area of China Jeanne Jinhui HUANG1#, Jingshu Shirley WANG1+ ¹Nankai University

HS08-D3-AM2-330-003 | HS08-A012

Quantifying Benefits of Ecological Water Supply Based on Emergy Theory Analysis Xianfeng HUANG^{1#+} ¹Hohai University

HS09 / Hydrometric Monitoring and Data Analysis HS11 / Hydroinformatics

Wed - 31 Jul | MR329

Time 11:00-12:30

Chair(s) Rita S.W. YAM, National Taiwan University Gwo-Fong LIN, National Taiwan University Qiang DAI, Nanjing Normal University

HS09-D3-AM2-329-001 | HS09-A014

Multi-trophic Responses to Environmental Changes in Different Mountain Lake Ecosystems from Subtropical Taiwan Rita S.W. YAM^{1‡+}, Chih-Hsuan FAN¹, Yen-Tzu FAN¹, Jih-Sheng HUANG¹

¹National Taiwan University

HS09-D3-AM2-329-002 | HS09-A019

Wireless Environmental Sensing and Monitoring Network for Production of Low-potassium Muskmelon (Cucumis melo L.) Fruits Through Hydroponic Nutrient Management in Greenhouse Environment

Rita S.W. YAM¹, Yen-Tzu FAN¹⁺, Hsiao-Feng LO^{1#}, Chin-Ling WEI¹, Jing-Tian LIN¹, Chihhao FAN¹ ¹National Taiwan University

HS11-D3-AM2-329-003 | HS11-A001

A Human-hazard Integrated City Model for Dynamic Vulnerability Assessment

Shuliang ZHANG^{1#+}, Qiang DAI¹, Xuehong ZHU¹, Quntao YANG¹ ¹Nanjing Normal University

HS11-D3-AM2-329-004 | HS11-A013

Critical Review on Quantitative Designing Water Quality Monitoring Networks in Watersheds Jiping JIANG^{1‡+}, Sijie TANG¹, Yi ZHENG¹ ¹Southern University of Science and Technology

HS11-D3-AM2-329-005 | HS11-A008

A Publicly Available GIS Based Online Web Platform for Reservoir Inundation Mapping in the Lower Mekong Region Aekkapol AEKAKKARARUNGROJ^{1#+}, Farrukh CHISHTIE², Nuntarut LOKETKAWEE¹, Hamid MEHMOOD³, Peter CUTTER⁴

¹SERVIR-Mekong Asian Disaster Preparedness Center Bangkok, ²SERVIR-Mekong Asian Disaster Preparedness Center, ³Institute of Water, Environment and Health, United Nations University, ⁴NatureServe

HS22 / Satellite Remote Sensing Data Products for Water Cycle Studies and Societal Applications HS27 / Evapotranspiration Estimation from Plot to Global Scale Using Instruments, Models and Remote Sensing

Wed - 31 Jul | MR328

Time	11:00-12:30
Chair(s)	Rong LIU, Chinese Academy of Sciences
	Marouane TEMIMI, Khalifa University of Science and
	Technology
	Xiwu ZHAN, National Oceanic and Atmospheric
	Administration
	Youssef WEHBE, Khalifa University of Science and
	Technology
	Hongkai GAO, Chinese Academy of Sciences
	Hailong WANG, Sun Yat-sen University

HS22-D3-AM2-328-001 | HS22-A014

Contributions of the Grace Mission to Water Cycle Studies Byron TAPLEY1 $\ensuremath{\mathbb{F}}^+$

¹University of Texas at Austin

HS22-D3-AM2-328-002 | HS22-A007 (Invited)

The Impacts of Rainfall Spatial Variability on Flood Modelling Nergui NANDING^{1,2#+}, Huan WU¹ ¹Sun Yat-sen University, ²University of Bristol

HS22-D3-AM2-328-003 | HS22-A005

Mapping of Flood Hazard Index (FHI) Using Landsat Data for Emergency Relief Planning and Prioritization in Myanmar Kittiphong PHONGSAPAN^{1*+}, Farrukh CHISHTIE¹, Khun San AUNG¹, Peeranan TOWASHIRAPORN¹, Thiri MAUNG², Ate POORTINGA³

¹SERVIR-Mekong Asian Disaster Preparedness Center, ²Department of Disaster Management (DDM), ³Spatial Informatics Group

HS27-D3-AM2-328-004 | HS27-A016 (Invited)

The Importance of Radiation in Modeling Evapotranspiration and its Components in Humid Subalpine Ecosystems, Southwest, China

Genxu WANG^{1‡}, Zhaoyong HU²⁺, Juying SUN², Xiangyang SUN¹ ¹Institute of Mountain Hazards and Environment, Chinese Academy of Sciences, ²Chinese Academy of Sciences

HS27-D3-AM2-328-005 | HS27-A003 (Invited)

Complementary Principle of Evaporation: From Original Linear Relationship to Generalized Nonlinear Function Songjun HAN^{1#+}, Fuqiang TIAN²

¹China Institute of Water Resources and Hydropower Research, ²Tsinghua University

HS27-D3-AM2-328-006 | HS27-A001

Study on the Impact of Climate Change and Land Use on the Runoff and Evaporation in Upper Han River in China Dengfeng LIU^{1#+}, Qian YANG¹, Mu LIN², Qiang HUANG¹, Hui LIU³

¹Xi'an University of Technology, ²Central University of Finance and Economics, ³China Institute of Water Resources and Hydropower Research

Day 03 - 31 Jul, Wed

PS12 / Juno at Jupiter and the Earth-based Observation Campaign

Wed - 31 Jul | MR310

 Time
 11:00-12:30

 Chair(s)
 Alessandro MURA, National Institute for Astrophysics

PS12-D3-AM2-310-001 | PS12-A004

Juno and Earth-based Visible and Near-infrared Observations of Jupiter's New Planetary-scale Equatorial Disturbance Glenn ORTON¹⁵⁺, Thomas MOMARY¹, Kevin BAINES², Fachreddin TABATABA-VAKILI¹, John ROGERS³, Gerald EICHSTAEDT⁴, Michael WONG⁵, Imke DE PATER⁶, Andrew STEPHENS⁷, Rohini GILES⁸, Arrate ANTUNANO⁹, Leigh FLETCHER⁹, Nahid CHOWDHURY⁹, Thomas STALLARD⁹, Henrik MELIN⁹, Thomas GREATHOUSE⁸, Gordon BJORAKER¹⁰, Julie RATHBUN¹¹

¹Jet Propulsion Laboratory, California Institute of Technology, ²University of Wisconsin-Madison, ³British Astronomical Association, ⁴N/A, ⁵University of California, Bekeley, ⁶University of California, Berkeley, ⁷Gemini Observatory, ⁸Southwest Research Institute, ⁹University of Leicester, ¹⁰NASA Goddard Space Flight Center, ¹¹Planetary Science Institute

PS12-D3-AM2-310-002 | PS12-A012

Long-term Evolution of Circumpolar Cyclones on Jupiter from Polar Observations with Junocam

Fachreddin TABATABA-VAKILI^{1#+}, Glenn ORTON¹, John ROGERS², Candice HANSEN³, Gerald EICHSTAEDT⁴, Michael RAVINE⁵, Michael CAPLINGER⁵, Thomas MOMARY¹, James SINCLAIR¹, Rohini GILES¹, Scott BOLTON⁶

¹Jet Propulsion Laboratory, California Institute of Technology, ²British Astronomical Association, ³Planetary Science Institute, ⁴N/A, ⁵Malin

Space Science Systems, 6Southwest Research Institute

PS12-D3-AM2-310-003 | PS12-A017

Determining the Depth of the Great Red Spot with Juno Gravity Measurements

Marzia PARISI^{1‡+}, William FOLKNER¹, Eli GALANTI², Yohai KASPI², Dustin BUCCINO¹, Kamal OUDRHIRI¹, Scott BOLTON³ ¹NASA Jet Propulsion Laboratory, ²Weizmann Institute of Science, ³Southwest Research Institute

PS12-D3-AM2-310-004 | PS12-A009 (Invited)

The Juno Gravity Experiment: Revealing Juno's Interior and Deep Flows

Yohai KASPI^{1#+}, Eli GALANTI¹, William HUBBARD², David STEVENSON³, Scott BOLTON⁴, Tristan GUILLOT⁵, Luciano IESS⁶, William FOLKNER⁷, Daniele DURANTE⁶, Marzia PARISI⁷, Yamila MIGUEL⁸, Steven LEVIN⁹, John CONNERNEY¹⁰

¹Weizmann Institute of Science, ²The University of Arizona,

³Geological and Planetary Sciences, California Institute of Technology, ⁴Southwest Research Institute, ⁵Observatoire De La Cote D'Azur,

⁶Sapienza University of Rome, ⁷NASA Jet Propulsion Laboratory,

⁸University of Leiden, ⁹Jet Propulsion Laboratory, California Institute of Technology, ¹⁰NASA Goddard Space Flight Center

PS12-D3-AM2-310-005 | PS12-A016 (Invited)

Current Understanding of the Formation of Jupiter Midway Through the Juno Mission

Jonathan LUNINE^{1*+}, Tristan GUILLOT², Ravit HELLED³, William HUBBARD⁴, David STEVENSON⁵, Sushil ATREYA⁶, Andrew INGERSOLL⁵

¹Cornell University, ²Observatoire De La Cote D'Azur, ³University of Zurich, ⁴The University of Arizona, ⁵Geological and Planetary Sciences, California Institute of Technology, ⁶University of Michigan

PS12-D3-AM2-310-006 | PS12-A013 (Invited)

The Galilean Moons as Seen by JIRAM After 3 Years of the Juno Mission Federico TOSI^{1#+}, Alessandro MURA¹, Gianrico FILACCHIONE¹, Giuseppe SINDONI², Alberto ADRIANI¹

¹National Institute for Astrophysics, ²Italian Space Agency (ASI)

SE23 / Oceanic Lithosphere: from Ridge to Arc Wed - 31 Jul | MR327

Time 11:00-12:30 Chair(s) Betchaida PAYOT, University of the Philippines Diliman

SE23-D3-AM2-327-001 | SE23-A002

Gravity and Magnetic Data Insight into the Oceanic Crust Characterization of Slow Spreading Ridges Gabriella ALODIA^{1‡+}, Chris GREEN¹, Andrew MCCAIG¹, Douglas PATON¹, Simon CAMPBELL² ¹University of Leeds, ²Getech Group Plc

SE23-D3-AM2-327-002 | SE23-A003

Plagioclase Peridotites in Southern Palawan Ophiolite, Philippines: Records of Melt-rock Interaction in the Upper Mantle

Florence Annette LABIS^{1#+}, Betchaida PAYOT², Gabriel Theophilus VALERA², Julius PASCO¹, Jesley Mei DYCOCO², Sarena TARONGOY², Maria Stella CORPUZ², Macky BARRIENTOS¹, Natsumi REYES¹ ¹University of the Philippines, ²University of the Philippines Diliman

SE23-D3-AM2-327-003 | SE23-A008

Ancient, Highly Depleted Mantle Beneath French Polynesia Archipelago Constrained by Rhenium-Osmium Isotope and Highly-siderophile Element Compositions of Mantle Xenoliths Norikatsu AKIZAWA¹⁵⁺, Akira ISHIKAWA², Katsuhiko SUZUKI³, Tetsu KOGISO⁴

¹The University of Tokyo, ²Tokyo Institute of Technology, ³Japan Agency for Marine-Earth Science and Technology, ⁴Kyoto University

SE23-D3-AM2-327-004 | SE23-A004

Petrological Characteristics of the Bantoon Serpentinite and Cansi Volcanics, Cebu, Philippines: Evidence for Arc and Accretionary Wedge Processes

Sarena TARONGOY¹⁵⁺, Betchaida PAYOT¹, Jillian Aira GABO-RATIO¹, Carla DIMALANTA¹, Noelynna RAMOS¹, Decibel FAUSTINO-ESLAVA², Leo ARMADA¹

¹University of the Philippines Diliman, ²University of the Philippines Los Baños

SE23-D3-AM2-327-005 | SE23-A009

Deformed Continental Arc Sequences in the South Tianshan: New Constraints to the Early Paleozoic Accretionary Tectonics of the Central Asian Orogenic Belt Bo WANG¹⁵⁺, Linglin ZHONG¹ ¹Nanjing University

SE23-D3-AM2-327-006 | SE23-A006

Petrogenesis of Mafic-Ultramafic Clasts of the Dos Hermanos Mélange (Philippines): Insights to the Evolution of Western Luzon

Julius PASCO^{1#+}, Betchaida PAYOT², Gabriel Theophilus VALERA², Jesley Mei DYCOCO², Jon Dave PILLEJERA², Anika UY², Carla DIMALANTA², Leo ARMADA²

¹University of the Philippines, ²University of the Philippines Diliman

OS17 / Advances in Oceanic Data Assimilation Methodologies, Forecasting and Reanalysis

Wed - 31 Jul | MR302

 Time
 11:00-12:30

 Chair(s)
 Shiqiu PENG, Chinese Academy of Sciences

OS17-D3-AM2-302-001 | OS17-A013 (Invited)

An Approach to Data Analysis for El Niño-southern Oscillation Predictability Wansuo DUAN^{1*+} ¹Chinese Academy of Sciences

OS17-D3-AM2-302-002 | OS17-A003

A Study of the Initialization and Ensemble Probabilistic Forecasts of ENSO Based on Ensemble Coupled Data Assimilation Yanqiu GAO^{1#+}

¹Second Institute of Oceanography, Ministry of Natural Resources

OS17-D3-AM2-302-003 | OS17-A009

Observing System Simulation Experiment of Underwater Glider Observed T/S Profiles in the Xisha Area of South China Sea Yuhang ZHU¹⁺, Shiqiu PENG^{1‡}

¹Chinese Academy of Sciences

OS17-D3-AM2-302-004 | OS17-A014

A Preliminary Assessment of the Impacts of Assimilating Synchronously Glider-observed T/S Profiles on the Real-time Marine Forecasting for the Northern South China Sea Ping Ll¹⁺, Shiqiu PENG^{1‡}, Yuhang ZHU¹ ¹Chinese Academy of Sciences

OS17-D3-AM2-302-005 | OS17-A006

The Long-term Variability of Significant Wave Height in Western Northern Pacific and South China Sea Regions Shaotian LI¹⁸⁺, Yineng LI¹, Shiqiu PENG¹ ¹Chinese Academy of Sciences

OS08 / Future Coastal Oceans Under Increasing Climate Change and Anthropogenic Stresses

Wed - 31 Jul | MR301

Time	11:00-12:30
Time	11:00-12:30

Chair(s) Daidu FAN, Tongji University Jingping XU, Southern University of Science and Technology

OS08-D3-AM2-301-001 | OS08-A003

Coastal Sea Level Projections with Warming of 1.5 Degree Svetlana JEVREJEVA^{1#+} ¹National Oceanography Centre

OS08-D3-AM2-301-002 | OS08-A014

Quantifying the Impacts of Human Interventions on Relative Mean Sea Level Change in the Pearl River Delta, China Huayang CAI^{1#+} ¹Sun Yat-sen University

OS08-D3-AM2-301-003 | OS08-A010

The Increasing Threat of Typhoon to Coastal Area in the Western North Pacific Between 1980-2015 Hong-Yuan SHI^{1#+} ¹Ludong University

OS08-D3-AM2-301-004 | OS08-A013

In Situ Observations of Wave-supported Fluid Mud Processes on the Yellow River Subaqueous Delta Xiaolei LIU¹⁵⁺, Lukuan MA¹ ¹Ocean University of China

OS08-D3-AM2-301-005 | OS08-A001

Sediment Transport Processes in a Mountainous River Subaqueous Delta Aijun WANG¹⁺⁺ ¹Ministry of Natural Resources

OS08-D3-AM2-301-006 | OS08-A019 (Invited)

ROMS Study on Increased Sedimentation in the Altered Nakdong Estuary, Korea Jongwi CHANGE¹, Guan-hong LEE^{1\$+}, Courtney HARRIS² ¹Inha University, ²Virginia Institute of Marine Science

SS05 / Space Agency Remote Sensing of the Earth Wed - 31 Jul | Nicoll 1

 Time
 11:00-12:30

 Chair(s)
 Wenjian ZHANG, World Meteorological Association

SS05-D3-AM2-Nicoll 1-001 | SS05-A001 (Invited)

NASA Earth Science Division Satellite Program – Status and Update Jack KAYE^{1#+}, Eric IANSON¹

¹NASA Earth Science Division

SS05-D3-AM2-Nicoll 1-002 | SS05-A002 (Invited)

NOAA's Space-based Remote Sensing Activities Ivan CSISZAR^{1#+}

¹NOAA National Environmental Satellite, Data, and Information Service

SS05-D3-AM2-Nicoll 1-003 | SS05-A003 (Invited)

Current and Future Japanese EO Satellite Programs and Related Activities and Issues Teruyuki NAKAJIMA^{1#+} ¹Japan Aerospace Exploration Agency

ST16 / Peculiar Nonlinear Phenomena in the Modern Solar-Terrestrial Physics

Wed - 31 Jul | MR309

 Time
 11:00-12:30

 Chair(s)
 Alexei DMITRIEV, National Central University

ST16-D3-AM2-309-001 | ST16-A003 (Invited)

Observations of Upward Propagating Waves in the Transition Region and Corona Above Sunspots Zhenghua HUANG^{1‡+}, Zhenyong HOU¹, Lidong XIA¹, Bo LI¹, Hui FU¹ ¹Shandong University

ST16-D3-AM2-309-002 | ST16-A006 (Invited)

Plasma Jets in the Solar Corona: Statistics, Dynamics and Oscillations Valery NAKARIAKOV^{1#+} ¹University of Warwick

ST16-D3-AM2-309-003 | ST16-A008

Observations of the Oscillatory Dynamics of Cometary Tails in the Solar Wind Giuseppe NISTICO^{1#+}, Valery NAKARIAKOV², Karl BATTAMS³, Volker BOTHMER¹ ¹University of Göttingen, ²University of Warwick, ³Naval Research Laboratory

ST16-D3-AM2-309-004 | ST16-A011

Magnetopause and its Boundary Layers Under Radial IMF Condition: Observations and Simulation Results Gilbert PI¹⁺, Zdenek NEMECEK¹, Jana SAFRANKOVA¹, Jih-Hong SHUE², Kostiantyn GRYGOROV¹ ¹Charles University, ²National Central University

ST16-D3-AM2-309-005 | ST16-A005

Dayside Magnetosphere and Ionosphere Responses to Transient Upstream Disturbances Measured by Satellite-imager Coordination Boyi WANG^{1*+}, Yukitoshi NISHIMURA¹ ¹Boston University

ST16-D3-AM2-309-006 | ST16-A010

Energetic Electron Enhancements Under Radiation Belt (L < 1.2) During Nonstorm Interval on August 1, 2008 Alla SUVOROVA^{1‡+} ¹National Central University

IG24 / Geo-science Education, Geo-heritage and Geo-conservation

Wed - 31 Jul | MR323

Time 11:00-12:30

Chair(s) Hoe Teck TAN, School of Science and Technology Mega Fatimah ROSANA, Padjadjaran University Than HTUN, Myanmar Precious Resources Group

IG24-D3-AM2-323-001 | IG24-A006

Geo-science Education Camp Hoe Teck TAN^{1#+} ¹School of Science and Technology

IG24-D3-AM2-323-002 | IG24-A007

Geoscience Education Activities by Southern Region Weather Center of Central Weather Bureau in Taiwan I-Te LEE^{1,2#+} ¹Central Weather Bureau, ²National Central University

IG24-D3-AM2-323-003 | IG24-A002

Potential Geoparks and Sustainable Development in Myanmar Than HTUN^{1#+} ¹Myanmar Precious Resources Group

IG24-D3-AM2-323-004 | IG24-A001

Milestone of Geoparks Development in West Java, Indonesia Mega Fatimah ROSANA^{1#+} ¹Padjadjaran University

IG24-D3-AM2-323-005 | IG24-A005

Geoheritage and Geoparks in China Kejian XU^{1‡+}

¹China University of Geosciences

IG24-D3-AM2-323-006 | IG24-A004

Linkages Among Geoconservation, Livelihood and Geotourism: A Case of Xingwen UNESCO Global Geopark of China Kejian XU¹¹⁺

¹China University of Geosciences

ST18 / Multi-scale Diagnosis of Magnetic Reconnection

Wed - 31 Jul | MR308

Time 13:30-15:30

Chair(s) Meng ZHOU, Nanchang University Rongsheng WANG, University of Science and Technology of China

ST18-D3-PM1-308-001 | ST18-A007 (Invited)

The Non-ideal Electric Field Observed in the Separatrix Region of a Magnetotail Reconnection Event Xiancai YU^{1s+}, Quanming LU¹

¹University of Science and Technology of China

ST18-D3-PM1-308-002 | ST18-A025

Observations of Flux Ropes with Strong Energy Dissipation in the Magnetotail

Shiyong HUANG^{1,*}, Kui JIANG¹, Zhigang YUAN¹, Meng ZHOU^{2,3}, Fouad SAHRAOUI⁴, Huishan FU⁵, Xiaohua DENG¹, Yuri KHOTYAINTSEV⁶, Xiongdong YU¹, Linghui HE¹, Dan DENG¹, James BURCH⁷

¹Wuhan University, ²Nanchang University, ³University of California, Los Angeles, ⁴Plasma Physics Laboratory, ⁵Beihang University, ⁶Swedish Institute of Space Physics, ⁷Southwest Research Institute

ST18-D3-PM1-308-003 | ST18-A003

Extension of the Electron Diffusion Region in the Reconnection Exhaust

Zhihong ZHONG¹⁺, Meng ZHOU^{1,2#}, Rongxin TANG^{1,3}, Xiaohua DENG⁴, Yuri KHOTYAINTSEV⁵, Barbara GILES⁶, William PATERSON⁷, Ye PANG¹, Hengyan MAN¹, Christopher RUSSELL², James BURCH⁸

¹Nanchang University, ²University of California, Los Angeles, ³Memorial University of Newfoundland, ⁴Wuhan University, ⁵Swedish Institute of Space Physics, ⁶NASA Goddard Space Flight Center,

⁷National Aeronautics and Space Administration, ⁸Southwest Research Institute

ST18-D3-PM1-308-004 | ST18-A029 (Invited)

Electron Heating Inside Diffusion Region and at Separatrices During Magnetopause Reconnection: Numerical Simulations Andrey DIVIN¹⁵⁺, Andris VAIVADS², Mats ANDRE², Ivan ZAITSEV¹, V. OLSHEVSKY³, Stefano MARKIDIS³, Giovanni LAPENTA⁴

¹Saint Petersburg State University, ²Swedish Institute of Space Physics, ³KTH Royal Institute of Technology, ⁴KU Leuven

ST18-D3-PM1-308-005 | ST18-A026

Electron Heating by Debye-scale Turbulence in Guide Field Reconnection

Yuri KHOTYAINTSEV^{1‡+}, Andris VAIVADS¹, Love ALM¹, Konrad STEINVALL¹, Andreas JOHLANDER¹, Andrey DIVIN², Cecilia NORGREN³, Wenya LI⁴, Amy RAGER⁵, Daniel GERSHMAN⁵, Huishan FU⁶, Kyoung-Joo HWANG⁷, Per-Arne LINDQVIST⁸, Robert ERGUN⁹, Olivier LE CONTEL¹⁰, Christopher RUSSELL¹¹

¹Swedish Institute of Space Physics, ²Saint Petersburg State University, ³University of Bergen, ⁴State Key Laboratory of Space Weather, ⁵NASA Goddard Space Flight Center, ⁶Beihang University, ⁷Southwest Research Institute, ⁸KTH Royal Institute of Technology, ⁹University of Colorado Boulder, ¹⁰National Centre for Scientific Research/ Ecole Polytechnique, ¹¹University of California, Los Angeles

ST18-D3-PM1-308-006 | ST18-A011

Parallel Electron Heating by Tangential Discontinuity in Turbulent Magnetosheath

Yangyang LIU^{1,*+}, Huishan FU¹, Chengming LIU¹, Zhe WANG¹, C. Philippe ESCOUBET², Kyoung-Joo HWANG³, James BURCH³, Barbara GILES⁴

¹Beihang University, ²European Space Agency, ³Southwest Research Institute, ⁴NASA Goddard Space Flight Center

ST18-D3-PM1-308-007 | ST18-A030

Universality of Fast Turbulent Magnetic Reconnection Under High Landquist Number

Li-Ping YANG^{1‡+}, Hui Ll², Fan GUO², Xiaocan Ll², Shengtai Ll², Lei ZHANG³, Xueshang FENG³

¹National Space Science Center, ²Los Alamos National Laboratory, ³Chinese Academy of Sciences

ST29 / Seven Years of Van Allen Probes and Two Years of Arase: New and Recent Results on Radiation Belt and Inner Magnetosphere Physics Wed - 31 Jul | MR304

Time 13:30-15:30

Chair(s) Allison JAYNES, *The University of Iowa*

ST29-D3-PM1-304-001 | ST29-A007 (Invited)

Plasmaspheric EMIC Waves Excited Through Mode Conversion from Equatorial Noise Under Existence of M/Q=2 Ions

Yoshizumi MIYOSHI^{1#+}, Shoya MATSUDA², Koji NOMURA¹, Kunihiro KEIKA³, Masafumi SHOJI¹, Naritoshi KITAMURA³, Yoshiya KASAHARA⁴, Ayako MATSUOKA², Iku SHINOHARA², Kazuo SHIOKAWA¹, Shinobu MACHIDA¹, Scott BOARDSEN⁵, Richard HORNE⁶, John WYGANT⁷

¹Nagoya University, ²Japan Aerospace Exploration Agency, ³The University of Tokyo, ⁴Kanazawa University, ⁵University of Maryland, Baltimore, ⁶British Antarctic Survey, ⁷University of Minnesota

ST29-D3-PM1-304-002 | ST29-A006

Correlation Analysis of Lightning Whistlers Simultaneously Observed by Arase and Van Allen Probes

Yoshiya KASAHARA^{1*s*+}, Yuta OGAWA¹, Satoshi IKARASHI¹, Shoya MATSUDA², Yoshizumi MIYOSHI³, Fuminori TSUCHIYA⁴, Atsushi KUMAMOTO⁴, Mitsuru HIKISHIMA², Ondrej SANTOLIK^{5,6}, Ivana KOLMASOVA^{5,6}, George HOSPODARSKY⁷, Craig KLETZING⁷, Chris COLPITTS⁸, John WYGANT⁸, Ayako MATSUOKA²

¹Kanazawa University, ²Japan Aerospace Exploration Agency, ³Nagoya University, ⁴Tohoku University, ⁵Czech Academy of Sciences, ⁶Charles University, ⁷The University of Iowa, ⁸University of Minnesota

ST29-D3-PM1-304-003 | ST29-A005

Relationship Between EMIC Waves and Storm-time Losses and Energizations of the Outer Radiation Belt Maria USANOVA^{1‡+}, Hong ZHAO¹ ¹University of Colorado Boulder

ST29-D3-PM1-304-004 | ST29-A003 (Invited)

Understanding the Radiation Belt Electron Scattering Effects of Plasmaspheric Hiss and Magnetosonic Waves Binbin NI^{1#+} ¹Wuhan University

ST29-D3-PM1-304-005 | ST29-A009

A Four-belt Structure in Earth's Van Allen Belts Allison JAYNES^{1‡+}, Connor POLLOCK¹, Daniel BAKER², Xinlin Ll², Hong ZHAO², Shri KANEKAL³ ¹The University of Iowa, ²University of Colorado Boulder, ³NASA Goddard Space Flight Center

ST29-D3-PM1-304-006 | ST29-A001

On the Structure of the Radiation Belts During Quiet Times Jean-Francois RIPOLL¹, Drew TURNER^{2#+} ¹French Alternative Energies and Atomic Energy Commission, ²The Aerospace Corporation

SE22 / Emerging Trends in Ore Deposit Studies in the Asia Oceania Region

Wed - 31 Jul | MR303

Chair(s) Chun-Kit LAI, Universiti Brunei Darussalam Jillian Aira GABO-RATIO, University of the Philippines Diliman

SE22-D3-PM1-303-001 | SE22-A025 (Invited)

Copper Deposits of Myanmar and Their Exploration Potentials Khin ZAW¹, Ye Myint SWE², Tin Aung MYINT^{3#+} ¹University of Tasmania, ²Department of Geological Survey and Mineral Exploration, ³Mandalay University

SE22-D3-PM1-303-002 | SE22-A017 (Invited)

The Occurrences of Porphyry Copper-gold Prospects Along Central to Eastern Segment of Neogene Java Volcanic Arc, Indonesia: An Implication to the Future Precious and Basemetals Exploration in the Region

Arifudin IDRUS^{1#+}, Sutarto SUTARTO², Trifatama RAHMALIA³, Dian Yesy FATIMAH⁴, Chun-Kit LAI⁵

¹Gadjah Mada University, ²Universitas Pembangunan Nasional Veteran Yogyakarta, ³STTNas Yogyakarta, ⁴Universitas Gadjah Mada Yogyakarta, ⁵Universiti Brunei Darussalam

SE22-D3-PM1-303-003 | SE22-A003

The Kalimantan Gold Belt: Geology and Metallogenic Perspectives

Chun-Kit LAI^{1^{‡+}}, Basilios TSIKOURAS¹, Huayong CHEN², Arifudin IDRUS³, Maria Ines Rosana BALANGUE-TARRIELA⁴, Mega Fatimah ROSANA⁵, Lejun ZHANG⁶, Utreck RUMBIAK⁵, Sebastien MEFFRE⁶

¹Universiti Brunei Darussalam, ²Chinese Academy of Sciences, ³Gadjah Mada University, ⁴University of the Philippines Diliman, ⁵Padjadjaran University, ⁶University of Tasmania

Day 03 - 31 Jul, Wed

SE22-D3-PM1-303-004 | SE22-A008

Petrology and Mineral Chemistry of Igneous Host Rocks in Suyoc, Mankayan Mineral District, Philippines Jillian Aira GABO-RATIO¹⁵⁺, Karl JABAGAT¹, Omar SOBERANO¹, Karlo QUEAÑO², Betchaida PAYOT¹, Gabriel Theophilus VALERA¹, Juan Miguel GUOTANA¹, Barbie Ross VILLAPLAZA¹, Graciano YUMUL, JR.³⁴

¹University of the Philippines Diliman, ²Ateneo de Manila University, ³Monte Oro Resources & Energy, Inc., ⁴Apex Mining Co. Inc.

SE22-D3-PM1-303-005 | SE22-A023

Transition of Hydrothermal System Related with Skarn Evolution at the DMLZ Cu-Au Deposit, Ertsberg District, Papua, Indonesia

Kotaro YONEZU^{1#+}, Shota NAKAO¹, Thomas TINDELL¹, Benny BENSAMAN², Mega Fatimah ROSANA² ¹Kyushu University, ²Padjadjaran University

SE22-D3-PM1-303-006 | SE22-A011

The Geochemistry, Mineralization and Fluid Inclusion Study of Bayan-Uul Porphyry Cu-Au-Mo Deposit, Central Mongolia Bolor-Erdene BILEGSAIKHAN¹⁵⁺, Kotaro YONEZU¹, Akira IMAI¹, Thomas TINDELL¹, Jargalan SEREENEN² ¹Kyushu University, ²Mongolian University Science of Technology

SE22-D3-PM1-303-007 | SE22-A018

The Metamorphic Rock-hosted Orogenic Gold Mineralization in Eastern Indonesia: Their Key Features and Significances for Gold Exploration

Arifudin IDRUS^{1*+}, Ernowo HARJANTO², Sukmandaru PRIHATMOKO³, Franz Micahel MEYER⁴, Chun-Kit LAI⁵ ¹Gadjah Mada University, ²Geological Agency of Indonesia, ³PT.

SJR-Pama Group, ⁴RWTH Aachen University, ⁵Universiti Brunei Darussalam

SE22-D3-PM1-303-008 | SE22-A020

Paleomagnetic Age Dating of the Grum Zn-Pb-Ag Deposit, Canada

Kazuo KAWASAKI^{1#+}, David SYMONS² ¹University of Toyama, ²University of Windsor

HS13 / Urban Water-Related Problems

Wed - 31 Jul | MR330

Time	13:30-15:30
Chair(s)	Akira KAWAMURA, Tokyo Metropolitan University Kenichiro KOBAYASHI, Kobe University

HS13-D3-PM1-330-001 | HS13-A011 (Invited)

Development of Water-related Risk Index Using Earth Observation Data Yoshiyuki IMAMURA^{1#+}

¹National Institute for Land and Infrastructure Management (NILIM)

HS13-D3-PM1-330-002 | HS13-A022 (Invited)

Application of a Large Ensemble Climate Simulation for Flood Risk Assessment of Urban Infrastructures Satoshi WATANABE^{1#+}, Takaya ONODERA¹, Ryota ARAI¹, Koji IKEUCHI¹

¹The University of Tokyo

HS13-D3-PM1-330-003 | HS13-A003

Risk Evaluation of Compound Disaster by Storm Surge and Flood in Lowland Areas of Japan So KAZAMA^{1*+} ¹Tohoku University

HS13-D3-PM1-330-004 | HS13-A025

Evaluation of Satellite DEMs on Selected Urban Settings: Comparison with High Resolution Data for Urban Flood Inundation Modeling Anjaneyulu AKKIMI^{1#+}, Subashisa DUTTA¹ ¹Indian Institute of Technology Guwahati

HS13-D3-PM1-330-005 | HS13-A026

Evaluating Appropriateness of Sewerage Facilities Design Rainfall Using Observed Rainfall Byeong Wook YU¹⁺, Seung WOO¹, Deg-Hyo BAE^{1#} ¹Sejong University

HS13-D3-PM1-330-006 | HS13-A029

Understanding the Geospatial Structure of Flood Hazard: Point Based and Probabilistic Analysis of Yoshino River Basin, Japan Masafumi YAMADA^{1#+}, Takeyoshi CHIBANA², Satoshi WATANABE²

¹Disaster Prevention Research Institute, Kyoto University, ²The University of Tokyo

HS13-D3-PM1-330-007 | HS13-A030

Monitoring of Water Level in Sewer System in Kasugai City and Verification of Analysis Model of Inundation Due to Heavy Rainfall

Masataka MURASE1**, Makoto TAKEDA1, Takuya YAGAMI2, Toshihiko TAKAHASHI3

¹Chubu University, ²CTI Engineering Co., Ltd., ³Kajima Information Communication Technology Co., Ltd.

HS13-D3-PM1-330-008 | HS13-A032 (Invited)

Field Survey on Changes in Bottom Sediments Before and After a Flash Flood in a Tidal Reach of an Urban River Hitoshi MIYAMOTO^{1#+}, Atsushi OSHIMI² ¹Shibaura Institute of Technology, ²Nippon Koei Co., Ltd.

HS11 / Hydroinformatics

Wed - 31 Jul | MR329

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

HS11-D3-PM1-329-001 | HS11-A015

Flow Forecasting Using a Soft Computing Technique Mohammad ASHRAFI¹⁺⁺, Lloyd CHUA², Chai QUEK¹ ¹Nanyang Technological University, ²Deakin University

HS11-D3-PM1-329-002 | HS11-A007

Study of Daily Crop Transpiration: Comparison of Random Forests and Support Vector Regression Han CHEN^{1#+}, Jeanne Jinhui HUANG¹ ¹Nankai University

HS11-D3-PM1-329-003 | HS11-A014

Efficient Parallel Surrogate Algorithm and Frame Work for Optimization of Parameter Estimation for Delft3D Lake Water Quality Models in Tropics Wei XIA^{1s+}, Christine SHOEMAKER¹, Taimoor AKHTAR¹ ¹National University of Singapore

HS11-D3-PM1-329-004 | HS11-A018

Efficient Optimal Calibration of Large Lake Hydrodynamic Models with Parallel DYCORS Software Christine SHOEMAKER^{1#+}, Wei XIA¹, Taimoor AKHTAR¹, Manh Tuan NGUYEN² ¹National University of Singapore, ²Public Utilities Board

HS11-D3-PM1-329-005 | HS11-A019

Hydrological Modeling in the Era of Big Data: Opportunities and Challenges Yi ZHENG^{1#+}, Shijie JIANG¹ ¹Southern University of Science and Technology

HS11-D3-PM1-329-006 | HS11-A021

The Dynamically Dimensioned Evolutionary Search (DDES) Algorithm for Parallel Parameter Estimation of Expensive Watershed Models Taimoor AKHTAR¹⁵⁺, Christine SHOEMAKER¹

¹National University of Singapore

HS27 / Evapotranspiration Estimation from Plot to Global Scale Using Instruments, Models and Remote Sensing

Wed - 31 Jul | MR328

Time 13:30-15:30 Chair(s) Ke ZHANG, Hohai University Xuan YU, Sun Yat-sen University

HS27-D3-PM1-328-001 | HS27-A002 (Invited)

Mapping Evapotranspiration from Plot to Global Scales with a Coupled Process Model Forced with Multiple Satellite Remote Sensing Datasets Youngryel RYU^{1#+}

¹Seoul National University

HS27-D3-PM1-328-002 | HS27-A004 (Invited)

A Non-gradient Model of Evapotranspiration over Land Surfaces Jingfeng WANG^{1‡+}, Yao TANG¹ ¹Georgia Institute of Technology

HS27-D3-PM1-328-003 | HS27-A008

Understanding the Impact of Landscape Heterogeneity and Human Activities on Urban Evaporation by Remote Sensing: A Case Study in Shanghai Jingjing WANG¹, Hongkai GAO^{1#+} ¹East China Normal University

HS27-D3-PM1-328-004 | HS27-A005

A Satellite-derived Multidecadal Record of Global Land Actual Evapotranspiration Ke ZHANG^{1#+} ¹Hohai University

HS27-D3-PM1-328-005 | HS27-A011

Performance of 12 Reference Evapotranspiration Estimation Methods Compared with the Penman–Monteith Method and the Potential Influences in Northeast China Yuyan ZHOU^{1#+}, Fan LU¹, Xinyi SONG¹ ¹China Institute of Water Resources and Hydropower Research

HS27-D3-PM1-328-006 | HS27-A009

Consistent Accessibility of Satellite-based Evapotranspiration Estimates in Himalayan Catchments Suman Kumar PADHEE^{1#+}, Subashisa DUTTA¹ ¹Indian Institute of Technology Guwahati

PS16 / Microwave and Infrared Remote Sensing of Solar System Objects

Wed - 31 Jul | MR310

Time 13:30-15:30

Chair(s) Paul HARTOGH, Max Planck Institute for Solar System Research Scott BOLTON, Southwest Research Institute

PS16-D3-PM1-310-001 | PS16-A024

Spatially-resolved Submillimeter Spectral Observations of Europa Yi-Jehng KUAN¹⁺⁺, Chien-Hsun LI², Wei-Ling TSENG¹,

Hsiang-Wen HSU³, Yo-Ling CHUANG¹ ¹National Taiwan Normal University, ²National Taiwan University, ³University of Colorado Boulder

PS16-D3-PM1-310-002 | PS16-A001 (Invited)

Unique Infrared and Microwave Observations of Jupiter's Planetary-scale Equatorial Disturbance

Glenn ORTON¹⁴⁺, Thomas MOMARY¹, James SINCLAIR¹, Steve LEVIN¹, Cheng LI¹, Zhimeng ZHANG¹, Shannon BROWN¹, Michael WONG², Arrate ANTUNANO³, Leigh FLETCHER³, Nahid CHOWDHURY³, Thomas STALLARD³, Henrik MELIN³, Thomas GREATHOUSE⁴, Rohini GILES⁴, Gordon BJORAKER⁵, Julie RATHBUN⁶, Takuya FUJIYOSHI⁷

¹Jet Propulsion Laboratory, California Institute of Technology, ²University of California, Bekeley, ³University of Leicester, ⁴Southwest Research Institute, ⁵NASA Goddard Space Flight Center, ⁶Planetary Science Institute, ⁷National Astronomical Observatory of Japan

PS16-D3-PM1-310-003 | PS16-A004

The Submillimetre Wave Instrument (SWI) on Juice After the Instrument Critical Design Review Paul HARTOGH¹⁺⁺ ¹Max Planck Institute for Solar System Research

PS16-D3-PM1-310-004 | PS16-A007

HCN Submillimetre Remote Sensing of Titan's Atmosphere with the APEX and IRAM 30m Telescopes Miriam RENGEL^{1,2#+}, Denis SHULYAK¹, Paul HARTOGH¹, Hideo SAGAWA³, Raphael MORENO⁴, Christopher JARCHOW¹ ¹Max Planck Institute for Solar System Research, ²European Space Astronomy Centre, ³Kyoto Sangyo University, ⁴Paris Observatory

PS16-D3-PM1-310-005 | PS16-A008 (Invited)

The D/H Ratio of Water Throughout the Solar System J. Hunter WAITE, JR.^{1#+}, Kelly MILLER¹, Chris GLEIN¹ ¹Southwest Research Institute **Terahertz Explorer for O2 and H2O Observation in the Mars Atmosphere** Yasuko KASAI^{1#+}

¹National Institute of Information and Communications Technology

AS07 / Origin, Evolution, and Distribution of Atmospheric Pollutions and Their Impact on Ecosystem in Eastern China

Wed - 31 Jul | MR311

Time 13:30-15:30

Chair(s) Xuexi TIE, National Center for Atmospheric Research Jianming XU, Yangtze River Delta Center for Environmental Meteorology Prediction and Warning

AS07-D3-PM1-311-001 | AS07-A024

As PM2.5 Falls, O3 Rises in Bohai Economic Rim of China Guohui LI^{1‡+}, Naifang BEI², Bo HU¹

¹Chinese Academy of Sciences, ²Xi'an Jiaotong University

AS07-D3-PM1-311-002 | AS07-A001 (Invited)

Mixing-layer Transport Flux of Particulate Matters in Beijing, China Guiqian TANG^{1#+} ¹Chinese Academy of Sciences

AS07-D3-PM1-311-003 | AS07-A012

The Chemical Effects on the Summertime Ozone in the Upper Troposphere and Lower Stratosphere over the Tibetan Plateau and the South Asian Monsoon Region Yixuan GU¹⁺, Hong LIAO^{2#}, Jianming XU¹

¹Yangtze River Delta Center for Environmental Meteorology Prediction and Warning, ²Nanjing University of Information Science & Technology

AS07-D3-PM1-311-004 | AS07-A020

Role of Climate Anomalies on Decadal Variation in the Occurrence of Wintertime Haze in YRD Region Jianming XU¹⁺

¹Yangtze River Delta Center for Environmental Meteorology Prediction and Warning

SE09 / Active Volcanic Processes from the Mantle to the Atmosphere: Multidisciplinary Approaches to Monitoring, Hazards, and Impacts

Wed - 31 Jul | MR327

Time 13:30-15:30

Chair(s) Florian M. SCHWANDNER, Jet Propulsion Laboratory, California Institute of Technology Estu KRISWATI, Center for Volcanology and Geological Hazard Mitigation

SE09-D3-PM1-327-001 | SE09-A011 (Invited)

Volcanic Legends and Their Impact on Preparedness Isaac KERLOW^{1#+}

¹Earth Observatory of Sinagpore

SE09-D3-PM1-327-002 | SE09-A005

Above-canopy Autonomous Drone Detection of Elevated CO2 Gradients from Volcanic Gas Seeps in a Tropical Rainforest Florian M. SCHWANDNER^{1,2‡+}, Jack ELSTON³, Jorge Andres DIAZ⁴, Maciej STACHURA³, Ernesto CORRALES⁴, Joshua FROMM³, David PIERI¹, Joshua B. FISHER¹, Thomas A. YOUMANS¹, Charles MILLER¹, Ryan P. PAVLICK¹

¹Jet Propulsion Laboratory, California Institute of Technology, ²University of California, Los Angeles, ³Black Swift Technologies LLC, ⁴National University of Costa Rica

SE09-D3-PM1-327-003 | SE09-A013

Characterizing the Relative Magma Viscosity of Raung Volcano Using Crystal Size and Shape Analysis: Implication to Lava Travel Distance and Interval of Eruption Firman SAUQI^{1*+}, Mirzam ABDURRACHMAN¹, Idham Andri KURNIAWAN¹

¹Bandung Institute of Technology

SE09-D3-PM1-327-004 | SE09-A002

Modeling the Formation of Volcanic Smoke Rings Fabio PULVIRENTI¹³⁺, Simona SCOLLO², Carmelo FERLITO³, Florian M. SCHWANDNER^{1,4}

¹Jet Propulsion Laboratory, California Institute of Technology, ²National Institute of Geophysics and Volcanology, ³University of Catania, ⁴Gas Monitoring Solutions

SE09-D3-PM1-327-005 | SE09-A009 (Invited)

Status of Ash Cloud Detectability in Southeast Asia Using Long-range Infrasound Dorianne TAILPIED^{1‡}, Benoit TAISNE¹⁺, Anna PERTTU¹

¹Nanyang Technological University

SE09-D3-PM1-327-006 | SE09-A006 (Invited)

Plume Spectroscopy: The Application of Imaging Spectroscopy to Map the Composition of Heterogeneous Volcanic Plumes Vincent REALMUTO^{1\$+}, Paulo PENTEADO¹, Florian M. SCHWANDNER^{1,2}

¹Jet Propulsion Laboratory, California Institute of Technology, ²Gas Monitoring Solutions

OS02 / Tropical Climate Variability, Modelling, Prediction, and Application

Wed - 31 Jul | MR302

Time 13:30-15:30

Chair(s) Jing-Jia LUO, Nanjing University of Information Science & Technology Swadhin BEHERA, Japan Agency for Marine-Earth Science and Technology

OS02-D3-PM1-302-001 | OS02-A016 (Invited)

Extreme Convective El Nino Events are Less Coinciding with Extreme Warm El Nino Events Under Warming Climate Guojian WANG^{1‡+}, Wenju CAI^{1,2}

¹Commonwealth Scientific and Industrial Research Organisation, ²Ocean University of China and Qingdao National Laboratory for Marine Science and Technology

OS02-D3-PM1-302-002 | OS02-A005 (Invited)

Westerly Wind Burst (WWB)/Easterly Wind Surge (EWS)-like Stochastic Forcing and the Effects on ENSO Prediction by the SINTEX-F System Takeshi DOI^{1#+}, Toshio YAMAGATA¹

¹Japan Agency for Marine-Earth Science and Technology

OS02-D3-PM1-302-003 | OS02-A009 (Invited)

Contrasting the Skills and Biases of Deterministic Predictions for the Two Types of El Nino Fei ZHENG^{1±+}, Jin-Yi YU² ¹Chinese Academy of Sciences, ²University of California, Irvine

OS02-D3-PM1-302-004 | OS02-A021

The Challenge in Estimation, Simulation and Prediction of the Long-term Trend in Hydroclimate June-Yi LEE^{1#+} ¹Pusan National University

OS02-D3-PM1-302-005 | OS02-A026

Towards Understanding the Suppressed ENSO Activity During Mid-holocene in PMIP2 and PMIP3 Simulations Lin CHEN^{1#+}, Weipeng ZHENG², Pascale BRACONNOT^{3,4} ¹Nanjing University of Information Science & Technology, ²Chinese Academy of Sciences, ³Pierre Simon Laplace Institute, ⁴Université Paris-Saclay

OS02-D3-PM1-302-006 | OS02-A022

Warming of Subtropical Eastern North Pacific SST and its Possible Effects Chi-Cherng HONG^{1#+}, Yi-Kai WU² ¹University of Taipei, ²National Taiwan Normal University

OS02-D3-PM1-302-007 | OS02-A023

Westward Wind Changes over the Tropical and Mid-latitude Pacific Driven by the Tropical Atlantic and the Indian Ocean SST Forcing Xichen LI^{1#+}

¹Chinese Academy of Sciences

OS02-D3-PM1-302-008 | OS02-A014

Diversity in the Representation of Large-scale Circulation Associated with Enso-indian Summer Monsoon Teleconnections in CMIP5 Models Dandi RAMU¹⁺⁺, Jasti CHOWARY¹, Suryachandra Rao ANGULURI¹, Ramakrishna S. S. V. S², Odury BHANUKUMAR² ¹Indian Institute of Tropical Meteorology, ²Andhra University

OS09 / Atmospheric and Oceanic Forcing on Biogeochemistry in the North Pacific Subtropical Gyre

OS19 / Artificial Intelligence (AI) Oceanography Wed - 31 Jul | MR301

Time 13:30-15:30

Chair(s) Wee CHEAH, University of Malaya Chun Hoe CHOW, National Taiwan Ocean University Changming DONG, Nanjing University of Information Science & Technology Bin ZOU, National Satellite Ocean Application Service

OS09-D3-PM1-301-001 | OS09-A002

Biogeochemical Responses of Eddies in the Northern South China Sea Yung-Yen SHIH¹⁵⁺

¹Republic of China Naval Academy

OS09-D3-PM1-301-002 | OS09-A003

Remote Impact on Decadal Variability of Nutrients and Biomass in the Kuroshio Extension Pengfei LIN¹, Jinfeng MA^{1#+}, Fei CHAI² ¹Chinese Academy of Sciences, ²University of Maine

OS09-D3-PM1-301-003 | OS09-A004

Anomalous Wind Triggered the Largest Phytoplankton Bloom in the Oligotrophic North Pacific Subtropical Gyre Chun Hoe CHOW¹⁵⁺, Wee CHEAH², Jen-Hua TAI³

¹National Taiwan Ocean University, ²University of Malaya, ³Academia Sinica

OS19-D3-PM1-301-004 | OS19-A009 (Invited)

Improving Ocean Color Data Coverage Through Machine Learning

Shuangling CHEN^{1‡+}, Chuanmin HU², Brian BARNES², Yuyuan XIE³, Gong LIN³, Zhongfeng QIU⁴ ¹Ministry of Natural Resources, ²University of South Florida, ³Xiamen University, ⁴Nanjing University of Information Science & Technology

OS19-D3-PM1-301-005 | OS19-A008

Identification of Oceanic Eddies Based on the Pyramid Scene Parsing Network

Guangjun XU^{1‡+}, Changming DONG^{2,3}, Cheng CHENG⁴, Wenxian YANG⁴, Lingmei KONG⁴, Wenhong XIE² ¹Guangdong Ocean University, ²Nanjing University of Information Science & Technology, ³University of California, Los Angeles, ⁴Univer

SS03 / Mineral Desert Dust

Wed - 31 Jul | Nicoll 1

 Time
 13:30-15:30

 Chair(s)
 Sang-Woo KIM, Seoul National University

SS03-D3-PM1-Nicoll 1-001 | SS03-A001 (Invited)

AD-Net, a Lidar Network for Observation of Three Dimensional Distribution of Asian Dust Particles Atsushi SHIMIZU^{1#+}, Tomoaki NISHIZAWA¹, Yoshitaka JIN¹, Nobuo SUGIMOTO¹

¹National Institute for Environmental Studies

SS03-D3-PM1-Nicoll 1-002 | SS03-A002 (Invited)

Following the Dust: Satellite Perspectives of Dust Sources, Transport, Deposition, and Impacts Hongbin YU¹⁵⁺

¹NASA Goddard Space Flight Center

SS03-D3-PM1-Nicoll 1-003 | SS03-A003 (Invited)

Advancing the Capabilities to Predict the Atmospheric Burdens of Dust and its Impacts on Air Quality, Weather and More

Gregory CARMICHAEL^{1#+}, Meng GAO², Pablo SAIDE³, Gonzalo FERRADA¹, Jun WANG¹, Sarika KULKARNI⁴, Gufran BEIG⁵, Alexander BAKLANOV ⁶

¹The University of Iowa, ²Harvard University, ³University of California, Los Angeles, ⁴California Air Resources Board, ⁵Indian Institute of Tropical Meteorology, ⁶World Meteorological Organization

ST26-PS17 / Future and Current Space Missions and Instrumentation for Space and Planetary Science

Wed - 31 Jul | MR309

Time	13:30-15:30
Chair(s)	Andrew YAU, University of Calgary

ST26-PS17-D3-PM1-309-001 | ST26-PS17-A003

Science Objectives of the Solar-C_EUVST Shinsuke IMADA^{1#+} ¹Nagoya University

ST26-PS17-D3-PM1-309-002 | ST26-PS17-A024

The Solar Magnetism Mission Haosheng LIN^{1#+}, Maxim KRAMAR¹ ¹University of Hawaii

ST26-PS17-D3-PM1-309-003 | ST26-PS17-A004 (Invited)

The Parker Solar Probe Mission: Status and Outlook Nour E. RAOUAFI^{1*+}, Stuart BALE², Justin KASPER³, David MCCOMAS⁴, Russell HOWARD⁵, Marco VELLI⁶, Arik POSNER⁷ ¹The Johns Hopkins University Applied Physics Laboratory, ²University of California, Berkeley, ³University of Michigan, ⁴Princeton University, ⁵U.S. Naval Research Laboratory, ⁶University of California, Los Angeles, ⁷National Aeronautics and Space Administration

ST26-PS17-D3-PM1-309-004 | ST26-PS17-A012

CuSP: The Cubesat Mission for Studying Solar Particles Mihir DESAI¹⁸⁺

¹Southwest Research Institute

ST26-PS17-D3-PM1-309-005 | ST26-PS17-A005 (Invited)

The Indian Aeronomy Satellite Mission – DISHA (Disturbed and Quiet Time Ionosphere-thermosphere System at High Altitudes)

Duggirala PALLAMRAJU^{1‡+}, Dibyendu CHAKRABARTY¹, Ashish MISHRA², Smitha THAMPI³, Tirtha Prathim DAS⁴, C VINEETH³, Tarun Kumar PANT³, Raj Kumar CHOUDHARY³, Sumanta SARKHEL⁵, Shyama NARENDRANATH⁶, Anil BHARDWAJ¹

¹Physical Research Laboratory, ²Space Applications Center, ³Vikram Sarabhai Space Centre, ⁴ISRO Headquarters, ⁵Indian Institute of Technology, Roorkee, ⁶UR Rao Satellite Center

ST26-PS17-D3-PM1-309-006 | ST26-PS17-A002 (Invited)

Ongoing and Future Space Science Mission of KASI Junga HWANG^{1#+}

¹Korea Astronomy and Space Science Institute

ST26-PS17-D3-PM1-309-007 | ST26-PS17-A006

Solar X-ray Monitor On-board Chandrayaan-2 Mission Mithun N.P.S.^{1#}, Santosh VADAWALE¹, M. SHANMUGAM¹⁺, Arpit PATEL¹, Hitesh ADALJA¹, Tinkal LADIYA¹, Shiv Kumar GOYAL¹, Neeraj Kumar TIWARI¹, Nishant SINGH¹, Sushil KUMAR¹, Arup Kumar HAIT², Abhinandan KAPOOR³, Suresh Kumar H.N.³, Gaurav Dutta SAXENA⁴, Kalpana ARVIND⁴, Neeraj Kumar SATYA³, Anil BHARDWAJ¹

¹Physical Research Laboratory, ²Space Applications Centre, ³U. R. Rao Satellite Centre, ⁴Laboratory For Electro-Optics Systems

ST18 / Multi-scale Diagnosis of Magnetic Reconnection

Wed - 31 Jul | MR308

Time	16:00-18:00
Chair(s)	Yuri KHOTYAINTSEV, Swedish Institute of Space
	Physics
	Keizo FUJIMOTO, Beihang University

ST18-D3-PM2-308-001 | ST18-A028 (Invited)

The Role of Lower Hybrid Waves in Magnetic Reconnection Daniel GRAHAM^{1#+}, Andris VAIVADS¹, Mats ANDRE¹, Cecilia NORGREN², James DRAKE³, Per-Arne LINDQVIST⁴, Olivier LE CONTEL⁵, Robert ERGUN⁶, Barbara GILES⁷, Christopher RUSSELL⁸, James BURCH⁹, Roy B. TORBERT^{9,10} ¹Swedish Institute of Space Physics, ²University of Bergen, ³University of Maryland, ⁴KTH Royal Institute of Technology, ⁵National Centre for Scientific Research/ Ecole Polytechnique, ⁶University of Colorado Boulder, ⁷NASA Goddard Space Flight Center, ⁸University of California, Los Angeles, ⁹Southwest Research Institute, ¹⁰University of New Hampshire

ST18-D3-PM2-308-002 | ST18-A024 (Invited)

Whistler Waves Driven by Field-aligned Crescent Electrons in the Near-earth Magnetotail Reconnection

Lei DAI¹⁵⁺, Ren YONG¹, Wen LI^{2,3}, Xin TAO⁴, Chi WANG¹, Binbin TANG¹, Benoit LAVRAUD⁵, James BURCH⁶, Barbara GILES⁷, Olivier LE CONTEL⁸, Roy B. TORBERT^{6,9}, Chris RUSSELL³, Robert STRANGEWAY³, Robert ERGUN¹⁰, Per-Arne LINDQVIST¹¹

¹Chinese Academy of Sciences, ²Boston University, ³University of California, Los Angeles, ⁴University of Science and Technology of China, ⁵National Centre for Scientific Research, ⁶Southwest Research Institute, ⁷NASA Goddard Space Flight Center, ⁸National Centre for Scientific Research/ Ecole Polytechnique, ⁹University of New Hampshire, ¹⁰University of Colorado Boulder, ¹¹KTH Royal Institute of Technology

ST18-D3-PM2-308-003 | ST18-A020

A Long-lasting Auroral Bright Spot Around Magnetic North Pole: Is it the Evidence of Stable Magnetic Reconnection? Qing-He ZHANG^{1‡+}, Guo-Cheng SHEN¹, Yongliang ZHANG², Kjellmar OKSAVIK³, Michael LOCKWOOD⁴, Zanyang XING¹, Yu-Zhang MA¹

¹Shandong University, ²The Johns Hopkins University Applied Physics Laboratory, ³University of Bergen, ⁴University of Reading

ST18-D3-PM2-308-004 | ST18-A018

Spectral and Imaging Observations of Magnetic Reconnection in a Solar Current Sheet Mingde DING^{1#+} ¹Nanjing University

ST18-D3-PM2-308-005 | ST18-A009 (Invited)

Electron-scale Measurements of Dipolarization Front Huishan FU^{1‡+}, Chengming LIU¹, Yin XU¹ ¹Beihang University

ST18-D3-PM2-308-006 | ST18-A015

Electron-scale Quadrants of the Hall Quadrupolar Structure Observed During Magnetic Reconnection Rongsheng WANG^{1‡+}, Rumi NAKAMURA², Quanming LU¹, Wolfgang BAUMJOHANN², Robert ERGUN³, James BURCH⁴ ¹University of Science and Technology of China, ²Austrian Academy of Sciences, ³University of Colorado Boulder, ⁴Southwest Research Institute

ST18-D3-PM2-308-007 | ST18-A027

Electron Sublayers and the Associated Magnetic Topologies in the Inner Low Latitude Boundary Layer

Xiangcheng DONG¹, Malcolm DUNLOP^{1,2#+}, Karlheinz TRATTNER³, Tieyan WANG², Zuyin PU⁴, Jinsong ZHAO⁵, Jinbin CAO¹, Christopher RUSSELL⁶, Barbara GILES⁷ ¹Beihang University, ²Rutherford Appleton Laboratory, ³University of Colorado Boulder, ⁴Peking University, ⁵Chinese Academy of Sciences, ⁶University of California, Los Angeles, ⁷NASA Goddard Space Flight Center

ST18-D3-PM2-308-008 | ST18-A013

Electron Distribution Functions Around a Reconnection X-line Resolved by the FOTE Method

Zhe WANG^{1#+}, Huishan FU¹, Chengming LIU¹, Yangyang LIU¹, Giulia COZZANI², Barbara GILES³, Kyoung-Joo HWANG⁴, James BURCH⁴

¹Beihang University, ²National Center for Scientific Research/ Ecole Polytechnique/ Pierre-and-Marie-Curie University, ³NASA Goddard Space Flight Center, ⁴Southwest Research Institute

ST11 / Radiation Belt Physics in the Sun-earth Connection Context

Wed - 31 Jul | MR304

 Time
 16:00-18:00

 Chair(s)
 Binbin NI, Wuhan University

 Xudong GU, Wuhan University

ST11-D3-PM2-304-001 | ST11-A015 (Invited)

Multi-MeV Electron Loss From the Radiation Belts Yuri SHPRITS^{1#+}, Nikita ASEEV², Alexander DROZDOV³ ¹GFZ German Research Center for Geosciences, ²GFZ German Research Centre for Geosciences, ³University of California, Los Angeles

ST11-D3-PM2-304-002 | ST11-A005 (Invited)

Rapid Loss of Relativistic Electrons by EMIC Waves in the Outer Radiation Belt Observed by Arase, Van Allen Probes, and the PWING Ground Stations

Satoshi KURITA^{1#+}, Yoshizumi MIYOSHI¹, Kazuo SHIOKAWA¹, Nana HIGASHIO², Takefumi MITANI², Takeshi TAKASHIMA², Ayako MATSUOKA², Iku SHINOHARA², Craig KLETZING³, Berhard BLAKE⁴, Seth CLAUDEPIERRE⁴, Martin CONNORS⁵, Shin-Ichiro OYAMA⁶, Tsutomu NAGATSUMA⁷, Kaori SAKAGUCHI⁷, Dmitry BAISHEV⁸, Yuichi OTSUKA¹ ¹Nagoya University, ²Japan Aerospace Exploration Agency, ³The University of Iowa, ⁴The Aerospace Corporation, ⁵Athabasca University, ⁶Institute for Space-Earth Environmental Research, ⁷National Institute of Information and Communications Technology,

⁸Siberian Branch of the Russian Academy of Sciences

ST11-D3-PM2-304-003 | ST11-A009

Hot Plasma Effects on the Scattering Loss of Radiation Belt Electrons by Plasmaspheric Hiss Xing CAO¹⁺, Binbin NI^{1‡}, Danny SUMMERS² ¹Wuhan University, ²Memorial University of Newfoundland

ST11-D3-PM2-304-004 | ST11-A002

Untangling Solar Wind Drivers of the Outer Radiation Belt with Information Theory Simon WING^{1#+}, Jay JOHNSON² ¹The Johns Hopkins University, ²Andrews University

ST11-D3-PM2-304-005 | ST11-A001

The Energy-dependent Acceleration of Ultrarelativistic Electrons in the Radiation Belts Hong ZHAO^{1#+}, Dan BAKER¹, Xinlin LI¹, Allison JAYNES², Shri

¹University of Colorado Boulder, ²The University of Iowa, ³NASA

Goddard Space Flight Center

ST11-D3-PM2-304-006 | ST11-A003

On the Initial Enhancement of Energetic Electrons and the Innermost Plasmapause Locations: During CIR-driven Storm Periods and Non-storm Periods Leng Ying KHOO^{1‡+}, Xinlin L¹, Hong ZHAO¹, Xiangning CHU², Zheng XIANG³, Kun ZHANG¹ ¹University of Colorado Boulder, ²University of California, Los Angeles, ³Wuhan University

ST11-D3-PM2-304-007 | ST11-A008

Imaging Energetic Electron Spectrometers Onboard Chinese Navigation Satellite in the Inclined GEO and MEO Orbits Zou HONG^{1#+}, Yuguang YE¹, Qiugang ZONG¹ ¹Peking University

ST11-D3-PM2-304-008 | ST11-A004

Properties of Solar Energetic Particle Events in the Radiation Belts as Observed by Van Allen Probes Rachael FILWETT^{1#}, Allison JAYNES¹⁺ ¹The University of Iowa

SE22 / Emerging Trends in Ore Deposit Studies in the Asia Oceania Region

Wed - 31 Jul | MR303

Time	16:00-18:00
Chair(s)	Kotaro YONEZU, Kyushu University
	Betchaida PAYOT, University of the Philippines Diliman

SE22-D3-PM2-303-001 | SE22-A010

Mineral Chemistry of Host Rocks in the Sangilo Epithermal Deposit, Baguio Mineral District Philippines: Probe to Sub-porphyry Magmatic Processes and Conditions Karl JABAGAT^{1#+}, Jillian Aira GABO-RATIO¹, Jessamin Belle DEMEGILLO¹, Karlo QUEAÑO², Eric ANDAL³, Carla DIMALANTA¹, Graciano YUMUL, JR.^{4,5}

¹University of the Philippines Diliman, ²Ateneo de Manila University, ³Itogon-Suyoc Resources Inc., ⁴Monte Oro Resources & Energy, Inc., ⁵Apex Mining Co. Inc.

SE22-D3-PM2-303-002 | SE22-A015

Hypogene Acid Hydrothermal Alteration at the Sih-Huang-Ping and Huang-Shan Steaming Grounds, Tatun Volcanic Group, Taiwan

Mizuki FUJISAKI¹⁺⁺, Sachihiro TAGUCHI², Hitoshi CHIBA³, Yi-Chia LU⁴, Yu-Jie LIN⁴, Chyi WANG⁵, Sheng-Rong SONG⁴, Po-Tsun LI⁶, Guo-Teng HONG⁶, Wei-Chia CHU⁶, Chi-Hsuan CHEN⁶, Jiin-Fa LEE⁶, Chih-Hao YANG⁷, Ming-Chien CHUNG⁷, Chi-Wen YU⁷, Kotaro YONEZU¹, Koichiro WATANABE¹ ¹Kyushu University, ²Fukuoka University, ³Okayama University, ⁴National Taiwan University, ⁵National Taipei University of Technology, ⁶Central Geological Survey, ⁷Sinotech Engineering Consultants Ltd

SE22-D3-PM2-303-003 | SE22-A021

Initial Study of Copper-Gold Mineralization in MGI in the Grasberg Mine, Papua, Indonesia: Insight from Drill Core AM30-08H-05

Kanehiko KAWASAKI^{1*+}, Kotaro YONEZU¹, Reza AL FURQAN², Benny BENSAMAN³, Mega Fatimah ROSANA³ ¹Kyushu University, ²PT Freeport Indonesia, ³Padjadjaran University

SE22-D3-PM2-303-004 | SE22-A027

Characteristics of Red and Yellow Jasper on Mineralisation Zone of Southern Java Mountainous Area, Yogyakarta, Indonesia

Kemala WIJAYANTI^{1#+}, Mega Fatimah ROSANA¹, Euis TINTIN YUNINGSIH¹

¹Padjadjaran University

SE22-D3-PM2-303-005 | SE22-A019

Mineralogy and Fluid Inclusion Studies of Sn-W Deposit of the Tagu Area, Myeik, Southern Myanmar

Kyaw Thu HTUN^{1#+}, Kotaro YONEZU¹, Aung Zaw MYINT¹, Akira IMAI¹, Thomas TINDELL¹, Koichiro WATANABE¹ ¹Kyushu University

SE22-D3-PM2-303-006 | SE22-A022

Preliminary Quartz and Sphalerite Fluid Inclusion Microthermometry, Hakurei Site, Izena Hole Yushi SEKIYA^{1*+}, Kotaro YONEZU¹, Thomas TINDELL¹, Junichiro ISHIBASHI¹, Tatsuo NOZAKI², Akira IMAI¹ ¹Kyushu University, ²Japan Agency for Marine-Earth Science and Technology

SE22-D3-PM2-303-007 | SE22-A007

Gold and Copper Mineralization Characteristics of the Ophiolite-hosted Malabeg Prospect in Cabangan, Zambales, Philippines

John Emmanuel FUNGO¹^{#+}, Jillian Aira GABO-RATIO², Kotaro YONEZU³, Karl JABAGAT², Omar SOBERANO² ¹National Institute of Geological Sciences, ²University of the Philippines Diliman, ³Kyushu University

SE22-D3-PM2-303-008 | SE22-A024

Geology, Alteration and Mineralization of Lower Level of Grasberg Igneous Complex; It's Relation with Grasberg Porphyry Cu-Au Deposit Benny BENSAMAN¹⁵⁺, Mega Fatimah ROSANA¹ ¹Padjadjaran University

HS13 / Urban Water-Related Problems

Wed - 31 Jul | MR330

Time	16:00-18:00	
Chair(s)	Akira KAWAMURA, Tokyo Metropolitan University	
	Kei NAKAGAWA, Nagasaki University	

HS13-D3-PM2-330-001 | HS13-A010

Modeling of eDNA in Rivers by a Lab Experiment Akira MORITA^{1#+}, So KAZAMA¹

¹Tohoku University

HS13-D3-PM2-330-002 | HS13-A004

Spatial Characteristics of Groundwater Chemistry in Unzen, Nagasaki, Japan

Kei NAKAGAWA^{1#+}, Zhi Qiang YU¹, Hiroki AMANO², Ronny BERNDTSSON³

¹Nagasaki University, ²Tokai University, ³Lund University

HS13-D3-PM2-330-003 | HS13-A016 (Invited)

Dynamics of Stream Environmental DNA Focusing on Transport, Bacteria and Particle Size Kei NUKAZAWA^{1*+}, Kentaro AKAHOSHI¹, Yoshihiro SUZUKI¹ ¹University of Miyazaki

HS13-D3-PM2-330-004 | HS13-A021 (Invited)

The 2016 Kumamoto Earthquake Effects on Groundwater Level Characteristics Tsutomu ICHIKAWA¹, Kei NAKAGAWA^{2#}, Hiroki AMANO¹⁺, Ronny BERNDTSSON³

¹Tokai University, ²Nagasaki University, ³Lund University

HS13-D3-PM2-330-005 | HS13-A023 (Invited)

A Proposal of Source Tracking of Fecal Pollution in Recreational Waters by Applying Pulsed-field Gel Electrophoresis (PFGE) Yoshihiro SUZUKI^{1‡+}, Takashi FURUKAWA², Kei NUKAZAWA¹

¹University of Miyazaki, ²Kitasato University

HS13-D3-PM2-330-006 | HS13-A027 (Invited)

In-situ Fluorescence Sensors for Monitoring Riverine Dissolved Organic Matter in Bihar, India

Laura RICHARDS^{1‡+}, Kieran KHAMIS², Stefan KRAUSE², Arun KUMAR³, Neha PARASHAR³, Sreedipta CHATTERJEE⁴, Sidharth SUMAN⁵, Prerona DAS⁴, Sumant KUMAR⁶, Ashok GHOSH³, Abhijit MUKHERJEE⁴, David HANNAH², Daren GOODDY⁷, David POLYA¹

¹University of Manchester, ²University of Birmingham, ³Mahavir Cancer Sansthan and Research Centre, ⁴Indian Institute of Technology Kharagpur, ⁵Anugrah Narayan College Patna, ⁶National Institute of Hydrology Roorkee, ⁷British Geological Survey

HS13-D3-PM2-330-007 | HS13-A033 (Invited)

Considering Multi-level Governance of Groundwater – Through the Case Study of Nitrate-nitrogen Pollution in Shimabara City, Japan Hironori HAMASAKI^{1#+}, Kei NAKAGAWA¹, Takashi WATANABE¹ ¹Nagasaki University

HS23 / Approaches for Post-processing Meteorological and Hydrological Forecasts for Improved Predictions of High-impact Weather Conditions

Wed - 31 Jul | MR329

Time 1	6:00-18:00
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Chair(s) Sanjeev Kumar JHA, Indian Institute of Science Education and Research Bhopal

HS23-D3-PM2-329-001 | HS23-A002

Quantification of Uncertainty in Weather Forecasting for Improved Agro-meteorological Services Aadhityaa MOHANAVELU^{1**}, Soundharajan BANKARU SWAMY¹, K.S. KASIVISWANATHAN² ¹Amrita Vishwa Vidyapeetham, ²Indian Institute of Technology Mandi

HS23-D3-PM2-329-002 | HS23-A001

Enhancement in Long-term Hydrologic Forecasting Accuracy Using the Bayes Theorem Seung Beom SEO^{1#}, Young-Oh KIM¹⁺, Shinuk KANG², Gun II CHUN³, Woo Sung NAM³ ¹Seoul National University, ²K-water Institute, ³National Drought Information Analysis Center

HS23-D3-PM2-329-003 | HS23-A004

Bias Correction of Meteorological Variables for Avalanche Study in Indian Himalayas Region Nibedita SAMAL¹, Shivani BADODIYA¹, Sanjeev Kumar JHA^{1#+}, Sudhanshu SHEKHAR² ¹Indian Institute of Science Education and Research Bhopal, ²Snow and Avalanche Study Establishment

HS23-D3-PM2-329-004 | HS23-A009

Dual Window Bias Correction for Runoff Projected by Super Ensemble Experiments Satoshi WATANABE^{1#+} ¹The University of Tokyo

HS23-D3-PM2-329-005 | HS23-A006

Addressing Mismatch in Spatial Scales of WRF Output and Gridded Observation Data for Precipitation and Temperature in South Eastern Australia Sanjeev Kumar JHA^{1#+}, Nibedita SAMAL¹ ¹Indian Institute of Science Education and Research Bhopal

HS24 / Modeling of Hydrologic Processes at Catchment Scales in the Context of Climate Change

Wed - 31 Jul | MR328

Time16:00-18:00Chair(s)Van-Thanh-Van NGUYEN, McGill University

HS24-D3-PM2-328-001 | HS24-A005

Climate Change Impact Assessment on Urban Hydrologic Processes: Recent Advances and Shortcomings Van-Thanh-Van NGUYEN^{1#+} ¹McGill University

HS24-D3-PM2-328-002 | HS24-A009

Impact of Climate Change on the Himachal Himalayas Netrananda SAHU^{1#+}, Takahiro SAYAMA² ¹University of Delhi, ²Kyoto University

HS24-D3-PM2-328-003 | HS24-A004

Climate Change Impacts May Be Underestimated in Regulated River Basins: A Case Study in the Upper Mekong River Basin Thanh Duc DANG^{1#+}, A.F.M. Kamal CHOWDHURY¹, Stefano GALELLI¹

¹Singapore University of Technology and Design

HS24-D3-PM2-328-004 | HS24-A008

A Three-source Attribution Framework and Application for Streamflow Change Affected by Climate Variability, Anthropogenic Climate and Basin Underlying Surface Change Yanli LIU¹⁵⁺, Guoqing WANG¹, Jianyun ZHANG¹, Junliang JIN¹, Cuishan LIU¹ ¹Nanjing Hydraulic Research Institute

HS24-D3-PM2-328-005 | HS24-A012

Mountainous River Health Assessment Using Fish-biotic Integrity Index and Environmental Factors Correlation Analysis

Han ZHAOFENG¹⁺, Ji CHEN^{1‡}, Qian XU¹, Yi LU¹ ¹The University of Hong Kong

HS24-D3-PM2-328-006 | HS24-A013

Applications of Macroinvertebrate Biotic Integrity Index in Assessing Lai Chi Wo River Water Quality Han ZHAOFENG¹⁺, Ji CHEN^{1±}, Yi LU¹, Qian XU¹ ¹The University of Hong Kong

HS24-D3-PM2-328-007 | HS24-A001

Integrated Surface- Subsurface Hydrological Modelling of a Humid Tropical River Basin Anu PATIL¹, Sreelash KRISHNAN KUTTY^{2#+}, Varija K¹, Rajat KUMAR SHARMA²

¹National Institute of Technology, ²National Centre for Earth Science Studies

PS16 / Microwave and Infrared Remote Sensing of Solar System Objects

Wed - 31 Jul | MR310

Time 16:00-18:00

Chair(s) Yi-Jehng KUAN, National Taiwan Normal University Yasuko KASAI, National Institute of Information and Communications Technology

PS16-D3-PM2-310-001 | PS16-A018

Crosslink Occultations for Probing the Planetary Atmosphere and Ionosphere of Mars

Silvia TELLMANN¹⁺⁺, Martin PÄTZOLD¹, Bernd HÄUSLER², Michael K. BIRD³, David P. HINSON⁴, Tom ANDERT², Graciela GONZALEZ PEYTAVÍ², Sami ASMAR⁵

¹Rhenish Institute for Environmental Research, ²Universität der Bundeswehr München, ³University of Bonn, ⁴Stanford University, ⁵Jet Propulsion Laboratory, California Institute of Technology

PS16-D3-PM2-310-002 | PS16-A019

Ground-based Observations of Magnetic Field Strength at Mesospheric Altitudes Richard LARSSON¹⁵⁺, Paul HARTOGH¹, Borys DABROWSKI¹ ¹Max Planck Institute for Solar System Research

PS16-D3-PM2-310-003 | PS16-A021

Planetary Spectrum Generator: An Accurate Online Radiative Transfer Suite for Atmospheres, Comets, Small Bodies and Exoplanets Geronimo VILLANUEVA^{1#+} ¹NASA Goddard Space Flight Center

PS16-D3-PM2-310-004 | PS16-A006

Study on the Early Activity of Comet 67P/CG with 3D Modeling of the MIRO Observations Yuhui ZHAO^{1#+}, Ladislav REZAC², Paul HARTOGH², Jianghui JI¹, Raphael MARSCHALL³, Horst Uwe KELLER² ¹Chinese Academy of Sciences, ²Max Planck Institute for Solar System Research, ³International Space Science Institute

PS16-D3-PM2-310-005 | PS16-A012

3D Analysis of Spatial Resolution of MIRO/Rosetta Observations at 67P/CG Ladislav REZAC^{1#+}, Paul HARTOGH¹, Yuhui ZHAO², Jianghui JI², David MARSHALL¹

¹Max Planck Institute for Solar System Research, ²Chinese Academy of Sciences

PS16-D3-PM2-310-006 | PS16-A014

The Far-ir Properties of a Large Sample of Asteroids in the Herschel-spire Catalogue of Serendipitous Solar System Observations

Mark KIDGER^{1#+}, Cristina ROMERO², Miriam RENGEL^{1,3} ¹European Space Astronomy Centre, ²Technische Universität Berlin, ³Max Planck Institute for Solar System Research

PS16-D3-PM2-310-007 | PS16-A025

Submillimeter Spectral Observations of Molecular Exospheres of the Ceres Icy World

Yo-Ling CHUANG^{1‡+}, Yi-Jehng KUAN¹, Steven CHARNLEY², Ming-Chi CHUNG¹, Yu-Fu YEH¹

¹National Taiwan Normal University, ²NASA Goddard Space Flight Center

AS07 / Origin, Evolution, and Distribution of Atmospheric Pollutions and Their Impact on Ecosystem in Eastern China

Wed - 31 Jul | MR311

Time	16:00-18:00
Chair(s)	Guohui LI, Chinese Academy of Sciences

AS07-D3-PM2-311-001 | AS07-A002 (Invited)

Characteristics of O3 and PM2.5 in the Pearl River Delta Region and its Relationship with Meteorological Factors Xuejiao DENG^{1#+}

¹China Meteorological Administration

AS07-D3-PM2-311-002 | AS07-A004 (Invited)

Numerical Forecast for Air Quality over Eastern China Guangqiang ZHOU^{1‡+} ¹Shanghai Meteorological Service

AS07-D3-PM2-311-003 | AS07-A013

Impact of the 2015 El Nino Event on Winter Air Quality in China

Luyu CHANG¹⁺, Jianming XU^{1#}, Xuexi TIE², Jianbin WU³ ¹Yangtze River Delta Center for Environmental Meteorology Prediction and Warning, ²National Center for Atmospheric Research, ³Clear Technology Co. Ltd.

AS07-D3-PM2-311-004 | AS07-A003

Spatial and Temporal Changes of SO2 Regimes over China in Recent Decade and the Driving Mechanism

Ting WANG^{1*+}, Pucai WANG¹, Nicolas THEYS², Dan TONG³, Francois HENDRICK², Qiang ZHANG³, Van Roozendael MICHEL²

¹Chinese Academy of Sciences, ²Royal Belgian Institute for Space Aeronomy, ³Tsinghua University

AS07-D3-PM2-311-005 | AS07-A022

Effects of Stabilized Criegee Intermediates (sCI) on the Sulfate Formation by a Source-oriented WRF-CHEM Model: A Case Study During Summertime in the North China Plain (NCP) Lang LIU¹⁺, Guohui LI^{2‡}

¹Institute of Earth Environment, Chinese Academy of Sciences, ²Chinese Academy of Sciences

IG19 / Volcanic Gas Surveillance: Applications to Monitoring and Hazard Mitigation

Wed - 31 Jul | MR327

Time	16:00-18:00
Chair(s)	Philipson BANI, The French Research Institute for Development Estu KRISWATI, Center for Volcanology and Geological Hazard Mitigation

IG19-D3-PM2-327-001 | IG19-A007

New Insight from Whole-rock Geochemistry and Seismic Tomography into Southwest Sector Collapse of Anak Krakatau Triggering Tsunami 2018

Mirzam ABDURRACHMAN^{1#+}, Sri WIDIYANTORO¹, Idham Andri KURNIAWAN¹, M. Nugraha KARTADINATA², Michael CASSIDY³, Hendra GUNAWAN², Achmad Nazar ABRORY⁴

¹Bandung Institute of Technology, ²Center for Volcanology and Geological Hazard Mitigation, ³University of Oxford, ⁴Institut Teknologi Bandung

IG19-D3-PM2-327-002 | IG19-A006

Increase in Lava Discharge Rate of Anak Krakatau During Volcanic Unrest June – December 2018 Derived from MODIS Hotspot Data

Estu KRISWATI^{1#+}, Diego COPPOLA², Akhmad SOLIKHIN¹ ¹Center for Volcanology and Geological Hazard Mitigation, ²Università degli Studi di Torino

IG19-D3-PM2-327-003 | IG19-A008

Morphology Changes of Anak Krakatau Volcano Observed by High Temporal Resolution SAR Images Agustan AGUSTAN^{1#+}, Estu KRISWATI²

¹Agency for the Assessment and Application of Technology, ²Center for Volcanology and Geological Hazard Mitigation

IG19-D3-PM2-327-004 | IG19-A002

Bromo Activity over the Last Decade Hilma ALFIANTI¹⁵⁺, Philipson BANI², Sofyan PRIMULYANA¹, Mita MARLIA¹, Ugan SAING¹, Nia HAERANI¹, Kristianto KRISTIANTO¹, Devy Kamil SYAHBANA¹, Hendra GUNAWAN¹ ¹Center for Volcanology and Geological Hazard Mitigation, ²The French Research Institute for Development

IG19-D3-PM2-327-005 | IG19-A009

Volcanic Eruption Material Triggers Diatom Blooms in Lake Maninjau, Indonesia

Aan DIANTO¹⁺, Arianto SANTOSO^{1#}, Iwan RIDWANSYAH¹, Luki SUBEHI¹, Mudrik DARYONO², Katleen WILS³, Danny NATAWIDJAJA¹, Marc DE BATIST³

¹Indonesian Institute of Sciences, ²Indonesian Institute of Sciences -LIPI, ³Ghent University

OS02 / Tropical Climate Variability, Modelling, Prediction, and Application

Wed - 31 Jul | MR302

Time	16:00-18:00
Chair(s)	June-Yi LEE, Pusan National University

OS02-D3-PM2-302-001 | OS02-A017 (Invited)

Stabilised Frequency of Extreme Positive Indian Ocean Dipole Under 1.5°C Warming

Wenju CAI^{1,2#+}, Lixin WU³, Guojian WANG², Bolan GAN³, Agus SANTOSO^{2,4}, Xiaopei LIN³, Zhaohui CHEN^{3,5}, Fan JIA⁶, Toshio YAMAGATA⁷

¹Ocean University of China and Qingdao National Laboratory for Marine Science and Technology, ²Commonwealth Scientific and Industrial Research Organisation, ³Ocean University of China, ⁴University of New South Wales, ⁵Qingdao National Laboratory for Marine Science and Technology, ⁶Chinese Academy of Sciences, ⁷Japan Agency for Marine-Earth Science and Technology

OS02-D3-PM2-302-002 | OS02-A007 (Invited)

The Impact of Future Sea Level Rise on Extreme Water Levels in the Pearl River Delta

Svetlana JEVREJEVA^{1#+}, Michela DE DOMINICIS¹, Judith WOLF¹ ¹National Oceanography Centre

OS02-D3-PM2-302-003 | OS02-A018 (Invited)

Variability of Sea Level and Upper-ocean Heat Content in the South Indian Ocean: Effects of Subtropical Indian Ocean Dipole and ENSO Lei ZHANG^{1±+}, Weiqing HAN¹ ¹University of Colorado Boulder

OS02-D3-PM2-302-004 | OS02-A024 (Invited)

Patterns of Tropical Sea Surface Temperature and Precipitation Responses to Extratropical Thermal Forcings: The Role of Clouds

Yen-Ting HWANG^{1*+}, Wei-Ting HSIAO¹, Sarah KANG² ¹National Taiwan University, ²Ulsan National Institute of Science and Technology

OS02-D3-PM2-302-005 | OS02-A003

The Impacts of Southern Tropical Indian Warming Following Strong El Nino Events

Zesheng CHEN¹⁺, Yan DU¹⁺, Zhiping WEN^{2,3}, Renguang WU⁴, Shang-Ping XIE⁵

¹Chinese Academy of Sciences, ²Sun Yat-sen University, ³Fudan University, ⁴Zhejiang University, ⁵University of California San Diego

OS02-D3-PM2-302-006 | OS02-A008

Tropical Oceanic Intraseasonal Variabilities Associated with Central Indian Ocean Mode

Ze MENG¹, Lei ZHOU^{2#+}, Raghu MURTUGUDDE³, Qingxuan YANG⁴, Kandaga PUJIANA⁵

¹Second Institute of Oceanography, ²Shanghai Jiao Tong University, ³University of Maryland, ⁴Ocean University of China, ⁵NOAA Pacific Marine and Environmental Laboratory

OS02-D3-PM2-302-007 | OS02-A001

Wet-to-dry Shift over Southwest China in 1994 Tied to the Warming of Tropical Warm Pool Lin WANG¹^{#+}, Gang HUANG¹, Wen CHEN¹, Wen ZHOU², Weiqiang WANG¹

¹Chinese Academy of Sciences, ²City University of Hong Kong

OS07 / Tropical Cyclone-Ocean Interactions

Wed - 31 Jul | MR301

Time 16:00-18:00

Chair(s) Chunzai WANG, South China Sea Institute of Oceanology

OS07-D3-PM2-301-001 | OS07-A004

ENSO and Tropical Cyclones – A Review I-I LIN^{1#+}, Suzana CAMARGO², Christina PATRICOLA³, Julien BOUCHAREL⁴, Savin CHAND⁵, Phil KLOTZBACH⁶, Johnny CHAN⁷, Bin WANG⁴, Ping CHANG⁸, Tim Ll⁴, Fei-Fei JIN^{4,9} ¹National Taiwan University, ²Columbia University, ³Lawrence Berkeley National Laboratory, ⁴University of Hawaii, ⁵Federation University, ⁶Colorado State University, ⁷City University of Hong Kong, ⁸Texas A&M University, ⁹Chinese Meteorological Agency

OS07-D3-PM2-301-002 | OS07-A012

Tropical Cyclone Intensity Response to Distribution of Warm Mesoscale Eddy Guihua WANG^{1#+}, Jia SUN² ¹Fudan University, ²State Oceanic Administration

OS07-D3-PM2-301-003 | OS07-A005

Why are Hurricanes in the Atlantic and Pacific Linked? Chunzai WANG^{1*+} ¹South China Sea Institute of Oceanology

OS07-D3-PM2-301-004 | OS07-A001

Upper Ocean Thermal Response to Tropical Cyclones Han ZHANG^{1‡+}, Dake CHEN² ¹Ministry of Natural Resources, ²State Oceanic Administration

OS07-D3-PM2-301-005 | OS07-A008

The Air-sea Interface Under Tropical Cyclones During Rapid Intensification Alexander SOLOVIEV^{1#+}, Breanna VANDERPLOW¹, Cayla DEAN¹, Brian K. HAUS², Roger LUKAS³ ¹Nova Southeastern University, ²University of Miami, ³University of Hawaii

OS07-D3-PM2-301-006 | OS07-A013

The Impact of Summertime North Indian Ocean SST on Tropical Cyclone Genesis over the Western North Pacific Jiayu ZHENG¹⁵⁺ ¹Chinese Academy of Sciences

OS07-D3-PM2-301-007 | OS07-A009

The Role of Intraseasonal Oscillation in the Tropical Cyclone Activity in Bay of Bengal Lei YANG^{1‡+}, Dongxiao WANG¹ ¹Chinese Academy of Sciences

OS07-D3-PM2-301-008 | OS07-A010

Improved Tropical Cyclone Intensity Forecasts by Assimilating Coastal Surface Currents Ralf TOUMI^{1#+}, Yi LI¹, Luke PHILLIPSON¹ ¹Imperial College London

AS11 / Exploration and Science of the Earth's Lower and Middle Atmosphere: Past, Present and Future Perspectives

Wed - 31 Jul | Nicoll 1

Time 16:00-18:00 Chair(s) Iain REID, ATRAD Pty Ltd Shikha RAIZADA, Arecibo Observatory

AS11-D3-PM2-Nicoll 1-001 | AS11-A011 (Invited)

Mesospheric Radar Wind Comparisons at High and Middle Southern Latitudes

Iain REID^{1,2#+}, Daniel MCINTOSH², Damian MURPHY³, Robert VINCENT²

¹ATRAD Pty Ltd, ²University of Adelaide, ³Australian Antarctic Division

AS11-D3-PM2-Nicoll 1-002 | AS11-A009

Detection of Metals Ions Within Intermediate Layers over Arecibo and Their Comparison with Sporadic E Shikha RAIZADA¹⁵⁺, M SULZER², Jens LAUTENBACH², J SMITH³, N APONTE², P PERILLAT², J MATHEWS⁴

¹Arecibo Observatory-UCF, ²Arecibo Observatory, ³National Aeronautics and Space Administration, ⁴Pennsylvania State University

AS11-D3-PM2-Nicoll 1-003 | AS11-A005

Is Extreme Rainfall Event Influences the Mesospheric Features?

Som Kumar SHARMA^{1#+}, Prashant KUMAR², Priyanka GHOSH¹, Niranjan Kumar KONDAPALLI¹, Rajesh VAISHNAV¹ ¹Physical Research Laboratory, ²Space Application Center

AS11-D3-PM2-Nicoll 1-004 | AS11-A010 (Invited)

The Long-term Trends of Nocturnal Mesopause Temperature and Altitude Revealed by the Na Lidar Observations Between 1990 and 2018 at Mid-latitude Tao YUAN¹⁵⁺

¹Utah State University

AS11-D3-PM2-Nicoll 1-005 | AS11-A013

Quasi-Lagrangian Drifting Balloons for Studying the Long-range Transport of Atmospheric Pollutants François DULAC¹⁵⁺, Valerie GROS², Roland SARDA-ESTÈVE¹, Jean-Baptiste RENARD³, Brice BARRET⁴, Pierre DURAND⁵, François GHEUSI⁴, André VARGAS⁶, Nicolas VERDIER⁶, Sang-Woo KIM⁷

¹French Alternative Energies and Atomic Energy Commission, ²Institute Pierre Simon Laplace/ National Center for Scientific Research, ³Université Orléans/ National Center for Scientific Research, ⁴University of Toulouse III/ National Center for Scientific Research, ⁵Université de Toulouse/ National Center for Scientific Research, ⁶Centre National d'Etudes Spatiales, ⁷Seoul National University

AS11-D3-PM2-Nicoll 1-006 | AS11-A014 (Invited)

Investigations on Winter Extreme Rainfall Episodes over Central and North Indian Region and the Role of Tropical Extra-tropical Interactions

Niranjan Kumar KONDAPALLI^{1#+}, Som Kumar SHARMA¹, D. V. PHANIKUMAR², Shaik GHOUSEBASHA³, Manish NAJA², TBMJ OUARDA⁴, Venkat Ratnam M³, Karnam KISHORE KUMAR⁵

¹Physical Research Laboratory, ²Aryabhatta Research Institute of Observational Sciences, ³National Atmospheric Research Laboratory, ⁴National Institute for Scientific Research, ⁵Vikram Sarabhai Space Centre

AS11-D3-PM2-Nicoll 1-007 | AS11-A006

Spatial Variability in Surface Measured Columnar Ozone and Water Vapor over the Southern Ocean and Validation of OMI Ozone and MODIS Water Vapor Products Hareef Baba Shaeb KANNEMADUGU¹⁵⁺, Biswadip GHARAI¹, Dibyendu DUTTA¹, Seshasai MVR¹ ¹Indian Space Research Organisation

ST26-PS17 / Future and Current Space Missions and Instrumentation for Space and Planetary Science Wed - 31 Jul | MR309

Ned - 31 Jul | MR309

 Time
 16:00-18:00

 Chair(s)
 Yoshifumi SAITO, Japan Aerospace Exploration Agency

ST26-PS17-D3-PM2-309-001 | ST26-PS17-A001

New Coatings for Langmuir Probes in Oxygen-rich Space Plasmas

Joseph SAMANIEGO^{1,*}, Xu WANG¹, Laila ANDERSSON¹, David MALASPINA¹, Robert ERGUN¹, Mihaly HORANYI¹ ¹University of Colorado Boulder

ST26-PS17-D3-PM2-309-002 | ST26-PS17-A023

Recent Radiation Measurements and Instrumentation in Polar Orbit: Ten-Koh 2018 Premkumar SAGANTI^{1#+}

¹Prairie View A&M University

ST26-PS17-D3-PM2-309-003 | ST26-PS17-A007

Performance of High Precision Magnetometer Onboard of China Seismo-electromagnetic Satellite Bingjun CHENG^{1#+}, Bin ZHOU¹, Xiaochen GOU¹, Werner

MAGNES², Roland LAMMEGGER³, Andreas POLLINGER², Yiteng ZHANG¹, Jindong WANG¹, Lei Ll¹

¹Chinese Academy of Sciences, ²Austrian Academy of Sciences, ³Graz University of Technology

ST26-PS17-D3-PM2-309-004 | ST26-PS17-A022

A Small Instrument Suite for Local Meteorology Onboard Future Balloon Mission to Venus

Durga Prasad KARANAM¹[#], Chandan KUMAR¹, Sanjeev MISHRA¹, P KALYAN REDDY¹, Janmejay KUMAR¹, Varun SHEEL¹⁺, S.A. HAIDER¹, Anil BHARDWAJ¹ ¹Physical Research Laboratory

ST26-PS17-D3-PM2-309-005 | ST26-PS17-A018 (Invited)

H2061: Space Technology and Instrumentation for the Second Half of the Twenty First Century Manuel GRANDE^{1±+}, Michel BLANC² ¹Aberystwyth University, ²Research Institute in Astrophysics and

¹Aberystwyth University, ²Research Institute in Astrophysics Planetology

ST26-PS17-D3-PM2-309-006 | ST26-PS17-A013

J-Mag : The Magnetometer Instrument on Juice Michele DOUGHERTY^{1#+} ¹Imperial College London

ST26-PS17-D3-PM2-309-007 | ST26-PS17-A019

OKEANOS: Jupiter Trojan Asteroid Mission Using a Solar Power Sail

Tatsuaki OKADA^{1±+}, Takahiro IWATA¹, Osamu MORI¹, Yoko KEBUKAWA², Motoo ITO³, Jun AOKI⁴, Yosuke KAWAI⁴, Shoichiro YOKOTA⁴, Shuji MATSUURA⁵, Kohji TSUMURA⁶, Daisuke YONETOKU⁷, Tatehiro MIHARA⁸, Hajime YANO^{1,9}, Takayuki HIRAI¹⁰, Ayako MATSUOKA¹, Atsushi KUMAMOTO⁶, Makoto YOSHIKAWA¹, Jun MATSUMOTO¹, Toshihiro CHUJO¹, Masanori MATSUSHITA¹, Junichiro KAWAGUCHI¹, Stephan ULAMEC¹¹, Jean-Pierre BIBRING¹² ¹Japan Aerospace Exploration Agency, ²Yokohama National University, ³Japan Agency for Marine-Earth Science and Technology, ⁴Osaka University, ⁵Kwansei Gakuin University, ⁶Tohoku University, ⁷Kanazawa University, ⁸RIKEN Advanced Institute for Computational Science, ⁹Massachusetts Institute of Technology, ¹⁰Chiba Institute of Technology, ¹¹German Aerospace Center (DLR), ¹²University of Paris-Sud

SE24 / Geotechnical and Geophysical Site Characterization

Wed - 31 Jul | MR323

Time 16:00-18:00

Chair(s) Sung-Woo MOON, Nazarbayev University Taeseo KU, National University of Singapore Askar ZHUSSUPBEKOV, L.N. Gumilyov Eurasian National University

SE24-D3-PM2-323-001 | SE24-A001

HVSR Measurements and Applications in Singapore Taeseo KU¹, Yunhuo ZHANG^{1*+}

¹National University of Singapore

SE24-D3-PM2-323-002 | SE24-A006 (Invited)

Insights from Strong Motion Downhole Array Data Ning WANG¹⁺⁺, Xiaojun Ll², Yushi WANG¹ ¹China Earthquake Administration, ²Chinese Academy of Sciences

SE24-D3-PM2-323-003 | SE24-A009

Nonlinearity of Surface Geology Effect on Ground Motion Based on Vertical Borehole Array Data Yushi WANG^{1‡+}, Ning WANG¹ ¹China Earthquake Administration

SE24-D3-PM2-323-004 | SE24-A011

Laboratory Tests of Soils on Compression Triaxial Apparatus Askar ZHUSSUPBEKOV^{1#+}, Iliyas ZHUMADILOV¹, Gulzhanat TANYRBERGENOVA¹ ¹L.N. Gumilyov Eurasian National University

SE24-D3-PM2-323-005 | SE24-A012 (Invited)

Using Cross-hole Sonic Logging for Integrity Testing of Concrete Deep Foundations Askar ZHUSSUPBEKOV^{1‡+}, Nurgul SHAKIROVA¹, Gulzhanat TANYRBERGENOVA¹ ¹L.N. Gumilyov Eurasian National University

SE24-D3-PM2-323-006 | SE24-A013

Period-multiplying Cycles as Precursors of Unloading-induced Fault Sliding Cheng MEI¹⁺, Wei WU^{1#} ¹Nanyang Technological University

SE24-D3-PM2-323-007 | SE24-A008

3D Laser Scanning in the Mining Underground Sung-Woo MOON^{1#+}, Sergei NIKITENKO², Yerassyl KOSHAN² ¹Nazarbayev University, ²Geolaser Company

BG Poster Presentations

Wed - 31 Jul, 13:30 - 15:30 | EXHIBITION HALL

BG01-D3-PM1-P-243 | BG01-A006 (Invited)

Spatial and Seasonal Variations of Dissolved Organic Matter and the Fluxes in the Pearl River Estuary, China Guisheng SONG^{1*+} ¹Tianiin University

BG01-D3-PM1-P-247 | BG01-A014

Impact Assessment of Nutrient Flux from Carcass of Pink Salmon to River Water Quality Katsuaki KOMAI^{1s+}, Kazuki YUHARA¹, Shunsuke HIROKI¹, Kei MATSUMOTO¹, Yasuyuki MARUYA² ¹Kitami Institute of Technology, ²Gifu University

BG01-D3-PM1-P-248 | BG01-A017

Ecosystem-scale Methane Fluxes in a Subtropical Mangrove Wetland Jiangong LIU¹, Derrick LAI^{1‡+} ¹The Chinese University of Hong Kong

BG03-D3-PM1-P-249 | BG03-A004

A Metabolomic Analysis on the Effects of Ocean Acidification on a Polar Phytoplankton Chlorella Sp. Yong-Hao TAN¹, Phaik-Eem LIM^{1‡+}, John BEARDALL², Sze Wan POONG¹, Siew Moi PHANG¹ ¹University of Malaya, ²Monash University

BG04-D3-PM1-P-250 | BG04-A001

Influence of Oceanographic Variability on Catch Rate of Yellowfin Tuna (Thunnus Albacares) Cohorts in the Indian Ocean

Kuo-Wei LAN^{1#+}, Yi-Jay CHANG², Yan-Lun WU¹ ¹National Taiwan Ocean University, ²National Taiwan University

BG04-D3-PM1-P-251 | BG04-A004

Remote Estimation of Chlorophyll-a Concentration Across Different Trophic States in Inland Lakes by a Hybrid Algorithm

Wei YANG^{1*+}, Bunkei MATSUSHITA², Akihiko KONDOH¹ ¹Chiba University, ²University of Tsukuba

BG04-D3-PM1-P-252 | BG04-A006

Long-term Variations of Cropland Growing Season Start at a Sub-county Level Using AVHRR NDVI

Hyeon-Ju GIM¹⁺, Chang-Hoi HO^{2#}, Su-Jong JEONG², Jinwon KIM³, Song FENG⁴, Michael HAYES⁵ ¹School of Earth and Environmental Sciences, ²Seoul National

²University, ³Chapman University, ⁴University of Arkansas, ⁵University of Nebraska-Lincoln

BG05-D3-PM1-P-253 | BG05-A002

Precipitation of Calcium Carbonate Mineral Induced by Viral Lysis of Cyanobacteria: Evidence from Laboratory Experiments

Hengchao XU¹⁺, Xiaotong PENG^{1#}, Shijie BAI¹ ¹Chinese Academy of Sciences

BG05-D3-PM1-P-254 | BG05-A003

Intermittent Emission of Deep-sourced Methane-rich Fluid in Gas Hydrate Mounds in the Eastern Slope of the Chukchi Basin, Arctic Ocean

Young-Gyun KIM^{1#+}, Young Keun JIN², Byung-Dal SO¹ ¹Kangwon National University, ²Korea Polar Research Institute

BG05-D3-PM1-P-256 | BG05-A008

Carbon Isotopic Fractionation of a C1-utilizing Methylotroph, Methylobacterium Extorquens Mellinda Aimee JAJALLA^{1‡+}, Alexis GILBERT², Yuichiro UENO²

¹University of the Philippines Diliman, ²Tokyo Institute of Technology

BG06-D3-PM1-P-257 | BG06-A004

Interplay of Trace Elements with Tannic Acid in Shaping Biological Communities of Sundarbans Anwesha GHOSH^{1#+}, Punyasloke BHADURY¹ ¹Indian Institute of Science Education and Research Kolkata

BG06-D3-PM1-P-258 | BG06-A006

Exploring the Health of a Mangrove Ecosystem - Looking Through Trace Metals and Biological Communities Punyasloke BHADURY^{1#+}, Ratul SAHA² ¹Indian Institute of Science Education and Research Kolkata, ²WWF-India Sundarbans Landscape

BG07-D3-PM1-P-259 | BG07-A001

Contrasting Mechanisms Behind Atmospheric CO2 Growth Between Two El Niño Events Masayuki KONDO¹²⁺ ¹Chiba University

BG07-D3-PM1-P-260 | BG07-A007

On Recent Trend of Land Use Change Emissions: Reality or Fallacy? Masayuki KONDO^{1#+} ¹Chiba University

BG07-D3-PM1-P-261 | BG07-A008

Evaluating an Updated Data-driven Terrestrial CO2 Flux Estimation with Other Available Datasets Kazuhito ICHII^{1#+}, Zhiyan LIU¹, Riku KAWASE¹, Masayuki KONDO¹, Masahito UEYAMA² ¹Chiba University, ²Osaka Prefecture University

BG07-D3-PM1-P-262 | BG07-A009 (Invited)

Impact of Heatwave in Summer 2018 on Terrestrial Vegetation Detected by Multiple Satellite-based Products Kazuhito ICHIII^{‡+}, Kazutaka MURAKAMI², Haruki OSHIO², Yukio YOSHIDA²

 $^{\rm 1}{\rm Chiba}$ University, $^{\rm 2}{\rm National}$ Institute for Environmental Studies

BG08-D3-PM1-P-265 | BG08-A005

Arsenic Speciation in Fulvic Acid and Humic Acid from Natural Organic Sediments Using X-ray Absorption Spectroscopy

Junko HARA^{1#+}, Susumu NOROTA², Yoshishige KAWABE¹ ¹National Institute of Advanced Industrial Science and Technology, ²Hokkaido Research Organization

BG08-D3-PM1-P-268 | BG08-A010

Microbial Exopolysaccharide Binding and Removal of Arsenic from Groundwater Arpitha CHIKKANNA^{1,2*+}, Devanita GHOSH² ¹Murdoch University, ²Indian Institute of Science

BG08-D3-PM1-P-270 | BG08-A013

Organic Biomarker Proxies Indicating Effect of Organic Carbon Chemistry on Arsenic Mobilization Devanita GHOSH^{1#+} ¹Indian Institute of Science

BG09-D3-PM1-P-271 | BG09-A008

Fluorescence Analysis of Dissolved Organic Matter Released from Sediment to Water Layer of Han River Haeseong OH¹⁺, Jung Hyun CHOI^{1‡} ¹Ewha Womans University

BG09-D3-PM1-P-272 | BG09-A017

Does Solar Energy Development Benefit or Harm Ecological Functions of Irrigation Pond Ecosystems? Rita S.W. YAM^{1#}, Hsin Hui WANG¹⁺, Wei Ta FANG² ¹National Taiwan University, ²National Taiwan Normal University

BG10-D3-PM1-P-273 | BG10-A001

Post-disaster Recolonization of Mangrove Forests with a Stochastic Agent-based Model

Joseph Earl BRANZUELA^{1#+}, Gabrielle Marie TORRES¹, Vena Pearl BONGOLAN^{1,2}

¹University of the Philippines Diliman, ²ICSU Regional Office for Asia and the Pacific

BG10-D3-PM1-P-274 | BG10-A003

Modelling, Simulation and Visualization of a Multispecific Philippine Seagrass Meadow

Gabrielle Marie TORRES¹, Joseph Earl BRANZUELA¹⁵⁺, Vena Pearl BONGOLAN^{1,2}

¹University of the Philippines Diliman, ²ICSU Regional Office for Asia and the Pacific

BG11-D3-PM1-P-275 | BG11-A005

Sizes Distributions of Proteinoid Microspheres with Different Preparation Conditions Miho SASE^{1*+}, Hajime MITA¹ ¹Fukuoka Institute of Technology

BG11-D3-PM1-P-277 | BG11-A010

The Community Composition of Picoeukaryotes and Their Distribution in the Segment of Subtropical Kuroshio Current Chih-Ching CHUNG^{1‡+}, Ya-Fan CHAN², Gwo-Ching GONG¹, Ching-Wei HSU¹

¹National Taiwan Ocean University, ²Academia Sinica

BG11-D3-PM1-P-279 | BG11-A012

Analysis of Organic Matter in Moor Hot Spring Water Saori MIKURIYA^{1‡+}, Mimu MATSUMOTO¹, Hajime MITA¹ ¹Fukuoka Institute of Technology

BG11-D3-PM1-P-280 | BG11-A013

Nucleotide Synthesis by UV Irradiation and Preliminary Study for Experiment on the International Space Station Madoka SHIROMIZU¹⁵⁺, Kazumichi NAKAGAWA², Yoshitaka BESSHO³, Hajime MITA¹

¹Fukuoka Institute of Technology, ²Kobe University, ³Academia Sinica

BG11-D3-PM1-P-281 | BG11-A015

Transpiration of the Cool Temperate Forest in a Snowy Mountain in Japan Yoshiyuki MIYAZAWA^{1#+}, Kiyoshi ISHIDA²

¹Kyushu University, ²Hirosaki University

BG11-D3-PM1-P-283 | BG11-A021

Flow Structure in Meandering Channel with Vegetation Modalavalasa SURESH^{1#+}, Chandan PRADHAN¹, Subashisa DUTTA¹, Vinayak Narayan KULKARNI¹ ¹Indian Institute of Technology Guwahati

BG11-D3-PM1-P-284 | BG11-A024

Mercury Speciation in Fly Ash, Bottom Ash and Slag from Co-firing: Can it Reduce Hg(0) Emissions? Flora BROCZA^{1‡+}, Bhoopesh MISHRA¹ ¹University of Leeds

AS2 Poster Presentations

Wed - 31 Jul, 13:30 - 15:30 | EXHIBITION HALL

AS02-D3-PM1-P-001 | AS02-A003

Changes in Record-breaking Temperature Events in China and Projections for the Future Hanqing DENG^{1*+} ¹Anhui Climate Center

AS02-D3-PM1-P-003 | AS02-A007

Effects of Warming on the Root Turnover of Peatland During Growth Season in Permafrost Area in Great Xing'an Mountain Hao ZHANG^{1#+}

¹Chinese Academy of Sciences

AS02-D3-PM1-P-006 | AS02-A016

Long-term Trend of the Tropical Pacific Trade Winds Under Global Warming and its Causes

Yang LI¹⁺, Quan-Liang CHEN^{1#}, Xiaoran LIU², Jianping LI³, Nan XING⁴, Fei XEI³, Juan FENG³, Zhou XIN¹, Hong-Ke CAI¹, Zhenglin WANG¹

¹Chengdu University of Information Technology, ²Chongqing Climate Center, ³Beijing Normal University, ⁴Beijing Meteorological Service

AS03-D3-PM1-P-008 | AS03-A001

Interdecadal Shifts in the Winter Monsoon Rainfall of the Philippines

Lyndon Mark OLAGUERA¹⁵⁺, Jun MATSUMOTO^{2,3}, Hisayuki KUBOTA⁴, Tomoshige INOUE¹, Esperanza CAYANAN⁵, Flaviana HILARIO⁵

¹Tokyo Metropolitan University, ²Tokyo Metropolitan University / JAMSTEC, ³Japan Agency for Marine-Earth Science and Technology, ⁴Hokkaido University, ⁵Philippine Atmospheric, Geophysical and Astronomical Services Administration

AS03-D3-PM1-P-009 | AS03-A003

Interannual Variation of Precipitation over the Indochina Peninsula and Relationship to Tropical Indo-pacific SST Anomalies

Yiya YANG^{1,2+}, Renguang WU^{3#} ¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences, ³Zhejiang University

AS03-D3-PM1-P-010 | AS03-A004

A Heat Budget Analysis of Seasonal Variation of the Indo-western Pacific Warm Pool Yuqi WANG¹⁺, Renguang WU^{2‡} ¹Chinese Academy of Sciences, ²Zhejiang University

AS03-D3-PM1-P-011 | AS03-A007

Characteristics of Precipitation Events Spanning Different Numbers of Days over Indo-China Peninsula and Eastern China Ting YOU¹⁺, Renguang WU^{2‡} ¹Chinese Academy of Sciences, ²Zhejiang University

AS03-D3-PM1-P-013 | AS03-A009

Relationship of Different Time Scale Droughts over Asia with SST and Soil Moisture Yanting ZHANG^{1‡+}, Renguang WU² ¹Chinese Academy of Sciences, ²Zhejiang University

AS03-D3-PM1-P-014 | AS03-A012

Formation and Influence of Snow Cover Anomalies over the Tibetan Plateau in Spring Zhibiao WANG¹⁺, Renguang WU^{2#} ¹Chinese Academy of Sciences, ²Zhejiang University

AS03-D3-PM1-P-016 | AS03-A018

Global Monsoon Responses to Precession and Obliquity Forcing Zhaomin DING¹⁺, Fei LIU², Gang HUANG^{1#}, Renguang WU³

¹Chinese Academy of Sciences, ²Nanjing University of Information Science & Technology, ³Zhejiang University

AS03-D3-PM1-P-019 | AS03-A024

The East Asian Monsoon and Tsushima Warm Current-related Annual Cycles of Ocean-atmosphere Heat Exchange in the Seas Around the Korean Peninsula from 2011 to 2016 Daeun YEO¹⁵⁺, Sung-Hyun NAM¹ ¹Seoul National University

AS03-D3-PM1-P-020 | AS03-A027

Weakening of Northwest Pacific Anticyclone Anomalies During Post-El Niño Summers Under Global Warming Wenping JIANG¹⁺, Gang HUANG², Ping HUANG^{2#}, Kaiming HU²

¹Hohai University, ²Chinese Academy of Sciences

AS03-D3-PM1-P-021 | AS03-A030

Correlation Between Meridional Migration of the East Asian Jet Stream and Tropical Convection over Indonesia in Winter Hui YANG¹⁸⁺

¹Chinese Academy of Sciences

AS03-D3-PM1-P-023 | AS03-A039

Evaluation of Atmospheric General Circulation Models over the Asian Summer Monsoon Region in the Coupled Model Intercomparison Project 5 Experiments

Prasanna VENKATRAMAN^{1#+}, Jaiho OH², Ramesh KRIPALANI^{2,3}, Bhaskar PREETHI³, Sumin WOO², Inwon KIM² ¹Meteorological Service Singapore, ²Pukyong National University, ³Indian Institute of Tropical Meteorology

AS03-D3-PM1-P-027 | AS03-A053

Effect of the Tropical Pacific and Indian Ocean Warming Since the Late 1970s on Wintertime Northern Hemispheric Atmospheric Circulation and East Asian Climate Interdecadal Changes

Cuijiao CHU^{1#+} ¹Nanjing University

AS03-D3-PM1-P-028 | AS03-A059

Interdecadal Connections Between the Surface Temperature over the Arctic and the Summer Monsoon Precipitation over China

Yuefeng LI^{1*+}, L. Ruby LEUNG² ¹China Meteorological Administration Training Center, ²Pacific Northwest National Laboratory

AS04-D3-PM1-P-029 | AS04-A001

The Influence of Tibetan Plateau Thermal Anomaly on Low Frequency Activity in Bay of Bengal Ziniu XIAO^{1#}, Xichun YANG²⁺ ¹Chinese Academy of Sciences, ²Beijing Rainymet Technology Co. Ltd.

AS04-D3-PM1-P-030 | AS04-A004

A More Stable Atmosphere Under Global Warming Accelerates the Hydrological Cycle of MJO Qiao-Jun LIN^{1#+}, Jia-Yuh YU¹ ¹National Central University

AS04-D3-PM1-P-031 | AS04-A010

Impacts of the Madden-Julian Oscillation on the North Atlantic Oscillation Xiaolu SHAO¹⁺, Jie SONG^{2#}, Shuanglin LI^{2,3} ¹Hohai University, ²Chinese Academy of Sciences, ³China University of Geosciences

AS04-D3-PM1-P-033 | AS04-A014

Modulation of the Madden-Julian Oscillation on the Energetics of Wintertime Synoptic-scale Disturbances Lu WANG¹⁺⁺, Tim Ll², Lin CHEN¹ ¹Nanjing University of Information Science & Technology, ²University of Hawaii

AS04-D3-PM1-P-034 | AS04-A021

Application of Dual-radar Retrievalwind Mosaics in Detailed Heavy Rainfall Forecast Produced by a Landfall Typhoon Yehong WANG^{1#+}, Yuchun ZHAO¹ ¹Xiamen Meteorological Bureau

AS04-D3-PM1-P-035 | AS04-A022

Barrier Effect on MJO Propagation by the Maritime Continent in the MJOTF/GASS Models Jian LING^{1\$+} ¹Chinese Academy of Sciences

AS05-D3-PM1-P-038 | AS05-A005

Causes of a Continuous Low-level Wind Shear at Hefei Airport in 2017

Houfu ZHOU^{1‡+}, Naichao SHAN², Shaoqing CHEN², Qian ZHAO¹

¹Anhui Institute of Meteorological Sciences, ²Meteorological Observatory of Anhui Air Traffic Control Branch

AS05-D3-PM1-P-041 | AS05-A014

Triggering Mechanism and Precipitation Characteristics of Landing Typhoon Matmo (2014) Rainbands Peijun ZHU^{1&+}, Liu WENTING² ¹Zhejiang University, ²Hubei Meteorological Cente

AS05-D3-PM1-P-042 | AS05-A018

Quantitative Analysis of Snow Crystals Using a Multi-angle Snowflake Camera (MASC) in the Yeongdong Region of Korea

Suhyun KIM¹⁺+, Byung-Gon KIM¹, Seung-Hee EUN¹, Baek-Jo KIM²

¹Gangneung-Wonju National University, ²National Institute of Meteorological Research

AS05-D3-PM1-P-044 | AS05-A024

Regional Distribution of Summertime Heavy Rainfall According to Representative Weather Pattern in Seoul, Korea Woosuk CHOI^{1#+}

¹Seoul Institute of Technology

AS05-D3-PM1-P-045 | AS05-A025

Environment and Processes for Heavy Rainfall in the Early Morning over the Korean Peninsula During Episodes of Cloud Clusters Associated with Mesoscale Troughs Uju SHIN¹⁵⁺, Tae-Young LEE¹, Sang-Hun PARK¹ ¹Yonsei University

AS05-D3-PM1-P-046 | AS05-A026

Sensitivity of Cumulus Parameterization Schemes to Simulations of Heavy Rainfall Event over the Korean Peninsula Haerin PARK¹⁺, Dong-Hyun CHA^{1‡} ¹Ulsan National Institute of Science and Technology

AS08-D3-PM1-P-051 | AS08-A001

Link of Extreme Hourly Precipitation Changes to Urbanization over Coastal South China: Observational Analysis and Modeling Study

Mengwen WU¹⁺, Yali LUO^{1‡}, Fei CHEN² ¹Chinese Academy of Meteorological Sciences, ²National Center for Atmospheric Research

AS08-D3-PM1-P-052 | AS08-A002

Statistical Characteristics of Presummer Rainfall over South China and Associated Synoptic Conditions

Zhenghui LI¹⁺, Yali LUO^{1‡}, Yangruixue CHEN² ¹Chinese Academy of Meteorological Sciences, ²China Meteorological Administration

AS08-D3-PM1-P-054 | AS08-A006

BMA Probabilistic Precipitation Forecasting over East Asia Using TIGGE Multimodel Ensemble Forecasts Luying JI^{1#+}, Xiefei ZHI¹, Shoupeng ZHU¹ ¹Nanjing University of Information Science & Technology

AS08-D3-PM1-P-055 | AS08-A008

Classify Radar Echoes into Stratiform and Convective Using a Machine Learning Algorithm Zhida YANG¹⁵⁺, Yi YANG¹ ¹Lanzhou University

AS08-D3-PM1-P-056 | AS08-A009

Evaluation of Cloud Microphysical Schemes for Heavy Precipitation Prediction over Central Mongolia Ganbold BOLDBAATAR¹⁺, Jambajamts LKHAMJAV^{1#}, Otgonsuren SHAR¹ ¹National University of Mongolia

AS08-D3-PM1-P-057 | AS08-A010

Quantitative Precipitation Forecasts: Model Output Statistics Based on a Deep Convolutional Neural Network Yan JI^{1#+}, Ting PENG¹, Luying JI¹, Xiefei ZHI¹ ¹Nanjing University of Information Science & Technology

AS08-D3-PM1-P-059 | AS08-A014

Flood Disaster Assessment Under Climate Change in Taichung City, Taiwan

Yi-Hua HSIAO^{1,‡+}, Yi-Chiung CHAO¹, Lun-Tsun CHEN², Chih-Tsung HSU², Chao-Tzuen CHENG¹, Keh-Chia YEH³, Hsinchi LI¹

¹National Science and Technology Center for Disaster Reduction, ²National Center for High-Performance Computing, ³National Chiao Tung University

AS08-D3-PM1-P-060 | AS08-A022

On Observational Aspects of a Tropical Extreme Rainfall Event

Unnikrishnan CHIRIKANDATH KALATH^{1#+}, Dharmadas JASH², Sumesh R.K², Resmi E.A², Ramachandran K.K² ¹National Centre for Earth Science Studies,, ²National Centre for Earth Science Studies

AS08-D3-PM1-P-061 | AS08-A024

Numerical Simulations of Heavy Rainfall and Streamflow over Davao City, Philippines: A Baseline Study for the Development of a Hydro-meteorological Flood Forecasting System

Ma. Cathrene LAGARE^{1#+}, Rochelle CORONEL¹ ¹Ateneo de Davao University

AS13-D3-PM1-P-062 | AS13-A002

Middle Atmosphere Ionization from Particle Precipitation as Observed by the SSUSI Satellite Instruments Stefan BENDER^{1#+}, Patrick ESPY^{1,2}

¹Norwegian University of Science and Technology, ²University of Bergen

AS13-D3-PM1-P-063 | AS13-A003

Microwave Radiometer Observations of Mesospheric Ozone Loss over Antarctica Associated with Particle Precipitation Patrick ESPY^{1,2#+}, Stefan BENDER¹, Elise KNUTSEN¹ ¹Norwegian University of Science and Technology, ²University of Bergen

AS13-D3-PM1-P-064 | AS13-A011

Multistatic Meteor Radar Observations of Gravity-wave-tidal Interaction over Southern Australia Andrew SPARGO¹[‡], Iain REID^{1,2}, Andrew MACKINNON¹, Bronwyn DOLMAN²⁺

¹University of Adelaide, ²ATRAD Pty Ltd

AS13-D3-PM1-P-065 | AS13-A012

An Investigation of Planetary Wave and Tidal Interaction in the MLT at 60°N Using SuperDARN and NAVGEM-HA Willem VAN CASPEL^{1#+}, Patrick ESPY^{1,2}, Robert HIBBINS^{1,2}, John MCCORMACK³ ¹Norwegian University of Science and Technology, ²University of Bergen, ³Naval Research Laboratory

AS13-D3-PM1-P-067 | AS13-A023

The Simultaneously Existence of Mountain Waves and Inertia Waves Observed by a Rayleigh Doppler Wind Lidar Ruocan ZHAO^{1*+}, Dongsong SUN¹, Xianghui XUE¹, Chong CHEN¹, Xiankang DOU¹ ¹University of Science and Technology of China

AS14-D3-PM1-P-068 | AS14-A001

The Application of Barnes Filter on Positioning the Center of Landed Tropical Cyclone in Numerical Simulation Haibo ZOU¹⁺, Shanshan WU²⁺

¹Meteorological Sciences Institute of Jiangxi Province, ²Meteorological Disaster Emergency Warning Center of Jiangxi

AS14-D3-PM1-P-071 | AS14-A015

The Impact of Horizontal Diffusion Parameterization on Typhoon Morakot (2009) Structure and Intensity Yi ZHANG¹⁺⁺ ¹Nanjing University

AS14-D3-PM1-P-075 | AS14-A033

The Remote Effect of Typhoon Khanun (2017) on the Heavy Rainfall over Eastern Taiwan – Evaluation of Uncertainty Based on Ensembles Simulations Yi-Hsuan LIN¹⁺, Chun-Chieh WU^{1‡} ¹National Taiwan University

AS14-D3-PM1-P-076 | AS14-A034

Impact of Cloud Microphysics Schemes on Typhoon Forecast over the Western North Pacific Jinyoung PARK¹⁺, Minkyu LEE¹, Jihong MOON¹, Dong-Hyun CHA¹⁺ ¹Ulsan National Institute of Science and Technology

AS14-D3-PM1-P-077 | AS14-A035

Taiwan Typhoon Rainfall Change Under Global Warming in HiRAM and MRI Models

Hsin-Yu CHIANG^{1‡+}, Chao-Tzuen CHENG¹, Chia-Ying TU², Huang-Hsiung HSU², Akio KITOH³

¹National Science and Technology Center for Disaster Reduction, ²Academia Sinica, ³Japan Meteorological Business Support Center

Day 03 - 31 Jul, Wed

AS14-D3-PM1-P-078 | AS14-A036

The Importance of Moisture in Tropical Cyclone Core Region Leads to TC Intensity Uncertainty Growth Thi Hoan NGUYEN¹⁺, Shu-Chih YANG^{1#}, Kuan-Jen LIN¹, Yileng CHEN², Hiep NGUYEN³ ¹National Central University, ²University of Hawaii at Manoa, ³Vietnam Academy of Science and Technology

AS14-D3-PM1-P-079 | AS14-A041

Improving Performance of Typhoon Track Prediction over the Western North Pacific Using Machine Learning Kyoung Min KIM^{1#+}, Dong-Hyun CHA¹, Tae Ho MUN¹, YiJune PARK¹

¹Ulsan National Institute of Science and Technology

AS14-D3-PM1-P-081 | AS14-A049

Autumn Tropical Cyclones over Western North Pacific During 1949-2016: A Statistical Study Xiuping YAO^{1#+}, Dajun ZHAO², Ying LI³ ¹China Meteorological Administration Training Centre, ²Chinese

Academy of Meteorological Sciences, ³National Climate Center

AS15-D3-PM1-P-083 | AS15-A003

Study of Reactive Nitrogen Species in an Indoor Household in Delhi (India) Ankita KATOCH^{1‡+}, U.C. KULSHRESTHA¹ ¹Jawaharlal Nehru University

AS15-D3-PM1-P-084 | AS15-A009

The Thermal Environment of the Hanshin Area Brought by Thermal Local Circulation of the Rokko Mountains Yoshinori SHIGETA^{1#+}, Yuki OGIHARA² ¹Tottori University of Environmental Studies, ²Graduate School Tottori University of Environmental Studies

AS15-D3-PM1-P-085 | AS15-A010

Verification of Thermal Environments and Temperature Reduction Effects in the Kumamoto Castle Park Using WBGT Yoshinori SHIGETA^{1**}, Megumi SAKO¹ ¹Tottori University of Environmental Studies

AS15-D3-PM1-P-087 | AS15-A013

Comparing the Diurnal and Seasonal Variabilities of Atmospheric and Surface Urban Heat Islands Based on the Beijing Urban Meteorological Network Shaojing JIANG¹⁺, Jizeng DU^{1‡} ¹Beijing Normal University

AS15-D3-PM1-P-089 | AS15-A017

Theoretical Urban Heat Island Circulation in the Temperature Inversion Profile Yao-Kun LI^{1s+}, Jiping CHAO²

¹Beijing Normal University, ²National Marine Environmental Forecasting Center

AS17-D3-PM1-P-090 | AS17-A002

Episode Study of Fine Particle and Ozone During the CAPUM-YRD over Yangtze River Delta, Eastern China: Characteristics and Source Attribution Lei SHU^{1#+}, Tijian WANG¹ ¹Nanjing University

AS17-D3-PM1-P-091 | AS17-A003

Surface Ozone Pollution and its Association with Synoptic Weather Patterns in the Yangtze River Delta Region, China Gao DA¹⁺, Min XIE^{1‡} ¹Nanjing University

AS17-D3-PM1-P-092 | AS17-A009

Role of Heterogeneous Chemistry and Regional Transport in Two Wintertime Extreme Haze Episodes in the Yangtze River Delta Region of China

Mengmeng LI¹⁺, Tijian WANG^{1‡}, Bingliang ZHUANG² ¹Nanjing University, ²School of Atmospheric Sciences, Nanjing University

AS17-D3-PM1-P-093 | AS17-A011

Source Apportionment of Tropospheric Ozone in YRD Using an Improved Three-regime O3 Source Apportionment Technique Jianlin HU^{1#+}, Qi YING² ¹Nanjing University of Information Science & Technology, ²Texas A&M University

AS17-D3-PM1-P-094 | AS17-A013

Exploring the Influence of Two Inventories on Simulated Air Pollutants During Winter over the Yangtze River Delta Tong SHA^{1±+}, Xiaoyan MA¹ ¹Nanjing University of Information Science & Technology

AS17-D3-PM1-P-095 | AS17-A014

Inter-annual Variability of PM2.5 Concentrations over East Asia Associated with Climate Connections Jaein JEONG^{1‡+}, Rokjin J. PARK¹, Sang-Wook YEH², Chang-Keun SONG³, Joon-Woo ROH¹ ¹Seoul National University, ²Hanyang University, ³Ulsan National Institute of Science and Technology

AS17-D3-PM1-P-096 | AS17-A015

Modeling Particulate Matter and Ozone in the 18 Cities of Sichuan Basin, Southwestern China Hongliang ZHANG^{1*+}, Qiao XUE², Hao GUO³, Pengfei WANG³, Ya TANG², Qi YING⁴, Wenye DENG⁵ ¹Fudan University, ²Sichuan University, ³Louisiana State University, ⁴Texas A&M University, ⁵Xinjiang Academy of Environmental Protection Science

AS17-D3-PM1-P-097 | AS17-A016

Comparison of CH4 Derived from g-b FTS and GOSAT and Evaluation Using Aircraft In-situ Observations over TCCON Site

Young-Suk OH^{1#+}, Samuel Takele KENEA¹ ¹National Institute of Meteorological Sciences

AS17-D3-PM1-P-098 | AS17-A017

Assessment of the Performance of the PV Cells Affected by the Optical Properties of PM2.5 - Asian Dust and Haze Episodes at Seoul in 2013 Jiyeon CHOI¹⁺, Daehyun WEE^{1#} ¹Ewha Womans University

AS17-D3-PM1-P-099 | AS17-A024

Meteorological Influences on Seasonal Variations of Air Pollutants (SO2, NO2, O3, CO, PM2.5 and PM10) in Dhaka City Mir Md. Mozammal HOQUE^{1#+}

¹Mawlana Bhashani Science and Technology University

AS17-D3-PM1-P-100 | AS17-A026

Source Apportionment of Size-segregated Atmospheric Particles and the Influence of Particles Deposition in the Human Respiratory Tract in Five Locations in Assam, India Rajyalakshmi GARAGA¹, Sri KOTA^{2#+}

¹Indian Institute of Technology Guwahati, ²Indian Institute of Technology Delhi

AS17-D3-PM1-P-101 | AS17-A030

Effects of Emission Reduction on Air Pollution in India Hao GUO¹⁺, Sri KOTA², Hongliang ZHANG^{1#} ¹Louisiana State University, ²Indian Institute of Technology Delhi

AS17-D3-PM1-P-102 | AS17-A031

Evaluation of the Health Impact of Air Quality in Major Chinese Cities Using an Air Quality Index Based on Environmental Epidemiology Tingting LIAO^{1±+} ¹Chengdu University of Information Technology

AS19-D3-PM1-P-104 | AS19-A004

Study of Annual AOD Variation Using Aerosol Type Separation After 2000 in Northeast Asia Using Aeronet Data So Hee JOO¹⁺, Youngmin NOH^{1#} ¹Pukyong National University

AS19-D3-PM1-P-105 | AS19-A005

Black Carbon AOD Retrieval in Beijing Using Depolarization Ratio of AERONET Data Youngmin NOH^{1#+}, So Hee JOO¹ ¹Pukyong National University

AS19-D3-PM1-P-106 | AS19-A006

Statistical Analysis of Radar Variables and Particle Size Distributions for Volcanic Ash Clouds Using X-band Dual-polarimetric Radar

Sung-Ho $SUH^{1*},$ Dong-In $LEE^{1\sharp},$ Masayuki $MAKI^2,$ Masato $IGUCHI^3$

¹Pukyong National University, ²Kagoshima University, ³Kyoto University

AS19-D3-PM1-P-108 | AS19-A011

Observationally Constrained Analysis of Aerosols over the Pacific Ocean

Huisheng BIAN¹⁵⁺, Pedro CAMPUZANO-JOST², Mian CHIN³, Peter COLARCO⁴, Anton DARMENOV³, Karl FROYD⁵, Alma HODZIC⁶, Jose-Luis JIMENEZ², Daniel MURPHY⁵, Gregory SCHILL⁵, Hongbin YU³

¹University of Maryland Baltimore County, ²University of Colorado, Boulder, ³NASA Goddard Space Flight Center, ⁴National Aeronautics and Space Administration, ⁵National Oceanic and Atmospheric Administration, ⁶National Center for Atmospheric Research

AS19-D3-PM1-P-109 | AS19-A012

The Long Trend of Dust Events in Central Asia and Their Relationship to Wind and Precipitation During 1960-2015 $\rm Jing\ SU^{1\sharp+}$

¹Lanzhou University

AS19-D3-PM1-P-110 | AS19-A013

Effects of Aerosols on Ozone Considering its Precursors in the Summertime in Shanghai, China Qiong LIU¹⁺, Yonghang CHEN^{1#} ¹Donghua University

AS19-D3-PM1-P-111 | AS19-A017

A Study on the Incidence and AOD Ratio of Asian Dust with Multi-wavelength Aerosol Depolarization Raman Lidar in Gwangju, Korea During DRAGON

So Hee JOO¹⁺, Youngmin NOH¹⁺, Dongho SHIN² ¹Pukyong National University, ²Sejong Special Self-Governing City

AS19-D3-PM1-P-112 | AS19-A018

Development of a Technique for Calculating the Ratio of Backscatter Coefficient to Aerosol Type Using Lidar Data So Hee JOO¹⁺, Youngmin NOH^{1‡}

¹Pukyong National University

AS19-D3-PM1-P-113 | AS19-A019

Retrieval and Parameterization of Mineral Dust Mass Extinction Coefficient Based on Sun-photometer Measurements Tianhe WANG^{1±+}, Hanyang QIAO¹ ¹Lanzhou University

AS21-D3-PM1-P-114 | AS21-A003

Climatology of Cloud-base and Cloud-top Height from a Ground-based Cloud Radar Observations over Beijing, China Qing ZHOU¹⁺, Yong ZHANG^{1#} ¹China Meteorological Administration

AS21-D3-PM1-P-116 | AS21-A012

An Optical Property Database for Black Carbon Aggregates Chao LIU^{1#+}, Yan YIN¹, Martin SCHNAITER², Yuk YUNG³ ¹Nanjing University of Information Science & Technology, ²Karlsruhe Institute of Technology, ³California Institute of Technology

AS21-D3-PM1-P-117 | AS21-A014

Characteristics of Aerosol-weather Interactions During the Hazes Events in Korea Sung-Min PARK¹⁺, Seung-Hee EUN¹, Byung-Gon KIM^{1‡}, Jin-Soo PARK² ¹Gangneung-Wonju National University, ²National Institute of Environmental Research

AS21-D3-PM1-P-118 | AS21-A015

Effects of Black Carbon and Boundary Layer Interaction on Surface Ozone in Nanjing, China Jinhui GAO^{1±+} ¹Southern University of Science and Technology

AS21-D3-PM1-P-121 | AS21-A024

Impacts of Aerosol Pollution on Urban-heat-island Intensity in the Beijing–Tianjin–Hebei Region, China Yuanjian YANG¹⁺, Steve YIM¹, Zuofang ZHENG^{2#} ¹The Chinese University of Hong Kong, ²China Meteorological Administration

AS21-D3-PM1-P-122 | AS21-A025

Characterization and Analysis of Hot and Polluted Events in the Pearl River Delta Region Using WRF Model Ifeanyinchukwu NDUKA^{1#+}, Steve YIM¹ ¹The Chinese University of Hong Kong

AS21-D3-PM1-P-124 | AS21-A030

An Evaluation of Different Microphysics Schemes for Aerosol-precipitation Interactions in the Mid-Korean Peninsula

Seung-Hee EUN^{1#+}, Byung-Gon KIM¹, Sung-Min PARK¹ ¹Gangneung-Wonju National University

AS21-D3-PM1-P-125 | AS21-A032

Background Characteristics of Atmospheric CO2 and the Potential Source Regions at Pearl River Delta (PRD), China Boru $MAI^{I^{\sharp+}}$

¹China Meteorological Administration

AS22-D3-PM1-P-126 | AS22-A003

Responses of Zonal Wind over Mid-latitude to Stratospheric Sudden Warming Events in the Middle Atmosphere Junfeng YANG^{1#+}

¹Chinese Academy of Sciences

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AS22-D3-PM1-P-128 | AS22-A008

The Different Influences on "Wave Turbopause" Exerted by Gravity Waves and Planetary Waves

Wei GE¹⁺, Zheng SHENG^{2#}, BoJiang YANG³, Ju WANG³, WeiLai SHI³, Xiao Cun SHU⁴

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AS22-D3-PM1-P-129 | AS22-A019

Correction of the Density at Middle Atmosphere (20-100km) of NRLMSISE-00 Based on TIMED/SABER Density Data Xuan CHENG^{1*+}, Junfeng YANG¹, Cunying XIAO¹, Xiong HU¹ ¹Chinese Academy of Sciences

AS22-D3-PM1-P-130 | AS22-A024

Sources of Inertia-gravity Waves Revealed in the Radiosonde Observation at Jang Bogo Station (JBS), Antarctica Ji-Hee YOO¹⁺, Hye-Yeong CHUN^{1‡}, In-Sun SONG², Byeong-Gwon SONG² ¹Yonsei University, ²Korea Polar Research Institute

AS22-D3-PM1-P-131 | AS22-A025

Tendency Equation for Lapse-rate-tropopause Heights Masashi KOHMA^{1#+}, Kaoru SATO¹ ¹*The University of Tokyo*

AS22-D3-PM1-P-133 | AS22-A031

A New Technology to Study on Small Scale Variation of Near Space Atmospheric Environment During Solar Storms Song LIANG^{1#+}, Xiong HU¹, Wei FENG¹, Yan ZHAOAI¹ ¹Chinese Academy of Sciences

AS22-D3-PM1-P-134 | AS22-A038

The Profile of HCl from the Stratosphere to the Lower Thermosphere Observed by Superconducting Submillimeter-wave Limb-emission Sounder (SMILES) Seidai NARA^{1,2#+}, Takayoshi YAMADA¹, Kaley WALKER³, Nario KUNO², Yasuko KASAI¹ ¹National Institute of Information and Communications Technology, ²University of Tsukuba, ³University of Toronto

AS22-D3-PM1-P-135 | AS22-A039

Gravity Waves in the Stratosphere Observed by a Mobile Doppler Wind and Temperature Lidar Yan ZHAOAI^{1‡+}

¹Chinese Academy of Sciences

AS22-D3-PM1-P-136 | AS22-A041

Measuring the Three-dimensional Structure of Gravity Waves by Lidar Wenjie GUO^{1#+}, Yan ZHAOAI¹ ¹Chinese Academy of Sciences

AS26-D3-PM1-P-137 | AS26-A002

Comparison of Statistical Downscaling and Bias-correction Methods for Current Estimation and Future Projection of Multi Agro-climatic Elements over Japan

Motoki NISHIMORI^{1#+}, Nobuhiko ENDO¹, Koji DAIRAKU² ¹National Agriculture and Food Research Organization, ²National Research Institute for Earth Science and Disaster Resilience

AS26-D3-PM1-P-138 | AS26-A004

The Added Value of Very High Resolution Simulation over South Korea Using WRF Liying QIU¹⁺, Eun-Soon IM^{1#} ¹The Hong Kong University of Science and Technology

AS26-D3-PM1-P-139 | AS26-A008

Extreme Winds in the Long-term High-resolution Reproduction Dataset CRIEPI-RCM-Era2 Yoshikazu KITANO^{1#+}, Yasuo HATTORI¹, Atsushi HASHIMOTO¹, Hiromaru HIRAKUCHI¹ ¹Central Research Institute of Electric Power Industry

AS26-D3-PM1-P-140 | AS26-A009

High-resolution WRF Simulation of a Heat Wave Event in Kansas City and Sensitivities to Physical Parameterizations Fengpeng SUN^{1F+} ¹University of Missouri - Kansas City

AS26-D3-PM1-P-141 | AS26-A019

Sensitivity of Summer Precipitation over Korea to the Convective Parameterizations in the RegCM 4.6: Updated Assessment Thanh NGUYEN-XUAN^{1\$*}, Eun-Soon IM¹

The Hong Kong University of Science and Technology

AS26-D3-PM1-P-142 | AS26-A023

Configuration of RegCM4 over CORDEX South East Asia Domain

Zhengqi WANG¹⁺, Jia WU², Zhenyu HAN², Xuejie GAO^{1#} ¹Chinese Academy of Sciences, ²China Meteorological Administration

AS26-D3-PM1-P-143 | AS26-A024

Hydroclimatic Intensity Changes over East Asia Based on MME Regional Projections

Ga-Yeong SEO¹⁺, Yeon-Woo CHOI¹, Eun-Soon IM², Joong-Bae AHN¹⁺, Myoung-Seok SUH³, Dong-Hyun CHA⁴, Seung-Ki MIN⁵ ¹Pusan National University, ²The Hong Kong University of Science and Technology, ³Kongju National University, ⁴Ulsan National Institute of Science and Technology, ⁵Pohang University of Science and Technology

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Changes in Rice Productions in the Korean Peninsula Under RCP Scenarios Using Multi-GCM and Multi-RCM Ensemble Young Hyun KIM¹⁺, Joong-Bae AHN¹⁺, Myoung-Seok SUH², Dong-Hyun CHA³, Seung-Ki MIN⁴

¹Pusan National University, ²Kongju National University, ³Ulsan National Institute of Science and Technology, ⁴Pohang University of Science and Technology

AS27-D3-PM1-P-145 | AS27-A003

Mechanisms of Orographically Enhanced Precipitation Associated with Typhoon Meari (2011) over Mt. Da-Tun Syuan-Ping CHEN^{1#+}, Cheng-Ku YU¹, Lin-Wen CHENG¹, Olivier BOUSQUET² ¹National Taiwan University, ²Meteo-France

AS27-D3-PM1-P-146 | AS27-A005

Characteristics of Sea Breeze in Yeongdong Region of Korea for 2008 - 2018 Hyewon HWANG^{1\$+}, Byung-Gon KIM¹, Seung-Hee EUN¹ ¹Gangneung-Wonju National University

AS27-D3-PM1-P-147 | AS27-A010

Effects of Changes in the Tibetan Plateau Positions on Summer Climate Junbin WANG^{1#+}, Song YANG¹, Zhenning LI¹ ¹Sun Yat-sen University

AS27-D3-PM1-P-148 | AS27-A012

Idealized Numerical Simulations of Orographic Precipitation to the Easterly Flow in the Eastern Coastal Region in Korea Ji Won YOON^{1#+}, Seon Ki PARK¹, Sojung PARK¹, Seung Yeon LEE¹ ¹Ewha Womans University

AS27-D3-PM1-P-149 | AS27-A013

Synoptic-climatological Analyses and High-resolution Simulation of the Easterly-related Weather Systems over the East Coast of South Korea Seung Yeon LEE¹⁺, Sojung PARK¹, Ebony LEE¹, Ji Won YOON¹, Seon Ki PARK^{1‡}

¹Ewha Womans University

AS27-D3-PM1-P-150 | AS27-A016

Roles of Interactions of Typhoon Nesat (2017) and Haitang (2017) and Topographic Effects in the Formation and Structure of Outer Tropical Cyclone Rainbands Yu-Rui HUANG^{1‡+}, Cheng-Ku YU¹ ¹National Taiwan University

AS27-D3-PM1-P-151 | AS27-A020

Upstream Influences of Topography on Precipitation Associated with Landfalling Fronts: A Review Cheng-Ku YU¹⁺⁺, Jia-Cheng SYU² ¹National Taiwan University, ²Central Weather Bureau

AS27-D3-PM1-P-152 | AS27-A021

Orographic Enhancement of Precipitation Associated with Typhoons over Southwestern Taiwan

Jia-Cheng SYU^{1#+}, Cheng-Ku YU², Lin-Wen CHENG², Che-Yu LIN²

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AS28-D3-PM1-P-153 | AS28-A001

Case Study of Sea Fog Predictability for an Event with Cold-front Synoptic Pattern Huiqin HU^{1,2#+}

¹Qingdao National Laboratory for Marine Science and Technology Development Centre, ²Ocean University of China

AS28-D3-PM1-P-154 | AS28-A007

Diurnal Cycle over a Coastal Area of the Maritime Continent as Derived by Special Networked Soundings over Jakarta During HARIMAU2010

Masaki KATSUMATA^{1#+}, Shuichi MORI¹, Jun-Ichi HAMADA², Miki HATTORI¹, Fadli SYAMSUDIN³, Manabu D. YAMANAKA^{4,5}

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AS28-D3-PM1-P-155 | AS28-A009

A Novel Way to Determine the Local Onset and Retreat of the Monsoon and Inter-monsoon Seasons Using Daily Weather Regime Classifications: A Singapore Case Study

Yujia HE¹, Muhammad Eeqmal HASSIM^{2#+}, Bertrand TIMBAL³ ¹The University of Manchester, ²Centre for Climate Research Singapore, Meteorological Service Singapore, ³National Environment Agency

AS28-D3-PM1-P-156 | AS28-A010

Was the Singapore January 2018 Cold Spell Record-breaking? Junhua YANG^{1#+}, Peiyun TEO², Bertrand TIMBAL³ ¹Meteorological Service Singapore, ²National University of Singapore,

³National Environment Agency

AS28-D3-PM1-P-157 | AS28-A012

Evaluation of WRF Cumulus Parameterization Scheme in High Resolution Simulations of Rainfall and Temperature over Peninsular Malaysia Abdul Azim AMIRUDIN¹⁵⁺, Ester SALIMUN¹, Fredolin

TANGANG^{1,2}, Ju Neng LIEW¹

¹National University of Malaysia, ²Ramkhamhaeng University

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SINGV Model Performance over the Maritime Continent and the Singapore Domain from One Month Climate Run Prasanna VENKATRAMAN^{1#+}, Bertrand TIMBAL², Anurag DIPANKAR¹, Muhammad Eeqmal HASSIM³, Boon Chong Peter HENG¹, Joshua QIAN¹

¹Meteorological Service Singapore, ²National Environment Agency, ³Centre for Climate Research Singapore, Meteorological Service Singapore

AS28-D3-PM1-P-159 | AS28-A017

Air-sea Interaction During the Short-term Ocean Hot Events Huiling QIN^{1#+}, Guixing CHEN¹ ¹Sun Yat-sen University

AS28-D3-PM1-P-160 | AS28-A021

Using GPS-derived Precipitable Water to Monitor Meteorological Events in Singapore Nathanael WONG^{1#+}, Lujia FENG¹, Emma HILL¹ ¹Nanyang Technological University

AS28-D3-PM1-P-161 | AS28-A025

Analysis of Drought Potential in Yogyakarta as Impact From Climate Change Based on Standard Precipitation Index (SPI) , Sinta BERLIANA^{1‡+}, Amalia NURLATIFAH¹, Indah SUSANTI¹, Bambang SISWANTO¹, Fanny ADITYA PUTRI¹, Martono MARTONO¹, Halimurrahman HALIMURRAHMAN¹, Edy MARYADI¹

¹National Institute of Aeronautics and Space

AS28-D3-PM1-P-162 | AS28-A027

Bias Correction of Surface Wind Speed Prediction by Using the Decaying Average Algorithm Yi-Ju CHEN^{1#+}, Jing-Shan HONG¹ ¹Central Weather Bureau

AS29-D3-PM1-P-163 | AS29-A005

Analysis of the Entrainment-mixing Processes in Cumulus Clouds over the Tibetan Plateau

Shi LUO¹⁺, Chunsong LU¹⁺, Yangang LIU², Janchun BIAN³, Wenhua GAO⁴, Xiaoqi XU¹, Sinan GAO¹, Suying YANG¹, Xiaohao GUO⁵

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AS29-D3-PM1-P-164 | AS29-A006

Subgrid Precipitation of Mesoscale Atmospheric Systems as Represented by MODIS Cloud Regimes Jackson TAN¹⁵⁺, Lazaros OREOPOULOS²

¹Universities Space Research Association, ²NASA Goddard Space Flight Center

AS29-D3-PM1-P-165 | AS29-A007

Aircraft-based Study of Aerosol-cloud Interaction in Hebei, China Chuanfeng ZHAO^{1#+} ¹Beijing Normal University

AS29-D3-PM1-P-166 | AS29-A008

Development of Cloud Image Velocimetry Based on Stereo Vision Makoto NAKAYOSHI^{1#+}, Yusuke TAKASE¹, Masakazu

TAKANO¹ ¹Tokyo University of Science

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Formulation of a Physically-based Convective Adjustment Time-scale: Impact on Climate Simulations over the Maritime Continent

Raju PATHAK^{1*+}, Sandeep SAHANY¹, Saroj Kanta MISHRA¹ ¹Indian Institute of Technology Delhi

AS33-D3-PM1-P-168 | AS33-A001

Coupling of the Quasi-biweekly Oscillation of the Tibetan Plateau Summer Monsoon with the Arctic Oscillation Meirong WANG¹⁷⁺

¹Nanjing University of Information Science & Technology

AS33-D3-PM1-P-169 | AS33-A008

Effects of the Tibetan Plateau on Atmospheric Transient Eddies and Their Link to East Asian Summer Rainfall Ren QIAOLING¹⁺, Song YANG^{1#}, Xingwen JIANG², Zhenning LI¹

¹Sun Yat-sen University, ²China Meteorological Administration

AS33-D3-PM1-P-170 | AS33-A009

Process-based Attribution of Long-term Surface Warming over the Tibetan Plateau Yuting WU¹⁺, Song YANG^{1#}, Xiaoming HU¹ ¹Sun Yat-sen University

AS33-D3-PM1-P-171 | AS33-A016

Modeling the Influences of Topography on the Weather and Climate of South-west China Kalli FURTADO^{1#+}, Paul FIELD¹, Puxi LI², Tianjun ZHOU² ¹Met Office, ²Chinese Academy of Sciences

AS33-D3-PM1-P-175 | AS33-A021

Intraseasonal Variability of Rainfall and its Effect on Interannual Variability Across the Indian Subcontinent and the Tibetan Plateau Xingwen JIANG^{1#+}, Mingfang TING² ¹China Meteorological Administration, ²Columbia University

AS34-D3-PM1-P-177 | AS34-A002

Clear Air Turbulence over the North Pacific in a 2-degree Warming Climate – Ensemble Projections by a 60-km Atmospheric General Circulation Model Shingo WATANABE¹⁵⁺, Mikiko FUJITA¹, Sho KAWAZOE¹,

Shiori SUGIMOTO¹, Yasuko OKADA¹, Ryo MIZUTA², Masayoshi ISHII²

¹Japan Agency for Marine-Earth Science and Technology, ²Japan Meteorological Agency

AS34-D3-PM1-P-178 | AS34-A004

Improvement in Upper-level Turbulence Forecast Using Hybrid Vertical Coordinate System Jung-Hoon KIM^{1,2+}

¹Seoul National University, ²NOAA National Centers for Environmental Prediction/ Colorado State University

AS34-D3-PM1-P-179 | AS34-A010

Low Level Wind Shear Prediction at Jeju International Airport, Korea Kim GEUN-HOI^{1#+} ¹National Institute of Meterorlogical Sciences

AS35-D3-PM1-P-181 | AS35-A002

A System Dynamics Approach to Assessing the Health, Environmental, and Socio-economic Implications of the Jeepney Modernization in Metro Manila, Philippines Katrina ABENOJAR¹⁵⁺, Carlos Rosauro MANALO¹, C. Kendra GOTANGCO^{1,2}, Melliza CRUZ², Maria Obiminda CAMBALIZA¹

¹Ateneo de Manila University, ²Manila Observatory

AS35-D3-PM1-P-182 | AS35-A003

Observation and Discussion of Air Pollutant in Industrial Zone by Using Real-time Network of Scanning Lidar, Anemometers and Micro-sensors Chih-Wei CHIANG^{1‡+}, Tien-Ying CHUNG¹, Huann-Ming CHOU¹ ¹Kun Shan University

AS35-D3-PM1-P-183 | AS35-A006

Analysis of PM2.5 Hot Zones by the Application of Machine Learning and Low-cost Sensors Wen-Cheng Vincent WANG^{1‡}, Shih-Chun Candice LUNG¹⁺ ¹Academia Sinica

AS35-D3-PM1-P-184 | AS35-A008

Assessment of Jeepney Drivers' PM2.5 Personal Exposure Levels in Metro Manila, Philippines Imee DELOS REYES^{1±+}, Melliza CRUZ², Maria Obiminda CAMBALIZA¹, C. Kendra GOTANGCO^{1,2}, Katrina ABENOJAR¹, Carlos Rosauro MANALO¹, Bernell GO² ¹Ateneo de Manila University, ²Manila Observatory

AS35-D3-PM1-P-185 | AS35-A009

Evaluation of Low-cost PM2.5 Sensing Devices for Exposure and Health Research Shih-Chun Candice LUNG^{1#+}, Wen-Cheng Vincent WANG¹ ¹Academia Sinica

AS35-D3-PM1-P-186 | AS35-A011

Short-term Effects of Particulate Matter from Various Sources on Heart Rate Variability Delvina SINAGA^{1,2+}, Wiwiek SETYAWATI³, Shih-Chun Candice LUNG^{1‡}

¹Academia Sinica, ²National Central University, ³National Institute of Aeronautics and Space (LAPAN)

AS35-D3-PM1-P-188 | AS35-A015

Utilizing ASLUNG Particulate Matter (PM) Sensor to Assess Exposure Concentration in Transportation Microenvironment in Bandung, Indonesia Delvina SINAGA^{1,2+}, Wiwiek SETYAWATI³, Shih-Chun Candice

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AS35-D3-PM1-P-190 | AS35-A020

Study on the Change of Seasonal Factors to Negative Air Ion Concentration in the Xitou Forest Area Ching-Peng CHENG¹⁺, Tsung-Ming TSAO¹, Chiang WEI^{1#} ¹National Taiwan University

AS35-D3-PM1-P-191 | AS35-A021

Seasonal Variation of Air Pollution in a Forest Environment Tsung Ming TSAO¹⁵⁺, Chiang WEI¹, Ching-Peng CHENG¹ ¹National Taiwan University

AS40-D3-PM1-P-192 | AS40-A002

Assessment of IMERG Precipitation over Taiwan at Multiple Timescales Wan-Ru HUANG^{1#+}, Ya-Hui CHANG¹, Pin-Yi LIU¹ ¹National Taiwan Normal University

AS40-D3-PM1-P-195 | AS40-A012

Assessment of WRF and IMERG Precipitation over Taiwan Pin- Lun Ll^{1#+}, Chia-Jeng CHEN¹ ¹National Chung Hsing University

AS40-D3-PM1-P-196 | AS40-A013

Evaluation of Gridded Satellite Precipitation Products in Malaysia

Afiqah Bahirah AYOUB^{1#+}, Fredolin TANGANG^{1,2}, Ju Neng LIEW¹

¹National University of Malaysia, ²Ramkhamhaeng University

AS40-D3-PM1-P-197 | AS40-A020

Contrasting Characteristics of the Heavy Rainfall Event in July 2018 in Japan and the Northern Kyushu Heavy Rainfall Event in 2017

Yukari TAKAYABU^{1#+}, Hiroki TSUJI¹, Chie YOKOYAMA¹ ¹The University of Tokyo

AS43-D3-PM1-P-198 | AS43-A005

How Ice Cloud Optical Property Parameterizations Perturb Simulated Short-term Climate State? Bingqi YI^{1#+} ¹Sun Yat-sen University

AS43-D3-PM1-P-199 | AS43-A007

Observational Relationships Between Seasonal Aerosol and Precipitation over Asian Monsoon Region Yushan LIU¹⁵⁺, Bingqi YI¹ ¹Sun Yat-sen University

AS43-D3-PM1-P-200 | AS43-A008

Retrieval of Gridded Aerosol Direct Radiative Forcing over East China Based on Satellite and Reanalysis Datasets Yanyu WANG¹⁺⁺, Qianshan HE², Tiantao CHENG¹ ¹Fudan University, ²Shanghai Meteorological Service

AS43-D3-PM1-P-201 | AS43-A013

Retrieval of Aerosol Optical Depth over Land Based on a Time Series Technique Using Himawari-8 Data Ding LI¹⁺, Kai QIN^{1#} ¹China University of Mining and Technology

AS43-D3-PM1-P-202 | AS43-A014

Role of Clouds in Accelerating Cold-season Warming During 2000-2015 over the Tibetan Plateau Shan HUA¹⁵⁺, Yuzhi LIU¹ ¹Lanzhou University

AS44-D3-PM1-P-203 | AS44-A001

Lidar Measurements of Atmosphere Boundary Layer Height (ABLH) Under Multiple-layer Conditions Ruijun DANG¹⁺, Yi YANG¹⁺ ¹Lanzhou University

AS44-D3-PM1-P-205 | AS44-A004

Modeling Study of the Particulate Matter in Hubei Province with the WRF/Chem Model: A Case Study of January 2018 Yingying MA^{1*+} ¹Wuhan University

AS44-D3-PM1-P-207 | AS44-A008

Satellite-derived PM2.5 Concentration Trends over Eastern China from 1998 to 2016: Relationships to Emissions and Meteorological Parameters Huizheng CHE^{1#+}, Ke GUI¹ ¹Chinese Academy of Meteorological Sciences

AS44-D3-PM1-P-210 | AS44-A018

A Model Evaluation of GEOS-Chem for the Estimated Column Amount of Ozone, Sulfur Dioxide, and Aerosol Optical Depth Against for Those Retrieved from OMI and GOCI over South Korea

Hyung-Min LEE1*, Rokjin J. PARK1+, Myungje CHOI², Jhoon KIM3

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AS44-D3-PM1-P-211 | AS44-A020

Mesoscale Modeling Aerosol Transport over Southeast Asia: Evaluation of the 2013 Smoke Event Srikanth MADALA^{1#+}, Li TAN¹, Jun WANG², Santo SALINAS¹ ¹National University of Singapore, ²The University of Iowa

AS44-D3-PM1-P-212 | AS44-A022

Geostationary Satellite Monitoring During the KORUS-AQ Campaign: The Long-range Transboundary Transport of Air Pollutants

Seoyoung LEE¹⁺, Jhoon KIM¹, Jaemin HONG¹, Hyunkwang LIM¹, Thomas ECK², Brent HOLBEN², Jun-Young AHN³, Ja-Ho KOO^{1#}

¹Yonsei University, ²NASA Goddard Space Flight Center, ³National Institute of Environmental Research

AS45-D3-PM1-P-217 | AS45-A002

Simultaneous Data Assimilation of Meteorological Variables and Tracer Concentration in the Case of the Fukushima Nuclear Accident Tsuyoshi SEKIYAMA^{1#+}, Mizuo KAJINO¹ ¹Japan Meteorological Agency

AS45-D3-PM1-P-219 | AS45-A005

Impact of Geostationary Ocean Color Imager Aerosol Optical Depth Assimilation on PM2.5 Prediction Taehee KIM^{1‡+}, Yonghee LEE¹, Jisu MYOUNG¹, Misuk JUNG¹, Insuk SUH¹, Limseok CHANG¹

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AS45-D3-PM1-P-220 | AS45-A006

Impact of Planetary Boundary Layer Height Changes on PM10 Simulation in South Korea Jeonghyeok MUN¹⁺, Hwa Woon LEE^{1‡}, Wonbae JEON¹, JungWoo YOO¹ ¹Pusan National University

AS45-D3-PM1-P-221 | AS45-A009

Evaluation of CAMS Reanalysis of Particulate Matter and Ozone Concentration via Ground Based Measurement over Malaysia

Anis Asma AHMAD MOHTAR^{1#+}, Ju Neng LIEW¹, Mohd Talib LATIF², Jing Xiang CHUNG¹, Afiqah Bahirah AYOUB¹ ¹National University of Malaysia, ²Universiti Kebangsaan Malaysia

AS45-D3-PM1-P-222 | AS45-A010

The Effect of Madden Julian Oscillation (MJO) in Modulating Surface Ozone in Peninsular Malaysia Mary Angelina JUD¹⁺⁺, Ju Neng LIEW¹, Fredolin TANGANG^{1,2}, Mohd Talib LATIF³ ¹National University of Malaysia, ²Ramkhamhaeng University, ³Universiti Kebangsaan Malaysia

AS45-D3-PM1-P-223 | AS45-A012

Observation System Experiments with the 3DVAR Aerosol Data Assimilation System Ganghan KIM^{1#+}, Myong-In LEE¹ ¹Ulsan National Institute of Science and Technology

AS45-D3-PM1-P-224 | AS45-A014

Assessment of Aerosol Optical Properties Using WRF/Chem over India Preeti GUNWANI^{1#+}, Manju MOHAN¹

¹Indian Institute of Technology Delhi

AS45-D3-PM1-P-225 | AS45-A017

Applicability of WRF-Chem in Simulating Air Quality Parameters over National Capital Region of India in Context of Increasing Urbanization Ankur Prabhat SATI^{1±+}, Manju MOHAN¹ ¹Indian Institute of Technology Delhi

AS46-D3-PM1-P-226 | AS46-A005

Role of Land Surface Schemes in Simulating Summer Surface Wind Speed Climatology over Continental China Xin-Min ZENG^{1#+} ¹Hohai University

AS46-D3-PM1-P-228 | AS46-A010

Comparing Energy Budget Patterns Under Different Weather Conditions and Different Management Strategies in Tea Field Siang-Heng WANG^{1‡+}, Jehn-Yih JUANG¹ ¹National Taiwan University

AS46-D3-PM1-P-230 | AS46-A014

A Preliminary Study on the Interaction Between Atmosphere and Land over the Typical Secondary Evergreen Broadleaf Forest in the Lingnan Region Zhigang WEI^{1#+} ¹Beijing Normal University

AS46-D3-PM1-P-231 | AS46-A017

Local and Remote Effects of Deforestation on Regional Climate in Europe Eun-Soon IM^{1#+}, Thanh NGUYEN-XUAN¹, Liying QIU¹, Bijian TANG¹ ¹The Hong Kong University of Science and Technology

AS46-D3-PM1-P-232 | AS46-A019

Assessing the Impact of Geoengineering and Global Warming on Deciduous Fruits in Himachal Pradesh (India) Jyoti SINGH¹³⁺, Sandeep SAHANY¹ ¹Indian Institute of Technology Delhi

AS47-D3-PM1-P-233 | AS47-A003

Multi-instrument Observations of Elves and Their Causative Lightning Strokes Associated with a Small-scale Central European Winter Thunderstorm

Ivana KOLMASOVA^{1,2#+}, Ondrej SANTOLIK^{1,2}, Pavel SPURNY³, Jiri BOROVICKA³, Janusz MLYNARCZYK⁴, Petr KASPAR¹, Martin POPEK¹, Andrea PIZZUTI⁵, Petr ZACHAROV¹, Radek LAN¹, Ludek UHLIR¹, Alec BENNET⁶, Martin FULLEKRUG⁵, Gerhard DIENDORFER⁷, Rudolf SLOSIAR⁸

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AS47-D3-PM1-P-234 | AS47-A005

Severe Hailstorm from Mesoscale Convective System in Nepal: A Case Study Deepak ARYAL¹⁷⁺

¹Central Department of Hydrology and Meteorology

AS47-D3-PM1-P-235 | AS47-A007

The Relationship Between Vertical Airflow Characteristics and Lightning Activity of Thunderstorm Chenxi WANG¹⁵⁺

¹Chinese Meteorological Administration Training Center

AS47-D3-PM1-P-236 | AS47-A009

A Dominant Spatiotemporal Variation of Spring Precipitation in Northeast and Southeast Asia: Its Close Relations to ENSO Variability

Chang-Kyun PARK¹⁺, Doo-Sun PARK^{2‡}, Chang-Hoi HO¹, Taewon PARK³, Jinwon KIM⁴, Su-Jong JEONG¹, Baek-Min KIM⁵ ¹Seoul National University, ²Chosun University, ³Chonnam National University, ⁴Chapman University, ⁵Korea Polar Research Institute

AS47-D3-PM1-P-237 | AS47-A010

CFD Simulation of UAV in a Microburst Modelled with Satellite Derived Data

Gokul VISHWANATHAN¹⁺, Wai Lee CHAN^{2‡}, Kenneth PRYOR³

¹TUM-Asia, ²Nanyang Technological University, ³NOAA National Environmental Satellite, Data, and Information Service (NESDIS)

AS47-D3-PM1-P-238 | AS47-A011

Tropical-extratropical Interaction Associated with Tropical Cyclone Formation in the Western North Pacific: A Case Study of Peipah (2007)

Minhee CHANG¹⁺, Chang-Hoi HO¹⁺, Johnny CHAN², Myung-Sook PARK³, Seok-Woo SON¹, Jinwon KIM⁴ ¹Seoul National University, ²City University of Hong Kong, ³Korea Institute of Ocean Science and Technology, ⁴Chapman University

AS47-D3-PM1-P-239 | AS47-A012

Best-track Based Tropical Cyclone Damage Forecast Doo-Sun PARK^{1*+}, Dasol KIM² ¹Chosun University, ²Seoul National University

AS47-D3-PM1-P-242 | AS47-A018

Dynamic Mechanisms of Heavy Rainfall from Afternoon Thunderstorms in Northern Taiwan Yun-Ya CHU^{1‡+}, Jen-Ping CHEN¹ ¹National Taiwan University

Day 04 01 Aug, Thu

Day 04 - 01 Aug 2019, Thursday Program Overview

T (D	AM1	AM2	PM1	PM2
Time / Room	08:30 - 10:30	11:00 - 12:30	13:30 - 15:30	16:00 - 18:00
MR308	ST30 p.M138	ST05 p.M146	ST24; ST17 p.M151	ST19; ST20 p.M159
MR304	ST14 p.M139	ST14 p.M146	ST28 p.M151	ST15; ST10 p.M160
MR303	AS35 p.M139		AS21 p.M152	AS21 p.M161
MR330	HS19 <i>p.M140</i>		HS26 p.M153	HS12 <i>p.M161</i>
MR329	HS07 p.M140	HS07 p.M147	HS18 p.M153	HS18 p.M162
MR328	HS06 p.M140	HS28 <i>p.M147</i>	HS14 p.M154	HS17 p.M162
MR310	PS09 p.M141	PS01 p.M147	PS14 <i>p.M154</i>	PS14 <i>p.M163</i>
MR311	AS43 p.M141	AS29 p.M148	AS28 p.M155	AS28 p.M163
MR327	AS27 p.M142	AS27 p.M148	AS15 p.M155	AS45 p.M164
MR302	AS02 p.M142	AS08 p.M148	AS08 p.M156	AS47 p.M164
MR301	SS04 p.M143	PS20 p.M149	ST07; ST01 <i>p.M156</i>	ST01; ST07 <i>p.M165</i>
MR300	BG07; BG08 <i>p.M144</i>	BG08 p.M149	IG07 p.M157	IG07 p.M166
MR309	ST02 p.M144	ST02 p.M150	ST09 p.M158	SS02 p.M166
MR323	IG17 p.M145	IG18 p.M150	IG18; IG17 <i>p.M158</i>	
Nicoll 1	OS13 p.M143	KL-OS p.F16 DL-OS p.F16	OS04 p.M157	OS04; OS03 <i>p.M165</i>
Nicoll 2	SE30 p.M138	KL-SE <i>p.F20</i> DL-SE <i>p.F19</i>		SE03 p.M160
Nicoll 3	AS14 p.M145	AS14 p.M150	AS14 p.M159	AS14 p.M166
EXHIBITION HALL			OS Posters <i>p.M168</i> SE Posters <i>p.M173</i>	

Sessions & Conveners

* Main Convener

AS02-Climate Change and Tropical Climatic Hazards in Asia Oceania

*Yuriy KULESHOV Bureau of Meteorology, David JONES Bureau of Meteorology

AS08-The Science and Prediciton of Heavy Precipitation and Floods

*Yali LUO Chinese Academy of Meteorological Sciences, Johnny CHAN City University of Hong Kong, Huiling YUAN Nanjing University

AS14-The Science and Prediction of Tropical Cyclones

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

AS15-Urban Climate

*Shaojing JIANG Beijing Normal University, Jizeng DU Beijing Normal University, Kaicun WANG Beijing Normal University

AS21-Understanding Light-absorbing Carbon Aerosols Using Observations and Models

*Yuan WANG California Institute of Technology, Jianping GUO Chinese Academy of Meteorological Sciences, Byung-Gon KIM Gangneung-Wonju National University, Chao LIU Nanjing University of Information Science & Technology, Steve YIM The Chinese University of Hong Kong

AS27-Mountain and Island Effects on Airflow, Precipitation, Weather Systems, and Climate

*Cheng-Ku YU National Taiwan University, Olivier BOUSQUET Meteo-France, Alison D. NUGENT University of Hawaii at Manoa, Tetsuya TAKEMI Kyoto University

AS28-Theory, Observations and Modelling of Maritime Continent Weather and Climate

*Muhammad Eeqmal HASSIM Centre for Climate Research Singapore, Meteorological Service Singapore, Masaki KATSUMATA Japan Agency for Marine-Earth Science and Technology, Hanh NGUYEN Australian Bureau of Meteorology, Joshua QIAN Meteorological Service Singapore, Sandeep SAHANY Indian Institute of Technology Delhi

AS29-Observations and Representations of Cloud-related Processes for Improving Models

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

AS35-Regional Collaborative Research on Air Pollution Sensing and Health in Asia

*Shih-Chun Candice LUNG Academia Sinica, Kin Fai HO The Chinese University of Hong Kong

AS43-Progress and Challenge in Light Scattering and Radiative Transfer About Clouds and Aerosols *Binggi YI Sun Vatson University, Husi LETU Chinese Act

*Bingqi YI Sun Yat-sen University, Husi LETU Chinese Academy of Sciences, Takashi NAKAJIMA Tokai University

AS45-Air Quality Modeling, Forecasting, and Data Assimilation

*Cheol-Hee KIM Pusan National University, Limseok CHANG National Institute of Environmental Research, Daisuke GOTO NIES, Hyo-Jung LEE Pusan National University, Myong-In LEE Ulsan National Institute of Science and Technology

AS47-Storms, Lightning, and Their Effects on Human Society

*Doo-Sun PARK Chosun University, Tai-Yin HUANG Penn State Lehigh Valley, Hyeong-Seog KIM Korea Maritime and Ocean University, Yukihiro TAKAHASHI Hokkaido University, Yoav YAIR IDC Herzliya

BG07-Recent Trend of Land and Ocean Biogeochemical Cycles in Asia

*Masayuki KONDO Chiba University, Prabir K. PATRA Japan Agency for Marine-Earth Science and Technology

BG08-Arsenic and Other Hazardous Elements in Water Sources

*Devanita GHOSH Indian Institute of Science, Laura RICHARDS University of Manchester, Chansopheaktra SOVANN Royal University of Phnom Penh

HS06-Water-related Hazards and Their Forecasting and Warning

*Gwo-Fong LIN National Taiwan University, Jui-Yi HO National Science and Technology Center for Disaster Reduction

HS07-The Third Pole Environment - Hydrometeorological Processes and Human Dimension

*Petrus (Peter) VAN OEVELEN Global Energy and Water Exchanges (GEWEX), Likun AI Chinese Academy of Sciences, Xin LI Chinese Academy of Sciences, China, Yaoming MA Chinese Academy of Sciences

HS12-Water Resilience in Coastal Areas: Processes, Consequences, and Potentials

*Xuan YU Sun Yat-sen University, Philip Li-Fan LIU National University of Singapore, Edmond LO Nanyang Technological University, Onyx WAI The Hong Kong Polytechnic University, Jie YANG Helmholtz Centre for Environmental Research

HS14-Exploration of Atmospheric Water Resources

*Haiyun SHI Southern University of Science and Technology, Ji CHEN The University of Hong Kong, Bellie SIVAKUMAR University of New South Wales

HS17-Water-food-energy Nexus Under Uncertain Future: Data, Tools, Modelling and Knowledge Integration

*Sreekanth J CSIRO Land and Water, Indu J. Indian Institute of Technology Bombay, Mohammed MAINUDDIN CSIRO, Jorge PENA ARANCIBIA Commonwealth Scientific and Industrial Research Organisation

HS18-Ecohydrological Processes and Modelling in a Changing Environment

*Huimin LEI Tsinghua University, Tim MCVICAR CSIRO, Youngryel RYU Seoul National University, Bellie SIVAKUMAR University of New South Wales, Yuting YANG Tsinghua University

HS19-Observation and Modelling of Glaciers in High Mountain Asia

*Yong ZHANG Hunan University of Science and Technology, Koji FUJITA Nagoya University, Shiyin LIU Yunnan University, Adnan TAHIR Department of Environmental Sciences, COMSATS University Islamabad, Xin WANG Hunan University of Science and Technology

HS26-Changes in Cryospheric Hydrological Processes and Their Impacts on Sustainable Development

*Yongjian DING Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, Fengjing LIU Michigan Technological University School of Forest Resources and Environmental Science, Daqing YANG National Hydrology Res Center, Shiqiang ZHANG Northwest University, Tingjun ZHANG Lanzhou University

HS28-Hydrological Impacts of Typhoons on Watershed Ecosystems

*Jr-Chuan HUANG National Taiwan University, Seiya NAGAO Kanazawa University, Hideaki SHIBATA Field Science Center for Northern Biosphere, Hokkaido University, Maki TSUJIMURA University of Tsukuba

IG07-Interdisciplinary Research on Water-related Disasters and Practical Applications for Disaster Risk Reduction

*Anawat SUPPASRI Tohoku University, Sivapragasam CHANDRASEKARAN Kalasalingam Academy of Research and Education, Natt LEELAWAT Chulalongkorn University, Adam SWITZER Nanyang Technological University, Srivatsan VIJAYARAGHAVAN National University of Singapore

IG17-Carbon dioxide sequestration and utilization (CCUS) in energy geosciences

*Qi LI Chinese Academy of Sciences, Matthew MYERS Commonwealth Scientific and Industrial Research Organisation, Masao SORAI National Institute of Advanced Industrial Science and Technology

IG18-Tropical Hydroclimate Changes Since the Late Pleistocene

*Shufang YUAN Nanyang Technological University, Yudha DJAMIL Nanyang Technological University, Keyan FANG Fujian Normal University, Ke LIN Nanyang Technological University, Guangxin LIU Nanyang Technological University

OS03-Changing Climate and Adjusting Ecosystem in the Arctic and Antarctic Ocean

*Meibing JIN Nanjing University of Information Science & Technology, Xuezhi BAI Hohai University, Hao WEI Tianjin University

OS04-Extreme Events: Tropical Cyclones, Intense Rainfall, Dust Storm in the Warming Environment of the Asia-oceania Region

*Narayana A. C. University of Hyderabad, Prasanna Kumar SUKUMARAN National Institute of Oceanography

OS13-General and Multidisciplinary Oceanography

*Charles LEMCKERT University of Canberra, Serena LEE Griffith University

PS01-Impact Cratering: Bridging the Gap in Nature, Experiment, Modeling, and Application

*Meng-Hua ZHU Macau University of Science and Technology, Masahiko ARAKAWA Kobe University, Wenzhe FA Peking University, Elena MARTELLATO Natural History Museum, Berlin, Jeffrey PLESCIA Johns Hopkins University

PS09-In Cosmic Dust We Truly Trust

*Hsiang-Wen HSU University of Colorado Boulder, Hidehiro KANEDA Department of Physics, Nagoya University, Aigen LI Department of Physics and Astronomy, University of Missouri, Columbia, MO, Zhong Yi LIN National Central University

PS14-Small Body Explorations by Current and Future Missions

*Jian-Yang LI Planetary Science Institute, Jiangchuan HUANG China Academy of Space Technology, Yangting LIN Institute of Geology and Geophysics, Chinese Academy of Science, Makoto YOSHIKAWA Japan Aerospace Exploration Agency

PS20-Outer Planet Satellites: Geologic Processes and Habitability

*Anezina SOLOMONIDOU ESA European Space Agency, Mathieu CHOUKROUN Jet Propulsion Laboratory, California Institute of Technology, Athena COUSTENIS Paris Observatory/ French National Center for Scientific Research/PSL Research University, Jun KIMURA Osaka University, Rosaly LOPES-GAUTIER Jet Propulsion Laboratory, California Institute of Technology

ST01-Systems Science Approaches to Heliophysics Modeling and Data Analysis

*Simon WING The Johns Hopkins University, Jay JOHNSON Andrews University

ST02-Sun-earth System Response to Extreme Solar Events *Balan NANAN Shandong University, Nat GOPALSWAMY NASA Goddard Space Flight Center, Yoshiharu OMURA Kyoto University, Qing-He ZHANG Shandong University

ST05-From the Heliosphere to Interstellar Exploration

*Linghua WANG Peking University, George HO The Johns Hopkins University Applied Physics Laboratory, Zhuoxi HUO Qian Xuesen Laboratory of Space Technology

ST07-Solar Super Storms: in the Past, Present and Future *C. Alex YOUNG NASA Goddard Space Flight Center, James GREEN NASA Headquarters

ST09-Cross-scale Couplings in Magnetospheric Boundary Layers: From Kinetic to MHD Scales

*Keizo FUJIMOTO Beihang University, Dongsheng CAI University of Tsukuba, Giovanni LAPENTA KU Leuven, Bertrand LEMBEGE National Center for Scientific Research/University of Versailles Saint-Quentin-en-Yvelines/Institute Pierre Simon Laplace

ST10-The Magnetopause and the Dayside Solar Wind -Magnetosphere Interaction

*Ramon LOPEZ University of Texas at Arlington, Chi WANG Chinese Academy of Sciences

ST14-Space Weather Forecasts: Methods, Issues and Future Development

*Larry PAXTON The Johns Hopkins University Applied Physics Laboratory, Tzu-Wei FANG University of Colorado Boulder, Yongliang ZHANG The Johns Hopkins University Applied Physics Laboratory

ST15-MHD Waves and Instabilities in the Solar Atmosphere: Identification and Modelling

*Viktor FEDUN The University of Sheffield, Wernher BREVIS Pontificia Universidad Catolica de Chile, Sergiy SHELYAG Deakin University, Marco STANGALINI National Institute for Astrophysics, Gary VERTH The University of Sheffield

ST17-The Dynamic Loss of Earth's Radiation Belts: from Loss in the Magnetosphere to Particle Precipitation in the Atmosphere

*Maria USANOVA University of Colorado Boulder, Thiago BRITO University of Helsinki, Allison JAYNES The University of Iowa

ST19-Hemispheric Symmetry and Asymmetry in the Solar-terrestrial Coupling

*Elizabeth MITCHELL The Johns Hopkins University Applied Physics Laboratory, Kan LIOU The Johns Hopkins University Applied Physics Laboratory, Jeng-Hwa YEE The Johns Hopkins University Applied Physics Laboratory

ST20-Solar Flare Forecasting Using Machine Learning

*Long XU Chinese Academy of Sciences, Robertus ERDELYI The University of Sheffield, Xin HUANG Chinese Academy of Sciences

ST24-Dynamic Coupling Between Waves and Plasmas in the Inner Magnetosphere and Its Feedback on Ionospheric Electrodynamics

*Natalia BUZULUKOVA NASA Goddard Space Flight Center, Mei-Ching FOK NASA Goddard Space Flight Center, Jerry GOLDSTEIN SWRI/University of Texas, Vyacheslav PILIPENKO Institute of physics of the Earth, Moscow, Maria USANOVA University of Colorado Boulder

ST28-Radio Heliophysics from Sun to Mud: How Radio Techniques can be Used to Study the Chain of Activity from Solar Origin to its Effects at Earth and Other Solar-System Bodies

*Mario BISI United Kingdom Research and Innovation - Science & Technology Facilities Council, Richard FALLOWS ASTRON - The Netherlands Institute for Radio Astronomy, Bernard JACKSON University of California, San Diego, Jasmina MAGDALENIC ZHUKOV Royal Observatory of Belgium, Yihua YAN Chinese Academy of Sciences

ST30-Multiscale Ionosphere Structuring Processes and Related Impact on Technology

*Shasha ZOU University of Michigan, Ercha AA University of Michigan, Qing-He ZHANG Shandong University, Shunrong ZHANG Massachusetts Institute of Technology

SE03-EPreparation Process of Earthquakes and Related Phenomena - Potential Precursory Anomalies, Earthquake Hydrology, Geochemistry and Other Phenomena Related to Induced and Natural Earthquakes

*Fuqiong HUANG China Earthquake Administration, Huihong CHENG University of Chinese Academy of Sciences, Peng HAN Southern University of Science and Technology, Yasuyuki KANO The University of Tokyo, Han YUE Beijing University

SE30-Tectonics and Geohazards in the Western Pacific: Geologic Models and Geophysical Constraints

*Leo ARMADA University of the Philippines Diliman, Carla DIMALANTA University of the Philippines Diliman, Shu-Kun HSU National Central University

SS02-The Brewer-Dobson and Hadley Circulations in a Changing Climate: Evolution and Impacts

*Richard ECKMAN National Aeronautics and Space Administration, Shigeo YODEN Kyoto University

SS04-Oceans

*Jack KAYE NASA Earth Science Division, Philip Li-Fan LIU National University of Singapore

ST30 / Multiscale Ionosphere Structuring Processes and Related Impact on Technology

Thu - 01 Aug | MR308

Time	08:30-10:30
Chair(s)	Shasha ZOU, University of Michigan
	Qing-He ZHANG, Shandong University

ST30-D4-AM1-308-001 | ST30-A004 (Invited)

Understanding Multi-scale Ionospheric Structuring Processes in the Polar Ionosphere Using GNSS Measurements Alone P. T. JAYACHANDRAN^{1#+} ¹University of New Brunswick

ST30-D4-AM1-308-002 | ST30-A006 (Invited)

Modeling Metal Ions and Sporadic E in the Ionosphere with SAMI3

Joseph HUBA^{1#+}, Jon KRALL², Douglas DROB² ¹Syntek Technologies, ²Naval Research Laboratory

ST30-D4-AM1-308-003 | ST30-A012 (Invited)

Medium-scale Traveling Ionospheric Disturbances Observed by World-wide GPS Receiver Networks During Stratospheric Sudden Warming Yuichi OTSUKA¹⁵⁺, Atsuki SHINBORI¹, Prayitno ABADI²,

Takuya TSUGAWA³, Michi NISHIOKA³ ¹Nagoya University, ²Indonesian National Institute of Aeronautics and Space (LAPAN), ³National Institute of Information and Communications Technology

ST30-D4-AM1-308-004 | ST30-A007 (Invited)

Ionospheric Plasma Structuring in the Cusp Ionosphere: In-situ Observations by Norsat-1 Satellite Yaqi JIN^{1#+}, Jøran MOEN¹, Lasse CLAUSEN¹, Andres SPICHER¹, Magnus IVARSEN¹

¹University of Oslo

ST30-D4-AM1-308-005 | ST30-A010

On the Sources of Cusp Ionospheric Scintillation Irregularities Andres SPICHER^{1#+}, Kjellmar OKSAVIK², Yaqi JIN¹, Jøran MOEN¹, Lisa BADDELEY², Lasse CLAUSEN¹ ¹University of Oslo, ²University of Bergen

ST30-D4-AM1-308-006 | ST30-A009

Modeling of the F2 Layer Stratification on Ionograms by a Raytracing Method

Chunhua JIANG¹^{‡+}, Guobin YANG¹, Zhao ZHENGYU¹ ¹Wuhan University

ST30-D4-AM1-308-007 | ST30-A008

Geospace System Responses During the September 7, 2017 Geomagnetic Storm

Shasha ZOU^{1‡+}, Zihan WANG², Jiaen REN¹, Thomas COPPEANS¹, Ercha AA^{1,3}, Aaron RIDLEY¹, Gabor TOTH¹, Tamas GOMBOSI¹

¹University of Michigan, ²Peking University, ³Chinese Academy of Sciences

SE30 / Tectonics and Geohazards in the Western Pacific: Geologic Models and Geophysical Constraints

Thu - 01 Aug | Nicoll 2

Time 08:30-10:30

Chair(s) Leo ARMADA, University of the Philippines Diliman

SE30-D4-AM1-Nicoll 2-001 | SE30-A009 (Invited)

Tracing the Polyphase Arc-continent Collision in Western Philippines: Biostratigraphic and Petrological Constraints Karlo QUEAÑO^{1‡+}, Carla DIMALANTA², Edanjarlo MARQUEZ³, Leo ARMADA², Jillian Aira GABO-RATIO², Graciano YUMUL JR.⁴

¹Ateneo de Manila University, ²University of the Philippines Diliman, ³University of the Philippines Manila, ⁴Apex Mining Company Inc.

SE30-D4-AM1-Nicoll 2-002 | SE30-A002

Tectonics and Earthquakes in the Transition Zone from Plate Collision to Subduction, Off Eastern Taiwan

Shu-Kun HSU^{1#+}, Shiou-Ya WANG¹, Yi-Ching YEH¹, Ching-Hui TSAI¹, Chin-Wei LIANG¹, Yen-Yu CHO¹ ¹National Central University

SE30-D4-AM1-Nicoll 2-003 | SE30-A004

Tectonic Setting of the Macolod Corridor (Luzon Island, Philippines): Implications to Rifting and Associated Geohazards

Leo ARMADA^{1‡+}, Carla DIMALANTA¹, Shu-Kun HSU², Wen-Bin DOO², Edd Marc REYES¹, Rurik AUSTRIA¹, Graciano YUMUL JR.³

¹University of the Philippines Diliman, ²National Central University, ³Apex Mining Company Inc.

SE30-D4-AM1-Nicoll 2-004 | SE30-A011

Influence of Pre-existing Structures on the Seismotectonic Environment of the Northern Manila Subduction Zone Jing-Yi LIN^{1#+}, Shao-Jinn CHIN¹, Yi-Ching YEH¹ ¹National Central University

SE30-D4-AM1-Nicoll 2-005 | SE30-A005

Potential Field Signatures of the Cretaceous Cebu Arc, Philippines

Carla DIMALANTA^{1#+}, Nathaniel PARCUTELA¹, Leo ARMADA¹, Betchaida PAYOT¹, Jillian Aira GABO-RATIO¹, Karlo QUEAÑO², Noelynna RAMOS³, Graciano YUMUL, JR.^{4,5} ¹University of the Philippines Diliman, ²Ateneo de Manila University, ³University of the Philippines, ⁴Monte Oro Resources & Energy, Inc., ⁵Apex Mining Co. Inc.

SE30-D4-AM1-Nicoll 2-006 | SE30-A013

Submarine Landslide and Seafloor Erosion in the Upper Stream of Kaoping Submarine Canyon: Dense 2D High Resolution Marine Sparker Seismic Survey Yi-Ching YEH^{1#+}, Wei-Chung HSIAO¹, Chung-Lin TSAI¹, Shu-Kun HSU¹, Yen-Yu CHO¹, Chin-Wei LIANG¹ ¹National Central University

SE30-D4-AM1-Nicoll 2-007 | SE30-A007

Persistent Inclination Anomaly Recorded in 5-0 Ma Volcanic Rocks in the Philippines

Decibel FAUSTINO-ESLAVA1*+, Hidetoshi SHIBUYA2, Carla DIMALANTA3, Graciano YUMUL JR. 4

¹University of the Philippines, ²Kumamoto University, ³University of the Philippines Diliman, ⁴Apex Mining Company Inc.

SE30-D4-AM1-Nicoll 2-008 | SE30-A001

Continuous GPS Observations Along the West Valley Fault in Metro Manila, Philippines Ruey-Juin RAU^{1‡+}, Choon-Muar KER¹, Kuo-En CHING¹, Geno SAPLA², Teresito BACOLCOL², Renato SOLIDUM²

¹National Cheng Kung University, ²Philippine Institute of Volcanology and Seismology

ST14 / Space Weather Forecasts: Methods, Issues and Future Development

Thu - 01 Aug | MR304

Time 08:30-10:30

Chair(s) Larry PAXTON, The Johns Hopkins University Applied Physics Laboratory Tzu-Wei FANG, University of Colorado Boulder

ST14-D4-AM1-304-001 | ST14-A010 (Invited)

Forecasting the Magnitude and Direction of the Solar Wind Magnetic Field Following Earth-directed Coronal Mass Ejections Nat GOPALSWAMY^{1#+}

¹NASA Goddard Space Flight Center

ST14-D4-AM1-304-002 | ST14-A007

Predicting Magnetic Fields in Earth-impacting Coronal Mass Ejections Using Data-driven Modelling

E. KILPUA^{1#+}, Jens POMOELL¹, Erkka LUMME¹, Daniel PRICE¹, Diana MOROSAN¹, Eleanna ASVESTARI¹, Simon GOOD¹, Matti ALALAHTI¹, Milla KALLIOKOSKI¹, Harriet GEORGE¹ ¹University of Helsinki

ST14-D4-AM1-304-003 | ST14-A013 (Invited)

Predicting Interplanetary Shocks Using Low-energy Ions: A Real-time Interplanetary Shock Prediction System George HO^{1#+}

¹The Johns Hopkins University Applied Physics Laboratory

ST14-D4-AM1-304-004 | ST14-A012

Statistical and Observational Research of Solar Flare Spectra for Total Emission Spectra Prediction Model Kyoko WATANABE^{1‡+}, Shohei NISHIMOTO¹, Shinsuke IMADA², Tomoko KAWATE³, Kyoung-Sun LEE⁴, Mitsuru

MATSUMURA² ¹National Defense Academy of Japan, ²Nagoya University, ³Japan Aerospace Exploration Agency, ⁴National Astronomical Observatory of

Japan

ST14-D4-AM1-304-005 | ST14-A008 (Invited)

Dynamic Variation of Earth's Outer Radiation Belt Due to Whistler-mode Chorus and EMIC Waves Yoshiharu OMURA^{1#+} ¹Kyoto University

ST14-D4-AM1-304-006 | ST14-A009 (Invited)

Ring Current Prediction: Challenges and Developments Mei-Ching FOK^{1#+} ¹NASA Goddard Space Flight Center

ST14-D4-AM1-304-007 | ST14-A011

Unfolding Method for Particle Detector Spectrums on

GEO-KOMPSAT-2A Yuchul SHIN¹⁵⁺, Sungmin PAK¹, Go Woon NA¹, Jongho SEON¹ ¹Kyung Hee University

AS35 / Regional Collaborative Research on Air Pollution Sensing and Health in Asia

Thu - 01 Aug | MR303

Time	08:30-10:30
Chair(s)	Shih-Chun Candice LUNG, Academia Sinica
	Kin Fai HO, The Chinese University of Hong Kong

AS35-D4-AM1-303-001 | AS35-A014

Assessment of Air Quality in Different Microenvironments Using Personal Low-cost PM2.5 Sensors and Associations with Health Outcomes in Singapore Yue Qian TAN¹, Rashid SK ABDUR¹, Liya YU¹, Wei Jie SEOW^{1#+}

¹National University of Singapore

AS35-D4-AM1-303-002 | AS35-A005 (Invited)

Building Urban Resilience: A Systems Approach to Analyzing Social and Personal Health Risks of Jeepney Commuters and Drivers to PM2.5 in Metro Manila, Philippines Melliza CRUZ^{1#}, Maria Obiminda CAMBALIZA²⁺, C. Kendra GOTANGCO^{1,2}, Shih-Chun Candice LUNG³, James Bernard SIMPAS¹, John WONG², Rene Marlon PANTI², Emma PORIO², Imee DELOS REYES², Bernell GO¹, Katrina ABENOJAR², Carlos Rosauro MANALO², Krizelle FOWLER¹ ¹Manila Observatory, ²Ateneo De Manila University, ³Academia Sinica

AS35-D4-AM1-303-003 | AS35-A013 (Invited)

Carbon Monoxide (CO) Exposure to the Urban Commuter in Bandung City, Indonesia

Wiwiek SETYAWATI^{1#+}, Delvina SINAGA^{2,3}, Nur Faizah ROMADONA⁴, Emalya Rachmawati RACHMAN⁵, Shih-Chun Candice LUNG², Eddy HERMAWAN¹, Puji LESTARI⁶ ¹National Institute of Aeronautics and Space (LAPAN), ²Academia Sinica, ³National Central University, ⁴Indonesian Education University, ⁵Ministry of Environment and Forestry, ⁶Bandung Institute of Technology

AS35-D4-AM1-303-004 | AS35-A007 (Invited)

Air Pollution in Myanmar Rural Ecosystem: The Issue Being Neglected So Far

Ohnmar May TIN HLAING^{1#+}, Yenaung HTUN¹ ¹Environmental Quality Management Co., Ltd

AS35-D4-AM1-303-005 | AS35-A004

Poor Air Quality Leading to High Health Risk in the Himalayan Urban Region: A Study with Low-cost Sensors Sanat Kumar DAS^{1‡+}, Uma DAS², Abhijit CHATTERJEE¹, Sanjay K. GHOSH¹, Chen Jeih PAN³, Sibaji RAHA¹

¹Bose Institute, ²Indian Institute of Information Technology Kalyani, ³National Central University

AS35-D4-AM1-303-006 | AS35-A016

Possible Association Between Heart Rate and Air Pollution Exposure: An Observation from Metro Area Adult During Cardio Activity

Shihyu LEE^{1*+}, Shih-Chun Candice LUNG¹, Tzu-Yao CHUANG² ¹Academia Sinica, ²China Medical University Hospital

HS19 / Observation and Modelling of Glaciers in High Mountain Asia

Thu - 01 Aug | MR330

 Time
 08:30-10:30

 Chair(s)
 Yong ZHANG, Hunan University of Science and Technology

HS19-D4-AM1-330-001 | HS19-A005 (Invited)

Glacier Runoff Simulation Under Climate Change by an Energy Balance Model for Individual Glaciers on a Continental-scale Shinjiro KANAE^{1‡}, Orie SASAKI¹⁺, Koji FUJITA², Yukiko HIRABAYASHI³

¹Tokyo Institute of Technology, ²Nagoya University, ³Shibaura Institute of Technology

HS19-D4-AM1-330-002 | HS19-A003 (Invited)

Glacier Hazards in Recent Years in High Mountains Asia Donghui SHANGGUAN^{1#+} ¹Northwest Institute of Eco-Environment and Resources, Chinese

Academy of Sciences

HS19-D4-AM1-330-003 | HS19-A017

Mass Balance of Trambau Glacier, Rolwaling Region, Nepal Himalaya: In-situ Observations, Long-term Reconstruction and Mass-balance Sensitivity Koji FUJITA^{1#+}

¹Nagoya University

HS19-D4-AM1-330-004 | HS19-A004

Glacier Changes and Surges over Xinqingfeng and Malan Ice Caps in the Inner Tibetan Plateau Since 1970 Zhen ZHANG^{1*+}, Shiyin LIU², Zongli JIANG³, Junfeng WEI³ ¹Anhui University of Science and Technology, ²Yunnan University, ³Hunan University of Science and Technology

HS19-D4-AM1-330-005 | HS19-A014

Global Warming Impacts on Glacier Dynamics in the Himalayan Basin Ankur DIXIT^{1#+}, Sandeep SAHANY¹ ¹Indian Institute of Technology Delhi

HS19-D4-AM1-330-006 | HS19-A009

Inconsistent Changes of Glaciers and its Heterogeneous Controlling Factors in the Longbasaba Lake Region, Himalayas Based on Multi-source Remote Sensing Data Xuanru ZHAO^{1s+}, Xin WANG¹ ¹Hunan University of Science and Technology

HS19-D4-AM1-330-007 | HS19-A015

Glacier Retreat, Glacial Lake Changes and Glacial Lake Outburst Floods Inventory in the Himalayas

Yong NIE¹⁺⁺, Qiao LIU², Jida WANG³, Yongwei SHENG⁴, Shiyin LIU⁵

¹Institute of Mountain Hazards and Environment, Chinese Academy of Sciences, ²Chinese Academy of Sciences, ³Kansas State University, ⁴University of California, Los Angeles, ⁵Yunnan University

HS19-D4-AM1-330-008 | HS19-A001

Estimation of Surface Energy Fluxes in the Permafrost Region of the Tibetan Plateau Based on Situ Measurements and TESEBS Model

Jimin YAO¹^{*+}, Lianglei GU¹, Ren LI², Lin ZHAO², Yongjian DING^{1,3} ¹Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, ²Chinese Academy of Sciences, ³University of Chinese Academy of Sciences

HS07 / The Third Pole Environment -Hydrometeorological Processes and Human Dimension

Thu - 01 Aug | MR329

Time	08:30-10:30
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Chair(s) Petrus (Peter) VAN OEVELEN, *Global Energy and Water Exchanges (GEWEX)*

HS07-D4-AM1-329-001 | HS07-A004

Estimation of River Discharge Solely from Remote-sensing Derived Data Lei WANG¹⁵⁺, Arthur SICHANGI¹ ¹Chinese Academy of Sciences

HS07-D4-AM1-329-002 | HS07-A007

Impact of Lake Outburst on Permafrost Change in Hoh Xil Area on the Qinghai-Tibet Plateau, China Changwei XIE^{1#+} ¹Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences

HS07-D4-AM1-329-003 | HS07-A008 (Invited)

Understanding the Integrated Hydrological Regimes over the Tibetan Plateau: Flow, Sediment and Reactive Transport Fan ZHANG^{1*+}, Xiaonan SHI¹, Chen ZENG¹, Xiong XIAO¹, Guanxing WANG¹ ¹Chinese Academy of Sciences

HS07-D4-AM1-329-004 | HS07-A012

Investigation on Mountain Glacier Ice Storage of "Pakistan Water Tower" and its Changes During 2000-2016 Combine Ground and Satellite Observation Yinsheng ZHANG^{1‡+}, Xiaojuan ZOU¹, Haifeng GAO¹ ¹Chinese Academy of Sciences

HS07-D4-AM1-329-005 | HS07-A002

Shrinking "Water Tower" in Central Asia Yaning CHEN^{1#+}, Zhi LI², Gonghuan FANG² ¹Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, ²Chinese Academy of Sciences

HS07-D4-AM1-329-006 | HS07-A003

Regionalization of Land Surface Heat Fluxes and Evapotranspiration over Heterogeneous Landscape of the Third Pole

Yaoming MA^{1#+}, Cunbo HAN¹, Binbin WANG¹ ¹Chinese Academy of Sciences

HS06 / Water-related Hazards and Their Forecasting and Warning

Thu - 01 Aug | MR328

- Time 08:30-10:30
- Chair(s) Gwo-Fong LIN, National Taiwan University Jui-Yi HO, National Science and Technology Center for Disaster Reduction

HS06-D4-AM1-328-001 | HS06-A002 (Invited)

Analyzing the Influence of Gully on Urban Flooding Through Coupled Overland–gully–sewer Flow Model Jiun-Huei JANG^{1#+}

¹National Cheng Kung University

HS06-D4-AM1-328-002 | HS06-A006

Characterization and Risk Assessment of Drought Hazards in Guangdong Province, China Yongqin David CHEN1,2#+

¹The Chinese University of Hong Kong, Shenzhen, ²The Chinese University of Hong Kong

HS06-D4-AM1-328-003 | HS06-A012

Applying High Resolution Satellite Rainfall Product in the **Operational Flash Flood Forecasting System** Apimook MOOKTAREE1#+, Ticha LOLUPIMAN², Theerapol CHAROENSUK², Watin THANATHANPHON², Narongrit LUANGDILOK², Sathit CHANTIP², Piyamarn SISOMPHON² ¹Hydro-Informatics Institute, ²Hydro and Agro Informatics Institute

HS06-D4-AM1-328-004 | HS06-A007

Monitoring and Prediction of Flood Events Using Online **Community Data**

Jeongha LEE1,2+, Seok Hwan HWANG2#, Byung-Hwa OH1,2 ¹University of Science and Technology, ²Korea Institute of Civil Engineering and Building Technology

HS06-D4-AM1-328-005 | HS06-A009

Data Driven Flood Forecasting Model with Hybrid Activation Function - A Case Study for Hangang River, South Korea Hyung-Ju YOO1+, Dong Hyun KIM1, Hong-Teak KIM1, Seungoh LEE1#

¹Hongik University

HS06-D4-AM1-328-006 | HS06-A003

A Discussion on the Intertial Forces in Urban Flood Simulation Tien-Hao CHANG1#+, Jiun-Huei JANG1 ¹National Cheng Kung University

HS06-D4-AM1-328-007 | HS06-A004

Practice of Employing Vibration-based Scour Detection **Technology in a Field Application** Xiao-Qin LIU1#+, Yung-Bin LIN1, Kuo-Chun CHANG2 ¹National Center for Research on Earthquake Engineering, ²National Taiwan University

HS06-D4-AM1-328-008 | HS06-A019

Assessment of Flood Risk in a Coastal City Due to the Combined Impact of Extreme Rainfall and Storm Surge B. SRIDHARAN¹, Soumendra Nath KUIRY^{1#+} ¹Indian Institute of Technology Madras

PS09 / In Cosmic Dust We Truly Trust

Thu - 01 Aug | MR310

Time 08:30-10:30 Chair(s) Hsiang-Wen HSU, University of Colorado Boulder

PS09-D4-AM1-310-001 | PS09-A009 (Invited)

Dust Environment on Asteroid Surfaces Explored by Sample **Return Spacecraft and Landers** Hajime YANO1,2#+

¹Japan Aerospace Exploration Agency, ²Massachusetts Institute of Technology

PS09-D4-AM1-310-002 | PS09-A007 (Invited)

The Surficial Dust Environment at the Asteroid Bennu and **Implications for Electrostatic Dust Motion** Christine HARTZELL^{1#+}, Michael ZIMMERMAN², Dante LAURETTA3, OSIRIS-REx TEAM4 ¹University of Maryland, ²The Johns Hopkins University Applied Physics Laboratory, ³The University of Arizona, ⁴University of Arizona

PS09-D4-AM1-310-003 | PS09-A001

Laboratory Measurements of Initial Conditions of **Electrostatically Lofted Dust Particles on Airless Bodies** Xu WANG1#+, Noah HOOD1, Anthony CARROLL1, Ryan MIKE1, Hsiang-Wen HSU¹, Mihaly HORANYI¹ ¹University of Colorado Boulder

PS09-D4-AM1-310-004 | PS09-A008 (Invited)

Interstellar Dust as Learned from AKARI Takashi ONAKA1#+ ¹Meisei University

PS09-D4-AM1-310-005 | PS09-A011 (Invited)

Interstellar Dust, Polarization and Grain Alignment Thiem HOANG1#+ ¹Korea Astronomy and Space Science Institute

PS09-D4-AM1-310-006 | PS09-A014 (Invited)

Evolution of Dust Revealed by High-sensitivity IR Spectroscopy with SPICA Issei YAMAMURA1#, Takafumi OOTSUBO1+ ¹Japan Aerospace Exploration Agency

PS09-D4-AM1-310-007 | PS09-A005

The 13C/12C Ratio in the Dust of Comet 67P/Churyumov-Gerasimenko John PAQUETTE1#+, Martin HILCHENBACH1, Cecile ENGRAND², Nicolas FRAY³ ¹Max Planck Institute for Solar System Research, ²Center for Nuclear Science and Matter Sciences, ³Interuniversity Laboratory of Atmospheric Systems

PS09-D4-AM1-310-008 | PS09-A016

The Widespread Presence of Nanometer-size Dust Grains in the Interstellar Medium of Galaxies Yanxia XIE1#+ ¹Peking University

AS43 / Progress and Challenge in Light Scattering and Radiative Transfer About Clouds and Aerosols Thu - 01 Aug | MR311

Time 08:30-10:30

Chair(s) Bingqi YI, Sun Yat-sen University Husi LETU, Chinese Academy of Sciences

AS43-D4-AM1-311-001 | AS43-A001 (Invited)

Cloud Longwave Scattering: A Missing Link in Current Models for Realistic Atmosphere and Surface Radiative Couplings

Xianglei HUANG1#+, Yi-Hsuan CHEN1, Xiuhong CHEN1, Ping YANG², Wuyin LIN³

¹University of Michigan, ²Texas A&M University, ³Brookhaven National Laboratory

AS43-D4-AM1-311-002 | AS43-A003 (Invited)

Towards a New Generation of Physically Consistent Ice Crystal Scattering Models Anthony BARAN^{1#+} ¹Met Office & University of Hertfordshire

AS43-D4-AM1-311-003 | AS43-A009 (Invited) **Aerosol Radiative Effects on Cloud Remote Sensing** Chuanfeng ZHAO^{1#+} ¹Beijing Normal University

AS43-D4-AM1-311-004 | AS43-A002

Optical Modeling of Atmospheric Aerosols in a Super-spheroidal Space: A Review Lei BI¹⁵⁺ ¹Zhejiang University

AS43-D4-AM1-311-005 | AS43-A004

Impact of Aerosol Vertical Profile and Optical Parameters on the Accuracy of Satellite AOD Retrieval Jing L1^{1#+} ¹Peking University

AS43-D4-AM1-311-006 | AS43-A012

Aerosol Composition and Vertical Profile Retrievals Using Multi-angle, Hyperspectral Measurements of the Oxygen A-band Vijay NATRAJ^{1‡+}, Zhao-Cheng ZENG¹, Tianhao LE¹, Feng XU¹, Stanley SANDER¹, Yuk YUNG¹ ¹California Institute of Technology

AS43-D4-AM1-311-007 | AS43-A011

Estimation of Surface Shortwave Radiation from Himawari-8 Satellite Measurement Husi LETU^{1#+} ¹Chinese Academy of Sciences

AS43-D4-AM1-311-008 | AS43-A010

Assessment of the Cloud Properties in Atmospheric Reanalysis with Satellite Cloud Observations Bin YAO^{1#+}, Chao LIU¹ ¹Nanjing University of Information Science & Technology

AS27 / Mountain and Island Effects on Airflow, Precipitation, Weather Systems, and Climate

Thu - 01 Aug | MR327

 Time
 08:30-10:30

 Chair(s)
 Cheng-Ku YU, National Taiwan University

AS27-D4-AM1-327-001 | AS27-A017 (Invited)

Improvement of the Heavy Orographic Rainfall Retrievals in the GSMaP Algorithm for Microwave Radiometers Considering Cloud and Precipitation Processes Shoichi SHIGE^{1±+}, Munehisa YAMAMOTO¹ ¹Kyoto University

AS27-D4-AM1-327-002 | AS27-A002 (Invited)

The Early Collapse of the 2017 Lincoln Sea Ice Arch in Response to Orographic Wind Forcing Along Nares Strait Kent MOORE^{1‡+}, Kaitlin MCNEIL² ¹University of Toronto Mississauga, ²University of Toronto

AS27-D4-AM1-327-003 | AS27-A001

Importance of Terrain Representation in Simulating a Heavy-rain-producing, Stationary Convective System: A Case Study Tetsuya TAKEMI^{1‡+} ¹Kyoto University

AS27-D4-AM1-327-004 | AS27-A006

Statistical Characteristics of Taiwan Rainbands in the Outer Typhoon Environment Che-Yu LIN^{1#+}, Cheng-Ku YU¹ ¹National Taiwan University

AS27-D4-AM1-327-005 | AS27-A009

Exploring Topographic Effects and Their Seasonal Variations on Fine Spatial Scale Rainfall Distribution over Mountainous Terrain Using Statistical Methods: Mae Sa, Northern Thailand Han TSENG¹⁺⁺, Russell YOST¹, Yin-Phan TSANG¹, Alan ZIEGLER² ¹University of Hawaii at Manoa, ²National University of Singapore

AS27-D4-AM1-327-006 | AS27-A015

Effects of Three-dimensional Terrain Features on Rainfall Intensity and Distribution Wei-Fan LIU^{1#+}, Cheng-Ku YU¹ ¹National Taiwan University

AS02 / Climate Change and Tropical Climatic Hazards in Asia Oceania

Thu - 01 Aug | MR302

Time08:30-10:30Chair(s)Yuriy KULESHOV, Bureau of Meteorology

AS02-D4-AM1-302-001 | AS02-A002

WMO Space-based Weather and Climate Extremes Monitoring Demonstration Project (SEMDP): First Outcomes of Regional Cooperation on Drought and Heavy Precipitation Monitoring for Australia and South-East Asia Yuriy KULESHOV^{1,2#+}

¹Bureau of Meteorology, ²Royal Melbourne Institute of Technology

AS02-D4-AM1-302-002 | AS02-A006

Impact of Solar Radio Flux on Precipitation in China Yan SONG^{1‡+}, Zhicai LI², Ziniu XIAO³, Yu GU⁴ ¹China Meteorological Administration, ²Shanxi Climate Centre, ³Chinese Academy of Sciences, ⁴University of California, Los Angeles

AS02-D4-AM1-302-003 | AS02-A010

Future Changes in Precipitation Extremes over South Peninsular India as Investigated from NEX-GDDP Model Simulations Koteswararao KUNDETI^{1#+}, Savita PATWARDHAN¹, Ashwini KULKARNI¹ ¹Indian Institute of Tropical Meteorology

AS02-D4-AM1-302-004 | AS02-A009

Environment Quality and Climate Change in Asia: From the 20th to the 21st Century Venkatachalam RAMASWAMY^{1#+}, Yi MING¹ ¹National Oceanic and Atmospheric Administration

AS02-D4-AM1-302-005 | AS02-A014

MERRA-2 Data and Analytic Services at NASA GES DISC for Climate Extremes Study

Suhung SHEN^{1,2#+}, Dana OSTRENGA^{3,4}, Bruce VOLLMER³, Angela LI³, David MEYER¹

¹NASA Goddard Space Flight Center, ²George Mason University, ³NASA Goddard Earth Sciences Data and Information Services Center, ⁴Adnet Systems

AS02-D4-AM1-302-006 | AS02-A013

Investigating West North Pacific Typhoons in a High-resolution Climate Model Kevin REED^{1#+}, Xiaoning WU¹, Julio BACMEISTER² ¹Stony Brook University, ²National Center for Atmospheric Research

AS02-D4-AM1-302-007 | AS02-A015

Understanding Heat Extremes in China: From Synoptics to Climate Change Ming LUO^{1‡+}, Gabriel LAU² ¹Sun Yat-sen University, ²The Chinese University of Hong Kong

AS02-D4-AM1-302-008 | AS02-A001

Climate Risk and Early Warning Systems (CREWS): Enhancing Drought Monitoring and Early Warning Systems for Papua New Guinea Yuriy KULESHOV^{1,2#+} ¹Bureau of Meteorology, ²Royal Melbourne Institute of Technology

SS04 / Oceans

Thu - 01 Aug | MR301

Time08:30-10:30Chair(s)Jack KAYE, NASA Earth Science Division

SS04-D4-AM1-301-001 | SS04-A001 (Invited)

The North Atlantic Aerosols and Marine Ecosystems Study (NAAMES) Michael BEHRENFELD^{1#+} ¹Oregon State University

SS04-D4-AM1-301-002 | SS04-A002 (Invited)

Observations and Model Assimilation Using GCOM-C/SGLI and Himawari-8/AHI in the Western Pacific Ocean Hiroshi MURAKAMI^{1#+}, Misako KACHI¹, Nodoka ONO¹, Yukio KURIHARA¹, Yasumasa MIYAZAWA², Toru MIYAMA², Tsutomu HIHARA², Hidenori AIKI³, Shun OHISHI³ ¹Japan Aerospace Exploration Agency, ²Japan Agency for Marine-Earth Science and Technology, ³Nagoya University

SS04-D4-AM1-301-003 | SS04-A003 (Invited)

Korea's Geostationary Ocean Color Program - Toward Transboundary Collaboration Young-Je PARK^{1‡+}, Seongick CHO¹, Hee-Jeong HAN¹ ¹Korea Institute of Ocean Science and Technology

SS04-D4-AM1-301-004 | SS04-A004 (Invited)

COral Reef Airborne Laboratory: A New Perspective on Coral Reefs Eric HOCHBERG^{1#+} ¹Bermuda Institute of Ocean Sciences

OS13 / General and Multidisciplinary Oceanography

Thu - 01 Aug | Nicoll 1

Time08:30-10:30Chair(s)Serena LEE, Griffith University

OS13-D4-AM1-Nicoll 1-001 | OS13-A002

High-precision Positioning and Navigation Method for Ocean Applications with BeiDou Short Message Communication Zhiteng ZHANG¹⁺, Bofeng LI^{1#} ¹Tongji University

OS13-D4-AM1-Nicoll 1-002 | OS13-A003

Acoustic Imaging of Multibeam Water Column Data and its Application in the Marine Science Investigation Qiuhua TANG^{1#+} ¹Ministry of Natural Resources

OS13-D4-AM1-Nicoll 1-003 | OS13-A005

Examining the Annual Bloom Intensity of the Giant Jellyfish Off the Coast of Korea Based on Lagrangian Particle Tracking Method Young-Heon JO^{1#+} ¹Pusan National University

OS13-D4-AM1-Nicoll 1-004 | OS13-A006

Internal Waves and Mixing Around the Luzon Strait Akie SAKAI¹⁵⁺, Tomoharu SENJYU², Eisuke TSUTSUMI², Takeshi MATSUNO¹, Takahiro ENDO² ¹Kyushu University, ²Research Institute for Applied Mechanics

OS13-D4-AM1-Nicoll 1-005 | OS13-A007

Monitoring of Phytoplankton Blooms in the Western Subarctic Pacific by Autonomous Ocean Observation Platforms Tetsuichi FUJIKI¹⁵⁺, Shigeki HOSODA¹, Naomi HARADA¹ ¹Japan Agency for Marine-Earth Science and Technology

OS13-D4-AM1-Nicoll 1-006 | OS13-A001

Temporal and Vertical Variations of Phytoplankton Observed by BGC-Argo Floats in the South China Sea Xiaogang XING^{1#+}, Guoqiang QIU², Emmanuel BOSS³, Haili WANG² ¹Second Institute of Oceanography, ²Xiamen University, ³University of Maine

OS13-D4-AM1-Nicoll 1-007 | OS13-A008

Investigation on Utilizing the Seasonally Varying Wave Power Along Indian Coastline Using an Integrated Wave Energy Absorption System Krishnendu PUZHUKKIL^{1‡+} ¹Indian Institute of Technology Bombay

OS13-D4-AM1-Nicoll 1-008 | OS13-A010

Wind Power on Oceanic Near-inertial Oscillations in the Global Ocean Estimated from Surface Drifters Yongzheng LIU^{1#+}, Zhao JING¹, Lixin WU¹ ¹Ocean University of China

BG07 / Recent Trend of Land and Ocean Biogeochemical Cycles in Asia BG08 / Arsenic and Other Hazardous Elements in Water Sources

Thu - 01 Aug | MR300

Time 08:30-10:30

Chair(s) Masayuki KONDO, Chiba University Laura RICHARDS, University of Manchester Prosun BHATTACHARYA, KTH Royal Institute of Technology Devanita GHOSH, Indian Institute of Science

BG07-D4-AM1-300-001 | BG07-A003

Indian Ocean Acidification and Trends Vinu VALSALA^{1*+}, Sreeush M. G.¹, Sreenivas PENTAKOTA¹, Raghu MURTUGUDDE²

¹Indian Institute of Tropical Meteorology, ²University of Maryland

BG07-D4-AM1-300-002 | BG07-A004

Estimation of Community Compensation Depth for Ocean Carbon Models: Comparison Between Biological Parameterization and Bayesian Statistical Inversion Sreeush M.G.^{1*+}, Vinu VALSALA¹, Sreenivas PENTAKOTA¹, Prasad K.V.S.R.², Raghu MURTUGUDDE³ ¹Indian Institute of Tropical Meteorology, ²Andhra University, ³University of Maryland

BG07-D4-AM1-300-003 | BG07-A002

The Net Methane Footprint of Plantation Forestry on Tropical Peatland – East Sumatra, Indonesia

Chandrashekhar DESHMUKH^{1#+}, Dony JULIUS², Nardi NARDI², Ankur DESAI³

¹Asia Pacific Resources International Limited (APRIL), Indonesia, ²APRIL Group, ³University of Wisconsin-Madison

BG07-D4-AM1-300-004 | BG07-A005

Methane Growth Rate Variation in Regards of its Sources and Sinks During 2000-2016

Jagat S. H. BISHT¹⁺⁺, Naveen CHANDRA¹, Prabir K. PATRA^{1,2}, Akihiko ITO³, Shinji MORIMOTO², Taku UMEZAWA³, Edward J. DLUGOKENCKY⁴, Greet JANSSENS-MAENHOUT⁵, Masayuki TAKIGAWA¹, Shingo WATANABE¹, Ryo FUJITA⁶, Shuji AOKI², Naoko SAITOH⁷, Nobuko SAIGUSA³

¹Japan Agency for Marine-Earth Science and Technology, ²Tohoku University, ³National Institute for Environmental Studies, ⁴NOAA ESRL Global Monitoring Division, ⁵Institute for Environment and Sustainability, ⁶Imperial College London, ⁷Chiba University

BG07-D4-AM1-300-005 | BG07-A006

Paris Agreement: Tracking of Greenhouse Gases (CO2, CH4 and N2O) by Inverse Modelling

Prabir K. PATRA^{1,2#+}, Naveen CHANDRA¹, Jagat S. H. BISHT¹ ¹Japan Agency for Marine-Earth Science and Technology, ²Tohoku University

BG08-D4-AM1-300-006 | BG08-A002

Directed Synthesis, Comprehensive Characterization and Exploration of Dearsenification Potential of B-cyclodextrin Fortified Hydrous Iron-zirconium Hybrid Oxide Indranil SAHA^{1F+}, Bibhuti Bhushan SHOW², Abir GHOSH³

¹Sripat Singh College, ²Jadavpur University, ³Calcutta University

BG08-D4-AM1-300-007 | BG08-A009

Colorimetric Determination for Selective Adsorption of Zn and Other Hazardous Metals in Aqueous Media Using Ion Imprinted Polymer

Sunyoung BAE^{1#+}, Yelin LEE¹, Soyoung AHN¹, Hyeyoung JUNG¹ ¹Seoul Women's University

ST02 / Sun-earth System Response to Extreme Solar Events

Thu - 01 Aug | MR309

Time 08:30-10:30

Chair(s) Balan NANAN, Shandong University Nat GOPALSWAMY, NASA Goddard Space Flight Center

ST02-D4-AM1-309-001 | ST02-A014 (Invited)

Origin and Early Dynamics of Extreme Flux Ropes Near the Sun

Tingyu GOU¹⁺⁺, Rui LIU¹, Bernhard KLIEM², Yuming WANG¹, Astrid VERONIG³

¹University of Science and Technology of China, ²University of Potsdam, ³University of Graz

ST02-D4-AM1-309-002 | ST02-A008 (Invited)

Extreme Interplanetary Coronal Mass Ejections and Their Impact at Earth E. KILPUA^{1#+} ¹University of Helsinki

ST02-D4-AM1-309-003 | ST02-A009 (Invited)

Extreme-value Geoelectric Amplitude and Polarization Across the Northeast United States Jeffrey LOVE^{1#+}, Greg LUCAS¹, Paul BEDROSIAN¹, Anna KELBERT¹

¹US Geological Survey

ST02-D4-AM1-309-004 | ST02-A019 (Invited)

Different Flux Evolutions of Relativistic Electrons of the Outer Belt Associated with High-speed Coronal Hole Streams; Arase and Van Allen Probes Observations

Yoshizumi MIYOSHI^{1‡+}, Satoshi KURITA¹, Ryuho KATAOKA², Shing SAITO¹, Vania JORDANOVA³, Iku SHINOHARA⁴, Takefumi MITANI⁴, Takeshi TAKASHIMA⁴, Nana HIGASHIO⁴, Satoshi KASAHARA⁵, Shoichiro YOKOTA⁶, Tomoaki HORI¹, Kunihiro KEIKA⁵, Yoshiya KASAHARA⁷, Shoya MATSUDA⁴, Atsushi KUMAMOTO⁸, Fuminori TSUCHIYA⁸, Masafumi SHOJI¹, Ayako MATSUOKA⁴, Mariko TERAMOTO¹, Harlan SPENCE⁹, Geoffrey REEVES³, Daniel BAKER¹⁰

¹Nagoya University, ²National Institute of Polar Research, ³Los Alamos National Laboratory, ⁴Japan Aerospace Exploration Agency, ⁵The University of Tokyo, ⁶Osaka University, ⁷Kanazawa University, ⁸Tohoku University, ⁹University of New Hampshire, ¹⁰University of Colorado Boulder

ST02-D4-AM1-309-005 | ST02-A006

Penetration of Stormtime Electric Fields to the Low Latitude Ionosphere as Observed with HF Doppler Sounders and Magnetometers

Takashi KIKUCHI^{1‡+}, Kumiko HASHIMOTO², Ichiro TOMIZAWA³

¹Nagoya University, ²Kibi International University, ³University of Electro-Communications

ST02-D4-AM1-309-006 | ST02-A007

Characteristics of Temporal and Spatial Evolutions of the Ionosphere and Plasmasphere During Major Geomagnetic Storms Observed by GNSS-TEC and Arase Observations Atsuki SHINBORI^{1#+}, Yuichi OTSUKA¹, Takuya SORI¹, Takuya TSUGAWA², Michi NISHIOKA², Atsushi KUMAMOTO³, Fuminori TSUCHIYA³, Shoya MATSUDA⁴, Yoshiya KASAHARA⁵, Ayako MATSUOKA⁴

¹Nagoya University, ²National Institute of Information and Communications Technology, ³Tohoku University, ⁴Japan Aerospace Exploration Agency, ⁵Kanazawa University

ST02-D4-AM1-309-007 | ST02-A001

A Derived Parameter IpsDst of Dst Storms and its Space Weather Applications Balan NANAN^{1,2#+} ¹Shandong University, ²The University of Sheffield

IG17 / Carbon Dioxide Sequestration and Utilization (CCUS) in Energy Geosciences

Thu - 01 Aug | MR323

Time 08:30-10:30

Chair(s) Qi LI, Chinese Academy of Sciences Matthew MYERS, Commonwealth Scientific and Industrial Research Organisation

IG17-D4-AM1-323-001 | IG17-A008 (Invited)

Adsorption Associated Geological Carbon Storage: From Laboratory to Field Xu TANG^{1#+}

¹University of Nottingham

IG17-D4-AM1-323-002 | IG17-A002 (Invited)

Calculation of the Wettability of CO2/Brine/Mineral System by Augmented Young Laplace Equation

Masashige SHIGA¹⁺⁺, Masao SORAI¹, Masaatsu AICHI², Hiromi HONDA²

¹National Institute of Advanced Industrial Science and Technology, ²The University of Tokyo

IG17-D4-AM1-323-003 | IG17-A006 (Invited)

Impacts of CO2 Sorption and Dehydration Induced Matrix Swellings on the Alteration of Caprock Sealing Efficiency Jianguo WANG^{1#+}, Huimin WANG¹, Bowen HU¹ ¹China University of Mining and Technology

IG17-D4-AM1-323-004 | IG17-A003

Change in Sealing Performance of Carbonate-containing Artificial Caprocks Masao SORAI^{1#+} ¹National Institute of Advanced Industrial Science and Technology

IG17-D4-AM1-323-005 | IG17-A007

Micro-CT Characterization of the Reaction Between Wellbore Cement and Sulfuric Acid in CO2 Geological Storage Environment Manguang GAN¹⁺, Liwei ZHANG¹^r, Xiuxiu MIAO¹, Yan WANG¹, Xiaochun LI¹

¹Chinese Academy of Sciences

IG17-D4-AM1-323-006 | IG17-A020

CO2-brine-rock Interaction and its Impacts on Sealing Efficiency of Sand Caprock Bin LIU^{1#+}

¹Northeast Petroleum University

IG17-D4-AM1-323-007 | IG17-A021

Evaluating the Mud Weight Window in Drilling Engineering Based on Response Surface Analysis Method Xiaochen WEI¹⁺, Jiawei SHEN¹, Xiangjun LIU¹⁺, Lixi LIANG¹ ¹Southwest Petroleum University

AS14 / The Science and Prediction of Tropical Cyclones

Thu - 01 Aug | Nicoll 3

Time 08:30-10:30

Chair(s) Dong-Hyun CHA, Ulsan National Institute of Science and Technology

AS14-D4-AM1-Nicoll 3-001 | AS14-A029 (Invited)

Comparison of Tropical Cyclone Forecast Skills Between Global and Regional Models and Application of Spectral Nudging Jihong MOON¹, Dong-Hyun CHA^{1#+}

¹Ulsan National Institute of Science and Technology

AS14-D4-AM1-Nicoll 3-002 | AS14-A017 (Invited)

Topographic Effects of a Mountain Range on Westbound Tropical Cyclones Under Vertical Wind Shears as Revealed by Idealized Simulations Ching-Yuang HUANG^{1#+}

¹National Central University

AS14-D4-AM1-Nicoll 3-003 | AS14-A039

Empirical Models for Predicting the Seasonal Accumulated Tropical Cyclone Kinetic Energy in Taiwan and Philippine Regions

Mong-Ming LU^{1#+}, Ching-Teng LEE², Ana Liza S. SOLIS³, Chung-Hsiung SUI¹

¹National Taiwan University, ²Central Weather Bureau, ³Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)

AS14-D4-AM1-Nicoll 3-004 | AS14-A042 (Invited)

Advancements in Hurricane Prediction with NOAA's Next Generation Forecast System Jan-Huey CHEN^{1,2#+}

¹University Corporation for Atmospheric Research, ²NOAA Geophysical Fluid Dynamics Laboratory

AS14-D4-AM1-Nicoll 3-005 | AS14-A005

Multivariate Ensemble Sensitivity Analysis for Typhoon Haiyan (2013) Lili LEI^{1#+} ¹Nanjing University

AS14-D4-AM1-Nicoll 3-006 | AS14-A019

Prediction Skill of West Pacific Tropical Cyclones in the Met Office Operational Model

Nicholas KLINGAMAN^{1,2*+}, Kevin HODGES², Simon PEATMAN³

¹National Centre for Atmospheric Science, ²University of Reading, ³University of Leeds

AS14-D4-AM1-Nicoll 3-007 | AS14-A022

Tropical Cyclone Removal Technique Based on Potential Vorticity Inversion and its Application in Climate Diagnostics Sho ARAKANE1#+, Huang-Hsiung HSU1 ¹Academia Sinica

AS14-D4-AM1-Nicoll 3-008 | AS14-A024 (Invited)

Thermodynamic Characteristics and Temporal Evolutions of the Tropical Cyclones Throughout Their Life-cycles Zhen ZENG1#+, Richard ANTHES1, Hailing ZHANG1, Sergey SOKOLOVSKIY1

¹University Corporation for Atmospheric Research

ST05 / From the Heliosphere to Interstellar Exploration

Thu - 01 Aug | MR308

Time 11:00-12:30

Chair(s) George HO, The Johns Hopkins University Applied Physics Laboratory Linghua WANG, Peking University

ST05-D4-AM2-308-001 | ST05-A002 (Invited)

Near-term Interstellar Probe: The First Dedicated Step Ralph MCNUTT1#+, Robert WIMMER-SCHWEINGRUBER2, Mike GRUNTMAN³, Stamatios KRIMIGIS⁴, Edmond ROELOF⁴, Pontus BRANDT⁴, Elena PROVORNIKOVA⁴, Carey M. LISSE⁴, Kirby RUNYON⁴, Kathleen MANDT⁴, Abigail RYMER⁴, Steven VERNON⁴, Michael PAUL⁴, Robert STOUGH⁵

¹Johns Hopkins Applied Physics Laboratory, ²University of Kiel, ³University of Southern California, ⁴The Johns Hopkins University Applied Physics Laboratory, ⁵NASA Marshall Space Flight Center

ST05-D4-AM2-308-002 | ST05-A003 (Invited)

Interstellar Heliosphere Probes (IHPs)

Qiugang ZONG1#+ ¹Peking University

ST05-D4-AM2-308-003 | ST05-A006 (Invited)

Scientific Opportunities of the Next Neptune Flyby in a New Interstellar Probe Mission

Wing-Huen IP1#+, Lianghai XIE2, Ying LIAO2, Liang Liang YU2, Hua-Shan SHI1

¹National Central University, ²Macau University of Science and Technology

ST05-D4-AM2-308-004 | ST05-A007 (Invited)

Exploring the Unseen: Search for Extra-heliospheric ENAs on an Interstellar Probe

Stas BARABASH1#+, Martin WIESER1, Vladislav IZMODENOV2 ¹Swedish Institute of Space Physics, ²Space Research Institute

ST05-D4-AM2-308-005 | ST05-A001

PKU Energetic Neutral Atom Imager

Linghua WANG1#+, Qiugang ZONG1, Yongfu WANG1, Hongfei CHEN¹, Zou HONG¹, Xiangqian YU¹, Yuguang YE¹, Gordon HURFORD², John SAMPLE³, George PARKS²

¹Peking University, ²University of California, Berkeley, ³Montana State University

ST05-D4-AM2-308-006 | ST05-A009

How Can We Investigate the Physical Properties of Density Structures Outside of the Heliopause? Jeewoo PARK1#+, Harald KUCHAREK2, Adam SZABO3, Nikolaos PASCHALIDIS4

¹University of Maryland, Baltimore County, ²University of New Hampshire, ³National Aeronautics and Space Administration, ⁴NASA Goddard Space Flight Center

ST14 / Space Weather Forecasts: Methods, Issues and Future Development

Thu - 01 Aug | MR304

Time 11:00-12:30

Chair(s) Larry PAXTON, The Johns Hopkins University Applied Physics Laboratory Tzu-Wei FANG, University of Colorado Boulder

ST14-D4-AM2-304-001 | ST14-A015 (Invited)

Global-scale Observations of the Limb and Disk (GOLD) **Mission Measurements and Space Weather Forecasting** Richard EASTES1#+

¹University of Colorado Boulder

ST14-D4-AM2-304-002 | ST14-A022 (Invited)

Day-to-day Variability of Ionospheric Pre-reversal **Enhancement Under Constant Solar and Geomagnetic** Conditions Hanli LIU1#+

¹National Center for Atmospheric Research

ST14-D4-AM2-304-003 | ST14-A005 (Invited)

Penetration Electric Field During Geomagnetic Storm: Observations and Mechanisms Chaosong HUANG1#+ ¹Air Force Research Laboratory

ST14-D4-AM2-304-004 | ST14-A016

Assimilating Thermospheric Data Across a Variety of Spatial and Temporal Scales Marcin PILINSKI1#+, G. CROWLEY2, Matt SEATON2, Eric SUTTON1

¹University of Colorado Boulder, ²Atmospheric & Space Technology Research Associates

ST14-D4-AM2-304-005 | ST14-A023

Space Weather in the Ionosphere Larry PAXTON^{1#+}, Yongliang ZHANG¹, Hyosub KIL¹, Robert SCHAEFER1

¹The Johns Hopkins University Applied Physics Laboratory

ST14-D4-AM2-304-006 | ST14-A001

A Scheme for Forecasting Severe Space Weather Balan NANAN^{1,2#+}, Y EBIHARA³, Ruth SKOUG⁴, Tulasi Ram SUDARSANAM⁵

¹Shandong University, ²The University of Sheffield, ³Kyoto University, ⁴Los Alamos National Laboratory, ⁵Indian Institute of Geomagnetism

HS07 / The Third Pole Environment -Hydrometeorological Processes and Human Dimension

Thu - 01 Aug | MR329

 Time
 11:00-12:30

 Chair(s)
 Yaoming MA, Chinese Academy of Sciences

HS07-D4-AM2-329-001 | HS07-A015

Evaluation of Snow Depth and Snow Cover over the Tibetan Plateau in Global Reanalyses Using In-situ and Satellite Remote Sensing Observations

Yvan ORSOLINI^{1#+}, Martin WEGMANN², Emanuel DUTRA³, Boqi LIU⁴, Gianpaolo BALSAMO⁵, Kun YANG⁶, Patricia DE ROSNAY⁵, Congwen ZHU⁴, Wenli WANG⁷, Retish SENAN⁵ ¹Norwegian Institute of Air Research, ²Alfred Wegener Institute, ³Universidade de Lisboa, ⁴Chinese Academy of Meteorological Sciences, ⁵European Centre for Medium-Range Weather Forecasts, ⁶Chinese Academy of Sciences, ⁷Beijing Normal University

HS07-D4-AM2-329-002 | HS07-A022

Missions and Key Questions of New Asian Monsoon Hydroclimatological Project, Post MAHASRI

Toru TERAO^{1#+}, Shinjiro KANAE², Jun MATSUMOTO^{3,4} ¹Kagawa University, ²Tokyo Institute of Technology, ³Tokyo Metropolitan University / JAMSTEC, ⁴Japan Agency for Marine-Earth Science and Technology

HS07-D4-AM2-329-003 | HS07-A024

The WCRP Water for the Food Baskets Grand Challenge and the Third Pole Environment

Petrus (Peter) VAN OEVELEN^{1#+}, Roy RASMUSSEN², Jan POLCHER³, Alexander RUANE⁴

¹Global Energy and Water Exchanges (GEWEX), ²National Center for Atmospheric Research, ³Dynamic Meteorology Laboratory, ⁴NASA Goddard Institute for Space Studies

HS07-D4-AM2-329-004 | HS07-A025

Evaluations and Improvements of GLDAS2.0 and GLDAS2.1 Forcing Data for Applying in Tibetan Plateau Regions Junguo LIU¹⁵⁺ ¹Southern University of Science and Technology

HS07-D4-AM2-329-005 | HS07-A027

How Does Temporal Trend of Reference Evapotranspiration over the Tibetan Plateau Change with Elevation? Xiaotao ZHANG^{1#+}

¹Chinese Academy of Sciences

HS28 / Hydrological Impacts of Typhoons on Watershed Ecosystems

Thu - 01 Aug | MR328

Time 11:00-12:30

Chair(s) Shinya OCHIAI, Kanazawa University Yung-Chia CHIU, National Taiwan Ocean University

HS28-D4-AM2-328-001 | HS28-A003 (Invited)

High Resilience of a Subtropical Forest Watershed in Taiwan to Frequent Typhoon Disturbance

Teng-Chiu LIN¹, Chung-Te CHANG², Jr-Chuan HUANG^{3#+} ¹National Taiwan Normal University, ²Tunghai University, ³National Taiwan University

HS28-D4-AM2-328-002 | HS28-A013 (Invited)

Variability of Suspension Transport and Event Sand Deposition in the Beppu Bay, the Southwestern Japan Tomohisa IRINO¹⁵⁺, Ken IKEHARA², Masanobu YAMAMOTO¹, Michinobu KUWAE³

¹Hokkaido University, ²National Institute of Advanced Industrial Science and Technology, ³Ehime University

HS28-D4-AM2-328-003 | HS28-A010

Change of Recharge Process and Age of Spring and Groundwater Caused by Thinning and Rainstorms in a Headwater Catchment Underlain by Sedimentary Rock Maki TSUJIMURA¹⁵⁺, Isabela SILVEIRA BAPTISTA¹, Koki KASHIWA¹, Yuichi ONDA¹, Marino HIRAOKA¹ ¹University of Tsukuba

HS28-D4-AM2-328-004 | HS28-A002

The Coupled Effects of Typhoon, Non-typhoon Events and Landcover Gradients on Nutrient Budgets in a Mountainous Watershed, Northern Taiwan Chung-Te CHANG^{1*+}, Yu-Ting SHIH², Ting-Chang HSU³, Teng-Chiu LIN⁴ ¹Tunghai University, ²National Taiwan University, ³Academia Sinica, ⁴National Taiwan Normal University

HS28-D4-AM2-328-005 | HS28-A006

Typhoon-induced Soil Erosion Inferred from Reservoir Sediment Observation in a Mud Rock Area in Southern Taiwan

Shinya OCHIAI^{1#+}, J.C. LIN², Kenji KASHIWAYA¹ ¹Kanazawa University, ²National Taiwan University

PS01 / Impact Cratering: Bridging the Gap in Nature, Experiment, Modeling, and Application Thu - 01 Aug | MR310

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Time	11:00-12:30

Chair(s) Meng-Hua ZHU, Macau University of Science and Technology

PS01-D4-AM2-310-001 | PS01-A001 (Invited)

Not Just Fresh Basalt: Other Protoliths in Addition to Bedrock Basalt from Lonar Crater, India Shawn WRIGHT^{1#+} ¹The University of Hong Kong

PS01-D4-AM2-310-002 | PS01-A004 (Invited)

Multi-wavelength Observations of Ejecta Blanket Degradation on the Lunar Surface

Angela STICKLE^{1*+}, Wes PATTERSON¹, Joshua CAHILL¹, Benjamin GREENHAGEN¹, Jennifer GRIER² ¹The Johns Hopkins University Applied Physics Laboratory, ²Planetary Science Institute

PS01-D4-AM2-310-003 | PS01-A002

Thickness Distribution of Primary Ejecta for Schrödinger Basin Luyuan XU^{1*+}, Minggang XIE¹ ¹Macau University of Science and Technology

PS01-D4-AM2-310-004 | PS01-A003 (Invited)

Automatic Extraction of Lunar Central Peak Craters by Deep Learning

Satoshi HARA1#+, Hiroka INOUE2, Mitsuo YAMAMOTO2, Yukio YAMAMOTO², Makiko OHTAKE², Hisashi OTAKE², Tetsuya ARAKI¹, Masaharu HIROTA³, Hiroshi ISHIKAWA¹ ¹Tokyo Metropolitan University, ²Japan Aerospace Exploration Agency, ³Okayama University of Science

PS01-D4-AM2-310-005 | PS01-A005

Relax of the Large-scale Impact Structures on the Moon Xiangyu XI1#+, Meng-Hua ZHU1 ¹Macau University of Science and Technology

AS29 / Observations and Representations of **Cloud-related Processes for Improving Models**

Thu - 01 Aug | MR311

Time 11:00-12:30

Chair(s) Chuanfeng ZHAO, Beijing Normal University

AS29-D4-AM2-311-001 | AS29-A011 (Invited)

Evaluation of Cloud Microphysics Development and Resolution Refinement in Global Models with Regionally Refined Mesh and Super Parameterization in Simulating Mesoscale Convective Systems

Jiwen FAN1#+, Zhe FENG1, Guangxing LIN1, Jingyu WANG1, Kai ZHANG¹, Erika ROESLER², Benjamin HILLMAN² ¹Pacific Northwest National Laboratory, ²Sandia National Laboratory

AS29-D4-AM2-311-002 | AS29-A001

CMIP6 Climate Model Improvements in Clouds and Water Vapor Simulations Jonathan JIANG1#+, Hui SU1

¹Jet Propulsion Laboratory, California Institute of Technology

AS29-D4-AM2-311-003 | AS29-A002

Arctic Clouds Simulated by a Multiscale Modeling Framework with an Advanced Third-order Turbulence Closure Kuan-Man XU1#+, Zhujun LI2 ¹NASA Langley Research Center, ²Science Systems and Applications,

Inc

AS29-D4-AM2-311-004 | AS29-A003

Estimation of Errors in 1D Solar Radiation Transfer Solution for Different Cloud Regimes

Qi TANG1#+, Michael PRATHER2, Shaocheng XIE1 ¹Lawrence Livermore National Laboratory, ²University of California Irvine

AS29-D4-AM2-311-005 | AS29-A004

Cloud Retrieval from Surface Using Zenith Radiances Pradeep KHATRI^{1#+}, Hironobu IWABUCHI¹, Tadahiro HAYASAKA1, Hitoshi IRIE2, Tamio TAKAMURA2, Akihiro YAMAZAKI3, Alessandro DAMIANI2 ¹Tohoku University, ²Chiba University, ³Japan Meteorological Agency

AS29-D4-AM2-311-006 | AS29-A009

The New CERES Fluxbycldtyp Data and its Simulator: Algorithm, Validation and Application

Moguo SUN1#+, David DOELLING2, Zachary EITZEN1, Cathy NGUYEN1, Joshua WILKINS1, Pamela MLYNCZAK1 ¹Science Systems and Applications, Inc., ²NASA Langley Research Center

AS27 / Mountain and Island Effects on Airflow, Precipitation, Weather Systems, and Climate

Thu - 01 Aug | MR327

Time 11:00-12:30 Chair(s) Tetsuya TAKEMI, Kyoto University

AS27-D4-AM2-327-001 | AS27-A019

Characteristics of Orographic Rainfall in the Southern Slope of the Meghalaya Plateau, Northeast India Fumie MURATA1#+, Toru TERAO2, Hatsuki FUJINAMI3, Kaustav CHAKRAVARTY⁴, Hiambok J. SYIEMLIEH⁵, Laitpharlang CAJEE⁵, Laitpharlang CAJEE⁵

¹Kochi University, ²Kagawa University, ³Nagoya University, ⁴Indian Institute of Tropical Meteorology, ⁵North-Eastern Hill University

AS27-D4-AM2-327-002 | AS27-A014

Surface Wind Verification of Meso-scale Dynamic Downscaling System (MDDS) over Complex Topography in Taiwan Jen-Hsin TENG1#+, Chien-Hsuen WANG1, Chiou BING KUI1, Yuanfu XIE² ¹Central Weather Bureau, ²Chinese Academy of Meteorological Sciences

AS27-D4-AM2-327-003 | AS27-A008

Spatial Variations and Mechanisms of Wintertime Orographic Precipitation over the Da-Tun Mountain Lin-Wen CHENG1#+, Cheng-Ku YU1 ¹National Taiwan University

AS27-D4-AM2-327-004 | AS27-A023

Orographic Effects of Heavy Rainfall Event in Mei-Yu Season Mu-Qun HUANG1#+, Pay-Liam LIN1, Yuh-Lang LIN2 ¹National Central University, ²North Carolina A&T State University

AS27-D4-AM2-327-005 | AS27-A007

Climate Modulation of the Tibetan Plateau with Large Topography on Haze in Eastern China by Thermal Forcing Xiaodan MA^{1#+}, Xiangde XU², Tianliang ZHAO¹, Xiaoyun SUN¹ ¹Nanjing University of Information Science & Technology, ²Chinese Academy of Meteorological Sciences

AS27-D4-AM2-327-006 | AS27-A018

Climate Change Impact on the Relationship Between Extreme Precipitation Events and Temperature over Japan Sridhara NAYAK1#+, Tetsuya TAKEMI1 ¹Kyoto University

AS08 / The Science and Prediciton of Heavy **Precipitation and Floods**

Thu - 01 Aug | MR302

Time 11:00-12:30

Chair(s) Johnny CHAN, City University of Hong Kong Xindong PENG, Chinese Academy of Meteorological Sciences

AS08-D4-AM2-302-001 | AS08-A021 (Invited)

Global Rainfall Assessment of a Non-hydrostatic Model on **Quasi-uniform Grids**

Xindong PENG1#+, Xiaohan LI1, Yifan ZHAO1 ¹Chinese Academy of Meteorological Sciences

AS08-D4-AM2-302-002 | AS08-A032

Relationships Between Typhoon Track, Size, and Motion Speed and Probabilistic Quantitative Precipitation Forecast Performance

Hsu-Feng TENG¹⁺, James DONE¹, Ying-Hwa KUO², Cheng-Shang LEE $^{\rm 3}$

¹National Center for Atmospheric Research, ²National Center for Atmospheric Research/University Corporation for Atmospheric Research, ³National Taiwan University

AS08-D4-AM2-302-003 | AS08-A028

Observed Linkage of Extreme Hourly Rainfall Frequency to Urbanizations over the Yangtze River Delta Xiaoling JIANG¹⁺, Yali LUO^{1‡}, Da-Lin ZHANG² ¹Chinese Academy of Meteorological Sciences, ²University of Maryland

AS08-D4-AM2-302-004 | AS08-A031

Projection of the Daily Precipitation Using CDF-T Method at Meteorological Observation Site Scale Wu WEI¹⁵⁺ ¹Shanghai Climate Center

PS20 / Outer Planet Satellites: Geologic Processes and Habitability

Thu - 01 Aug | MR301

Time 11:00-12:30

Chair(s) Anezina SOLOMONIDOU, ESA European Space Agency Mathieu CHOUKROUN, Jet Propulsion Laboratory, California Institute of Technology

PS20-D4-AM2-301-001 | PS20-A004 (Invited)

Cryovolcanism in Icy Ocean Worlds: Perspective from Models of Radial Structure Steven VANCE^{1\$+}

¹Jet Propulsion Laboratory, California Institute of Technology

PS20-D4-AM2-301-002 | PS20-A005 (Invited)

Eruption Characteristics on Jupiter's Moon Io from Observations of Active Lava Lakes at Kilauea, Hawaii Jani RADEBAUGH¹⁺⁺, Rosaly LOPES-GAUTIER² ¹Brigham Young University, ²Jet Propulsion Laboratory, California Institute of Technology

PS20-D4-AM2-301-003 | PS20-A003

Microwave Radiometer Sensing of Volcanism Ralph LORENZ^{1#+} ¹The Johns Hopkins University Applied Physics Laboratory

PS20-D4-AM2-301-004 | PS20-A002

Habitability of Hydrocarbon Worlds: Titan and Beyond Rosaly LOPES^{1#+}, Michael MALASKA¹ ¹Jet Propulsion Laboratory, California Institute of Technology

PS20-D4-AM2-301-005 | PS20-A001

Monitoring Titan's Surface Albedo Changes with Radiative Transfer Analysis of VIMS Data for 10 Years Anezina SOLOMONIDOU^{1#+}, Athena COUSTENIS², Alice LE GALL³, Michael MALASKA⁴, Rosaly LOPES-GAUTIER⁴, Samuel BIRCH⁵, Sebastien RODRIGUEZ⁶, Kenneth LAWRENCE⁷, Pierre DROSSART⁸, Christos MATSOUKAS⁹

¹ESA European Space Agency, ²Paris Observatory/ French National Center for Scientific Research/ PSL Research University, ³Laboratoire Atmosphères, Milieux, Observations Spatiales (LATMOS-UVSQ), ⁴Jet Propulsion Laboratory, California Institute of Technology, ⁵Cornell University, ⁶Institut de Physique du Globe de Paris (IPGP), CNRS-UMR 7154, Université Paris-Diderot, ⁷NASA Jet Propulsion Laboratory, ⁸Observatoire de Paris/ French National Center for Scientific Research/ Univ. Paris 06/ Univ. Paris-Diderot, ⁹KTH-Royal Institute of Technology

PS20-D4-AM2-301-006 | PS20-A008

On the Genesis and Detectability of Organic Chemistry in Hypervelocity Impact Ice Spectra

Zach ULIBARRI^{1‡*}, Tobin MUNSAT¹, Bernd ABEL², Richard DEE¹, Mihaly HORANYI¹, David JAMES¹, Sascha KEMPF¹, Zoltan KUPIHAR¹, Zoltan STERNOVSKY¹

¹University of Colorado Boulder, ²Leibniz Institute of Surface Engineering

BG08 / Arsenic and Other Hazardous Elements in Water Sources

Thu - 01 Aug | MR300

Time	11:00-12:30
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Chair(s) Abhijit MUKHERJEE, Indian Institute of Technology Kharagpur Devanita GHOSH, Indian Institute of Science Laura RICHARDS, University of Manchester

BG08-D4-AM2-300-001 | BG08-A019 (Invited)

Sediment Color Tool as an Innovative Tool for Local Drillers for Safe Water Provision in Rural Bangladesh Prosun BHATTACHARYA^{1#+} ¹KTH Royal Institute of Technology

BG08-D4-AM2-300-002 | BG08-A012

Implementation Challenges to Effective Groundwater Remediation in Contrasting Arsenic-impacted Areas Laura RICHARDS^{1#+}, Neha PARASHAR², Debapriya MONDAL³, Ashok GHOSH², Gianfranco PINCETTI ZUNIGA¹, David POLYA¹

¹University of Manchester, ²Mahavir Cancer Sansthan and Research Centre, ³University of Salford

BG08-D4-AM2-300-003 | BG08-A016

Regional Scale Microbiome Study of Arsenic Contaminated Groundwater of West Bengal, India: Identification of Key Players Involved in As Biogeochemical Cycling Anumeha SAHA¹⁺, Abhishek GUPTA¹, Balaram MOHAPATRA¹, Sufia K KHANNAM², Pinaki SAR^{1#} ¹Indian Institute of Technology Kharagpur, ²National Institute of Technology Durgapur

ST02 / Sun-earth System Response to Extreme Solar Events

Thu - 01 Aug | MR309

Time	11:00-12:30
Chair(s)	Qing-He ZHANG, Shandong University Yoshiharu OMURA, Kyoto University

ST02-D4-AM2-309-001 | ST02-A013 (Invited)

Enhanced N+ and Molecular Ion Outflows from the Topside Ionosphere During Magnetic Storms and Superstorms: First Observations and Magnetospheric Implications Andrew YAU^{1‡+}, Andrew HOWARTH¹, Victoria FOSS¹ ¹University of Calgary

ST02-D4-AM2-309-002 | ST02-A005 (Invited)

Severe GPS Phase and Amplitude Scintillations at High Latitudes During the 2015 St. Patrick's Day Storm Yaqi JIN^{1#+}, Kjellmar OKSAVIK² ¹University of Oslo, ²University of Bergen

ST02-D4-AM2-309-003 | ST02-A003 (Invited)

Impact of Solar EUV, Particle Precipitation and Nitric Oxide on Thermospheric Density Decrease Yongliang ZHANG¹²⁺, Larry PAXTON¹, Gang LU², Jeng-Hwa YEE¹

¹The Johns Hopkins University Applied Physics Laboratory, ²National Center for Atmospheric Research

ST02-D4-AM2-309-004 | ST02-A017

Ionospheric Responses to the October 2002 Storms over Millstone Hill Libo LIU^{1±+}, Huijun LE¹, Yiding CHEN¹ ¹Chinese Academy of Sciences

ST02-D4-AM2-309-005 | ST02-A020

Investigation of Equatorial Plasma Bubbles During 2015 St. Patrick's Day Storm by Data Assimilation and Model Simulations

P. K. RAJESH^{1#+}, Charles LIN¹, Chia-Hung CHEN¹, Chuan Ping LIEN², Tomoko MATSUO², Joe HUBA³

¹National Cheng Kung University, ²University of Colorado, Boulder, ³Naval Research Laboratory

IG18 / Tropical Hydroclimate Changes Since the Late Pleistocene

Thu - 01 Aug | MR323

- Time 11:00-12:30
- Chair(s) Guangxin LIU, Nanyang Technological University Shufang YUAN, Nanyang Technological University

IG18-D4-AM2-323-001 | IG18-A004 (Invited)

Climate and Vegetation Change in Central Sulawesi During the Pleistocene and Holocene James RUSSELL^{1#+} ¹Brown University

IG18-D4-AM2-323-002 | IG18-A016

Paleoenvironment of Southwestern Taiwan Inferred from Stable Isotope Records of Archaeological Crassostrea Oyster Shells Since Middle Holocene Horng-Sheng MII¹⁵⁺, Manh Ling NGUYEN¹, Kuang-Ti LI²

¹National Taiwan Normal University, ²Academia Sinica

IG18-D4-AM2-323-003 | IG18-A003

Tropical Vegetation and Soil CO2 Productivity Changes in Central Indonesia During the Past 30,000 Years Shufang YUAN^{1#+}, Xianfeng WANG¹, Guangxin LIU¹, Hong-Wei CHIANG², Satria BIJAKSANA³, Xiuyang JIANG⁴, Imran UMAR⁵, Satrio WICAKSONO⁶, Minn Lin WONG⁷

¹Nanyang Technological University, ²National Taiwan University, ³Institut Teknologi Bandung, ⁴Fujian Normal University, ⁵Hasanuddin University, ⁶World Resources Institute, ⁷Earth Observatory Singapore

IG18-D4-AM2-323-004 | IG18-A007

Anthropogenic Influence on Monsoonal Rainfall and Vegetation in Southwestern China over the Past 300 Years Ke LIN^{1,2*+}, Wuhui DUAN³, Xianfeng WANG¹, Xinggong KONG⁴, Liangcheng TAN³, Chuan-Chou SHEN² ¹Nanyang Technological University, ²National Taiwan University, ³Chinese Academy of Sciences, ⁴Nanjing Normal University

IG18-D4-AM2-323-005 | IG18-A019

Spatial-temporal Variability of Streamflow in Major Asian Basins over the Past Four Centuries and Links to Climate Drivers

Hung NGUYEN^{1#+}, Sean TURNER², Stefano GALELLI¹ ¹Singapore University of Technology and Design, ²Pacific Northwest National Laboratory

IG18-D4-AM2-323-006 | IG18-A006

Why the Climate over Large Islands in the Maritime Continent was Wetter During the Mid-holocene Than Today? Yudha DJAMIL^{1#+}, Xianfeng WANG¹ ¹Nanyang Technological University

AS14 / The Science and Prediction of Tropical Cyclones

Thu - 01 Aug | Nicoll 3

 Time
 11:00-12:30

 Chair(s)
 Ralf TOUMI, Imperial College London Shu-Chih YANG, National Central University

AS14-D4-AM2-Nicoll 3-001 | AS14-A044 (Invited)

Airborne Eyewall Momentum Flux Measuremets in the South China Sea

Ralf TOUMI^{1±+}, Nathan SPARKS¹, Shuai WANG¹, K.K. HON², P.W. CHAN², T. C. LEE², Johnny CHAN³ ¹Imperial College London, ²Hong Kong Observatory, ³City University of Hong Kong

AS14-D4-AM2-Nicoll 3-002 | AS14-A046

Impact of Assimilating FORMOSAT-7/COSMIC-2 Radio Occultation on Tropical Cyclone Formation: Observing System Simulation Experiments Based on Hurricane Helene (2006) Shu-Chih YANG^{1#+}, Chih-Chien CHANG¹, Shu-Hua CHEN² ¹National Central University, ²University of California, Davis

AS14-D4-AM2-Nicoll 3-003 | AS14-A026

Quasi Real-time Observation of Typhoon and Thunderstorms Using Micro-satellites and Ground-based Lightning Networks Yukihiro TAKAHASHI^{1#+}, Mitsuteru SATO¹, Hisayuki KUBOTA¹, Kozo YAMASHITA², Tetsuro ISHIDA¹, Ellison CASTRO³, Loren ESTREBILLO¹, Purwadi PURWADI¹, Ryuto HASHIBA¹, Kazuhisa TSUBOKI⁴, Hiroyuki YAMADA⁵, Taro SHINODA⁴, Norio NAGAHAMA⁶

¹Hokkaido University, ²Ashikaga Institute of Technology, ³University of the Philippines, Diliman, ⁴Nagoya University, ⁵University of the Ryukyus, ⁶Meisei Electric

AS14-D4-AM2-Nicoll 3-004 | AS14-A037

Airborne Observation of Super Typhoon Trami in 2018 for Understanding the Mature Stage of Tropical Cyclone in the Philippine Sea

Hisayuki KUBOTA^{1#+}, Kazuhisa TSUBOKI², Hiroyuki YAMADA³, Yukihiro TAKAHASHI¹, Taro SHINODA², Tadayasu OHIGASHI⁴, Munehiko YAMAGUCHI⁵, Kosuke ITO³, Tetso NAKAZAWA⁵, Norio NAGAHAMA⁶, Kensaku SHIMIZU⁶, Mitsuteru SATO¹

¹Hokkaido University, ²Nagoya University, ³University of the Ryukyus, ⁴National Research Institute for Earth Science and Disaster Resilience, ⁵Japan Meteorological Agency, ⁶Meisei Electric

AS14-D4-AM2-Nicoll 3-005 | AS14-A050 (Invited)

Mid-tropospheric Relative Humidity and Tropical Cyclone Intensification Brian SODEN¹³⁺

¹University of Miami

AS14-D4-AM2-Nicoll 3-006 | AS14-A008

Remote Influence of Moisture Transport from the Kuroshio on the Development of Tropical Cyclones over the Western North Pacific in Boreal Fall Keita FUJIWARA^{1s+}, Ryuichi KAWAMURA¹, Tetsuya KAWANO¹ ¹Kyushu University

ST24 / Dynamic Coupling Between Waves and Plasmas in the Inner Magnetosphere and Its Feedback on Ionospheric Electrodynamics ST17 / The Dynamic Loss of Earth's Radiation Belts: from Loss in the Magnetosphere to Particle Precipitation in the Atmosphere

Thu - 01 Aug | MR308

Time 13:30-15:30

Chair(s) Natalia BUZULUKOVA, NASA Goddard Space Flight Center Allison JAYNES, The University of lowa Maria USANOVA, University of Colorado Boulder

ST24-D4-PM1-308-001 | ST24-A001

Simulations of Magnetosphere-ionosphere Coupling of Precipitating Electrons, Ionospheric Conductance, and Inner Magnetospheric Electric Fields

Margaret CHEN¹⁵⁺, Colby LEMON¹, James HECHT¹, George KHAZANOV², Joseph EVANS³, James ROEDER¹, Stephen KAEPPLER⁴

 ${}^1\!The\ Aerospace\ Corporation,\, {}^2\!NASA\ Goddard\ Space\ Flight\ Center,$

³Computational Physics, Inc., ⁴Clemson University

ST24-D4-PM1-308-002 | ST24-A006 (Invited)

MMS Observations of Magnetospheric Field Line Resonances Guan LE^{1**}, Peter CHI², Robert STRANGEWAY², Christopher RUSSELL², James SLAVIN³, Brian ANDERSON⁴, Rumi NAKAMURA⁵, Ferdinand PLASCHKE⁵, Roy B. TORBERT^{6,7} ¹National Aeronautics and Space Administration, ²University of California, Los Angeles, ³University of Michigan, ⁴The Johns Hopkins University Applied Physics Laboratory, ⁵Austrian Academy of Sciences, ⁶University of New Hampshire, ⁷Southwest Research Institute

ST24-D4-PM1-308-003 | ST24-A004

A New Ionosphere Conductivity Model with Comprehensive Ionospheric Dynamics and Solar and Magnetospheric Inputs Suk-Bin KANG¹⁺, Alex GLOCER², Mei-Ching FOK², Vladimir AIRAPETIAN³

¹NASA/GSFC, ²NASA Goddard Space Flight Center, ³American University

ST17-D4-PM1-308-004 | ST17-A002 (Invited)

Radiation Belt Electron Precipitation into the Atmosphere: Implications for Atmospheric Composition and Dynamics Miriam SINNHUBER¹⁵⁺

¹Karlsruhe Institute of Technology

ST17-D4-PM1-308-005 | ST17-A001 (Invited)

Very Low Frequency Transmitter Signals in the Magnetosphere Lunjin CHEN^{1#+} ¹The University of Texas at Dallas

ST17-D4-PM1-308-006 | ST17-A003

Wave-induced Loss of Electrons in the Inner Zone and Slot Region Jay ALBERT¹⁵⁺

¹Air Force Research Laboratory

ST17-D4-PM1-308-007 | ST17-A004

Intense Electron Precipitation Observed by Multiple Satellites on 7, 8 October 2018 Berhard BLAKE^{1#+}

¹The Aerospace Corporation

ST28 / Radio Heliophysics from Sun to Mud: How Radio Techniques can be Used to Study the Chain of Activity from Solar Origin to its Effects at Earth and Other Solar-System Bodies

Thu - 01 Aug | MR304

- Time 13:30-15:30
- Chair(s) Yihua YAN, Chinese Academy of Sciences Mario BISI, United Kingdom Research and Innovation -Science & Technology Facilities Council

ST28-D4-PM1-304-001 | ST28-A009 (Invited)

Tracing of Energetic Electron Beams in Solar Corona with Imaging Spectroscopy from MUSER Susanta Kumar BISOI^{1#+}, Yihua YAN^{1,2}, Linjie CHEN¹, Janardhan PADMANABHAN³

¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences, ³Physical Research Laboratory

ST28-D4-PM1-304-002 | ST28-A007

LOFAR and Arecibo Observations of Interplanetary Scintillation (IPS)

Oyuki CHANG^{1‡+}, Mario BISI¹, Richard FALLOWS², Alessandra Abe PACINI³

¹United Kingdom Research and Innovation - Science & Technology Facilities Council, ²ASTRON - The Netherlands Institute for Radio Astronomy, ³Arecibo Observatory

ST28-D4-PM1-304-003 | ST28-A011 (Invited)

The Design of Interplanetary Scintillation Telescope in China for Space Weather

Yihua YAN^{1,2#+}, Wei WANG¹, Linjie CHEN¹, Fei LIU¹, Lihong GENG¹, Zhijun CHEN¹

¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

ST28-D4-PM1-304-004 | ST28-A010

Preliminary Receiver Design for a New Interplanetary Scintillation (IPS) Telescope

Linjie CHEN¹⁵⁺, Wei WANG¹, Yihua YAN^{1,2}, Fei LIU¹, Lihong GENG¹

¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

ST28-D4-PM1-304-005 | ST28-A012

The UCSD Iterative Interplanetary Scintillation (IPS) Analysis Using an ENLIL 3-D MHD Model Kernel in Near Real Time Bernard JACKSON^{1#}, Paul HICK¹, Andrew BUFFINGTON¹, Dusan ODSTRCIL², Munetoshi TOKUMARU³, Nobuhiko NISHIMURA⁴, Mario BISI⁵⁺

¹University of California, San Diego, ²NASA Goddard Space Flight Center, ³Nagoya University, ⁴Institute for Space Earth Environmental Research, ⁵United Kingdom Research and Innovation - Science & Technology Facilities Council

ST28-D4-PM1-304-006 | ST28-A013

LOFAR4SpaceWeather (LOFAR4SW) – Increasing European Space-weather Capability with Europe's Largest Radio Telescope: Beyond the Preliminary Design Review (PDR) Mario BISI^{1#+}, Richard FALLOWS², Rene VERMEULEN², Stuart ROBERTSON¹, Mark RUITER², Nicole VILMER³, Hanna ROTHKAEHL⁴, Joris VERBIEST⁵, Peter GALLAGHER⁶, Michael OLBERG⁷, Tobia CAROZZI⁷, Michael LINDQVIST⁷, Eoin CARLEY⁸, Pieter BENTHEM², Paulus KRUGER², Maaijke MEVIUS²

¹United Kingdom Research and Innovation - Science & Technology Facilities Council, ²ASTRON - The Netherlands Institute for Radio Astronomy, ³Observatoire de Paris, ⁴Space Research Centre of Polish Academy of Sciences, ⁵Bielefeld University, ⁶Dublin Institute for Advanced Studies, ⁷Onsala Space Observatory, ⁸Trinity College Dublin

AS21 / Understanding Light-absorbing Carbon Aerosols Using Observations and Models

Thu - 01 Aug | MR303

Time	13:30-15:30
Chair(s)	Jianping GUO, Chinese Academy of Meteorological Sciences

Steve YIM, The Chinese University of Hong Kong

AS21-D4-PM1-303-001 | AS21-A019

The Impact of a New Multi-measurement Constrained, 4D Varying, Dataset of Global Fire Aerosols, on Atmospheric Loadings and Associated Radiative Forcing of Black Carbon Aerosols Jason COHEN^{1#+} ¹Sun Yat-sen University

AS21-D4-PM1-303-002 | AS21-A031 (Invited)

Formation and Optical Properties of Brown Carbon Aerosols Renyi ZHANG^{1*+}, Wilmarie MARRERO-ORTIZ¹, Zhuofei DU², Yuemeng JI³, Yuan WANG⁴, Min HU² ¹Texas A&M University, ²Peking University, ³Guangdong University of Technology, ⁴California Institute of Technology

AS21-D4-PM1-303-003 | AS21-A018

Modeling Atmospheric Age Distribution of Elemental Carbon Using a Regional Age-resolved Particle Representation Framework

Hongliang ZHANG^{1#+}, Hao GUO², Jianlin HU³, Qi YING⁴, Michael KLEEMAN⁵

¹Fudan University, ²Louisiana State University, ³Nanjing University of Information Science & Technology, ⁴Texas A&M University, ⁵University of California, Davis

AS21-D4-PM1-303-004 | AS21-A021 (Invited)

Interaction Between Absorbing Aerosols, Boundary-layer, and Convective Cloud Systems Zhanqing LI^{1,2#+}

¹University of Maryland, ²Beijing Normal University

AS21-D4-PM1-303-005 | AS21-A006

Feedback of Black Carbon Aerosol to Atmosphere During Polluted Weather

Yan YANG^{1#+}, Delong ZHAO¹, Chun ZHAO² ¹Beijing Weather Modification Office, ²University of Science and Technology of China

AS21-D4-PM1-303-006 | AS21-A013 (Invited)

Observation-based Estimates of the Mass Absorption Cross-section of Black and Brown Carbon and Their Contribution to Aerosol Light Absorption Sang-Woo KIM¹^{\$+}, Chaeyoon CHO¹, Meehye LEE², Saehee LIM², Wenzheng FANG³, Orjan GUSTAFSSON⁴, August ANDERSSON⁴, Rokjin J. PARK¹, Patrick SHERIDAN⁵ ¹Seoul National University, ²Korea University, ³East China Normal University, ⁴Stockholm University, ⁵National Oceanic and Atmospheric Administration

AS21-D4-PM1-303-007 | AS21-A008

Constraining Aging Processes of Black Carbon in the Community Atmosphere Model Using Environmental Chamber Measurements

Yuan WANG^{1*+}, Po-Lun MA², Jianfei PENG³, Renyi ZHANG³, Jonathan JIANG⁴, Richard EASTER², Yuk YUNG¹ ¹California Institute of Technology, ²Pacific Northwest National Laboratory, ³Texas A&M University, ⁴Jet Propulsion Laboratory, California Institute of Technology

AS21-D4-PM1-303-008 | AS21-A016

The Effects of Minor Structures on the Optical Properties of Black Carbon Aerosols

Shiwen TENG^{1#+}, Chao LIU¹, Martin SCHNAITER², Rajan K. CHAKRABARTY³, Fengshan LIU⁴ ¹Nanjing University of Information Science & Technology, ²Karlsruhe Institute of Technology, ³Washington University in St. Louis, ⁴National Research Council

HS26 / Changes in Cryospheric Hydrological Processes and Their Impacts on Sustainable Development

Thu - 01 Aug | MR330

 Time
 13:30-15:30

 Chair(s)
 Zhang SHIQIANG, Northwest University

HS26-D4-PM1-330-001 | HS26-A006 (Invited)

Slower Than GCM Predicted Permafrost Degradation by the End of the 21st Century Tingjun ZHANG^{1#+} ¹Lanzhou University

HS26-D4-PM1-330-002 | HS26-A005

Characteristics of Runoff Chemistry and its Influencing Factor in a Meltwater-dominated Dongkemadi Basin in Central Tibetan Plateau Tianding HAN^{1#+}, Jia QIN²

¹Chinese Academy of Sciences, ²Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences

HS26-D4-PM1-330-003 | HS26-A007

Estimated Glacier Meltwater and River Runoff Changes by Observed Glacier Change and Runoff in the Upper Reach of the Shule River Basin, Northeastern Edge of the Tibetan Plateau

Zhang SHIQIANG^{1#+} ¹Northwest University

HS26-D4-PM1-330-004 | HS26-A021

A Novel Approach for Mapping Permafrost in a Large Area Using Subregion Maps and Satellite Data Shuping ZHAO^{1#+}, Zhuotong NAN¹ ¹Nanjing Normal University

HS26-D4-PM1-330-005 | HS26-A009

Long-term Changes of Water Vapor Flux over the Qilian Mountain and Hexi Corridor Region During 1980 to 2017, Northwestern China

Zhihua ZHANG¹⁺, Qiudong ZHAO², Zhang SHIQIANG^{1‡}, Xiaowen ZHANG¹, Na WEI¹, Ting HUA¹ ¹Northwest University, ²Chinese Academy of Sciences

HS26-D4-PM1-330-006 | HS26-A008

Vulnerability and Adaptation of an Oasis Social-ecological System Affected by Glacier Change in an Arid Region of Northwestern China Jianping YANG^{1#+}

¹Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences

HS26-D4-PM1-330-007 | HS26-A004 (Invited)

Study on Water Internal Recycle Process and Mechanism in Typical Mountain Areas of Inland Basins, Northwest China: Progress and Challenge

Yongjian DING^{1,2#+}, Zhang SHIQIANG³ ¹Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, ²University of Chinese Academy of Sciences, ³Northwest University

HS26-D4-PM1-330-008 | HS26-A002

Dissolved Iron Supply from Asian Glaciers: Local Controls and a Regional Perspective Xiangying LI^{1#+}, Yongjian DING^{2,3}, Eran HOOD⁴, Raiswell

Xiangying Ll^{1**}, Yongjian DING^{2,3}, Eran HOOD⁴, Raiswell ROBERT⁵

¹Hohai University, ²Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, ³University of Chinese Academy of Sciences, ⁴University of Alaska Southeast, ⁵University of Leeds

HS18 / Ecohydrological Processes and Modelling in a Changing Environment

Thu - 01 Aug | MR329

Time	13:30-15:30
Chair(s)	Huimin LEI, Tsinghua University Yuting YANG, Tsinghua University

HS18-D4-PM1-329-001 | HS18-A008

Hydrologic Spaces for Catchment Water Balance Edoardo DALY^{1#+}, Salvatore CALABRESE², Jun YIN², Amilcare PORPORATO² ¹Monash University, ²Princeton University

HS18-D4-PM1-329-002 | HS18-A023

Ecohydrological Modeling-based Ecosystem Service Evaluation Yiping WU^{1*+} ¹Xi'an Jiaotong University

HS18-D4-PM1-329-003 | HS18-A016

Interactions Between Topography, Permafrost, and Vegetation in Siberian Larch Forest: A Simulation Study Hisashi SATO¹⁺⁺ ¹Japan Agency for Marine-Earth Science and Technology

HS18-D4-PM1-329-004 | HS18-A020 (Invited)

Reforestation Mitigates the Rising Temperature in the Eastern US: Mechanism and Implication Quan ZHANG^{1‡+}, Kimberly A. NOVICK² ¹Wuhan University, ²Indiana University

HS18-D4-PM1-329-005 | HS18-A013

Study on Forest Ecological Hydrology in Qilian Mountains Zhibin HE^{1#+} ¹Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences

HS18-D4-PM1-329-006 | HS18-A003 (Invited)

Analyzing the Impact of Climate Change and Human Activities on Vegetation Changes in a Headwater Catchment Using a Distributed Model Bing GAO^{1#+}, Dawen YANG² ¹China University of Geosciences, ²Tsinghua University

HS18-D4-PM1-329-007 | HS18-A010

Investigations on the Diffusion Characteristics of Kandelia Mangrove Seedling in Northern Taiwan Wei-Bin XU¹⁺, Shang-Shu SHIH^{1‡} ¹National Taiwan University

HS14 / Exploration of Atmospheric Water Resources

Thu - 01 Aug | MR328

Time 13:30-15:30

Chair(s) Haiyun SHI, Southern University of Science and Technology Ji CHEN, The University of Hong Kong Bellie SIVAKUMAR, University of New South Wales

HS14-D4-PM1-328-001 | HS14-A001

A New Classification of Large-scale Climate Regimes Around the Tibetan Plateau Based on Seasonal Moisture Transport Patterns

Ping WANG¹, Xin-Gang DAI^{2#+}

¹Chinese Academy of Meteorological Sciences, ²Institute of Atmospheric Physics, Chinese Academy of Sciences

HS14-D4-PM1-328-002 | HS14-A003

Does Summer Precipitation in China Exhibit Significant Periodicities?

Yanfang SANG^{1*+}, Vijay SINGH², Ping XIE³, Yanxin ZHU¹, Xinxin LI¹

¹Chinese Academy of Sciences, ²Texas A&M University, ³Wuhan University

HS14-D4-PM1-328-003 | HS14-A004

Cloud Water Interception in Hawai'i: Project Overview & Preliminary Results of Fog and CWI Patterns Han TSENG^{1#+}, Thomas GIAMBELLUCA¹, John DELAY² ¹University of Hawaii at Manoa, ²University of Hawaii

HS14-D4-PM1-328-004 | HS14-A005

A Quantitative Evaluation Method of Atmospheric Water Resource and its Precipitation Conversion Analysis Jiaye LI^{1,2+}, Tiejian LI^{2#}, Ji CHEN¹ ¹The University of Hong Kong, ²Tsinghua University

HS14-D4-PM1-328-005 | HS14-A009

Theoretical and Experimental Study on the Mechanism of Precipitation Stimulation by Acoustic Wave Mengyao WANG^{1#+}, Ji CHEN¹ ¹The University of Hong Kong

HS14-D4-PM1-328-006 | HS14-A012

Analysis of Temporal and Spatial Distribution of Atmospheric Water Resources in the Tibetan Plateau Using WRF Xinzheng TANG^{1#+}, Ji CHEN¹ ¹The University of Hong Kong

PS14 / Small Body Explorations by Current and Future Missions

Thu - 01 Aug | MR310

 Time
 13:30-15:30

 Chair(s)
 Jian-Yang LI, Planetary Science Institute

PS14-D4-PM1-310-001 | PS14-A002 (Invited)

Ceres: The Dawn Legacy Chris RUSSELL^{1#+}, Carol RAYMOND² ¹University of California, Los Angeles, ²Jet Propulsion Laboratory, California Institute of Technology

PS14-D4-PM1-310-002 | PS14-A011

Exploration of Asteroid Ryugu by Hayabusa2

Makoto YOSHIKAWA¹⁵⁺, Šei-Ichiro WATANABE², Yuichi TSUDA¹, Satoru NAKAZAWA¹, Fuyuto TERUI¹, Takanao SAIKI¹, Tra-Mi HO³, Aurelie MOUSSISOFFYS⁴, Seiji SUGITA⁵, Noriyuki NAMIKI⁶, Kohei KITAZATO⁷, Satoshi TANAKA¹, Masahiko ARAKAWA⁸, Shogo TACHIBANA⁵, Masateru ISHIGURO⁹, Hitoshi IKEDA¹, Tatsuaki OKADA¹, Hirohide DEMURA⁷, Masanao ABE¹, Kazuhisa FUJITA¹, Yukio YAMAMOTO¹, Ralf JAUMANN³, Jean-Pierre BIBRING¹⁰, Matthias GROTT³, Karl-Heinz GLASSMEIER¹¹

¹Japan Aerospace Exploration Agency, ²Nagoya University, ³German Aerospace Center, ⁴National Centre for Space Studies, ⁵The University of Tokyo, ⁶National Astronomical Observatory of Japan, ⁷The University of Aizu, ⁸Kobe University, ⁹Seoul National University, ¹⁰University of Paris-Sud, ¹¹Technische Universitat Braunschweig

PS14-D4-PM1-310-003 | PS14-A027 (Invited)

Topography of Large Craters and Equatorial Bulge of 162173 Ryugu

Noriyuki NAMIKI¹⁺⁺, Takahide MIZUNO², Hiroki SENSHU³, Hirotomo NODA¹, Koji MATSUMOTO¹, Naru HIRATA⁴, Ryuhei YAMADA⁴, Yoshiaki ISHIHARA⁵, Hitoshi IKEDA², Hiroshi ARAKI¹, Keiko YAMAMOTO¹, Shinsuke ABE⁶, Fumi YOSHIDA³, Arika HIGUCHI¹, Sho SASAKI⁷, Shoko OSHIGAMI¹, Seiitsu TSURUTA¹, Kazuyoshi ASARI¹, Seiichi TAZAWA¹, Makoto SHIZUGAMI¹, Hideaki MIYAMOTO⁸, Hirohide DEMURA⁴, Jun KIMURA⁷, Toshimichi OTSUBO⁹

¹National Astronomical Observatory of Japan, ²Japan Aerospace Exploration Agency, ³Chiba Institute of Technology, ⁴The University of Aizu, ⁵National Institute for Environmental Studies, ⁶Nihon University, ⁷Osaka University, ⁸The University of Tokyo, ⁹Hitotsubashi University

PS14-D4-PM1-310-004 | PS14-A028

Results of Hayabusa2 Near Infrared Spectroscopy at Asteroid Ryugu

Takahiro IWATA¹⁴⁺, Kohei KITAZATO², Masanao ABE¹, Makiko OHTAKE¹, Yusuke NAKAUCHI¹, Moe MATSUOKA¹, Kohji TSUMURA³, Shuji MATSUURA⁴, Lucie RIU¹

¹Japan Aerospace Exploration Agency, ²The University of Aizu, ³Tohoku University, ⁴Kwansei Gakuin University

PS14-D4-PM1-310-005 | PS14-A004 (Invited)

Thermophysical Properties of Asteroid 162173 Ryugu Observed by TIR on Hayabusa2

Tatsuaki OKADA1#+, Tetsuya FUKUHARA2, Satoshi TANAKA1, Makoto TAGUCHI², Takehiko ARAI³, Naoya SAKATANI¹, Yuri SHIMAKI¹, Hiroki SENSHU⁴, Hirohide DEMURA⁵, Toru KOUYAMA⁶, Tomohiko SEKIGUCHI⁷, Jorn HELBERT⁸, Thomas MUELLER9, Axel HAGERMANN10

¹Japan Aerospace Exploration Agency, ²Rikkyo University, ³Ashikaga University, ⁴Chiba Institute of Technology, ⁵The University of Aizu, ⁶National Institute of Advanced Industrial Science and Technology, ⁷Hokkaido University of Education, ⁸German Aerospace Center, ⁹Max Planck Institute for Extraterrestrial Physics, ¹⁰University of Stirling

PS14-D4-PM1-310-006 | PS14-A016 (Invited)

Towards Understanding the Complex Near-nucleus Gas and Dust Environment of Comet 67P/Churyumov-Gerasimenko Xian SHI1#+, Jessica AGARWAL1, Martin ROSE2, Xuanyu HU3, Marco FULLE⁴, Holger SIERKS¹

¹Max Planck Institute for Solar System Research, ²PI-DSMC, ³Technical University Berlin, ⁴National Institute for Astrophysics

PS14-D4-PM1-310-007 | PS14-A006

Identification and Characterization of Active Regions on the Nucleus of Comet 67P/Churyumov-Gerasimenko Hong Van HOANG1#+, Sonia FORNASIER2, Pedro HASSELMANN³, Eric QUIRICO⁴

¹Université Grenoble Alpes, ²Paris Diderot University, ³Laboratoire d'Etudes Spatiales et d'Instrumentation en Astrophysique, 4French National Center for Scientific Research

AS28 / Theory, Observations and Modelling of Maritime Continent Weather and Climate

Thu - 01 Aug | MR311

Muhammad Eeqmal HASSIM, Centre for Climate Chair(s) Research Singapore, Meteorological Service Singapore Joshua QIAN, Meteorological Service Singapore

AS28-D4-PM1-311-001 | AS28-A002 (Invited)

The Barrier Effect of the Maritime Continent for the Madden-Julian Oscillation

Xianan JIANG1#+, Hui SU2, Duane WALISER2 ¹University of California, Los Angeles, ²Jet Propulsion Laboratory, California Institute of Technology

AS28-D4-PM1-311-002 | AS28-A006 (Invited)

Maritime Continent Barrier Effect on the MJO: Role of the **Maritime Continent Land Convection**

Daehyun KIM1#+, Min-Seop AHN1, Yoo-Geun HAM2, Sungsu PARK³

¹University of Washington, ²Chonnam National University, ³Seoul National University

AS28-D4-PM1-311-003 | AS28-A004 (Invited)

A Zonal Projection of Monsoons and the Variability in the Propagation of the Madden-Julian Oscillation Events Across the Maritime Continent

Samson HAGOS1#+, L. Ruby LEUNG1, Chidong ZHANG2, Karthik BALAGURU¹, Casey BURLEYSON¹

¹Pacific Northwest National Laboratory, ²National Oceanic and Atmospheric Administration

AS28-D4-PM1-311-004 | AS28-A005 (Invited)

MJO Propagation Through the Maritime Continent Under the Influences of ENSO and QBO

Chidong ZHANG1#+, Guiwan CHEN2 ¹National Oceanic and Atmospheric Administration, ²Chinese Academy of Sciences

AS28-D4-PM1-311-005 | AS28-A008

Modulation of Diurnal Precipitation in the Maritime Continent by MJO and ENSO

Tieh-Yong KOH1#+, Ricardo FONSECA2, Chee-Kiat TEO3 ¹Singapore University of Social Sciences, ²Khalifa University, ³Centre for Climate Research Singapore

AS28-D4-PM1-311-006 | AS28-A003 (Invited)

Numerical Studies with NICAM on Mechanisms for Northward Propagation of the Boreal Summer Intraseasonal Oscillation Kanta NAKAE1, Masaki SATOH1#+, Daisuke TAKASUKA1 ¹The University of Tokyo

AS28-D4-PM1-311-007 | AS28-A016

On Precipitation Biases in CMIP5 Models over the Maritime **Continent Region** Raju PATHAK^{1#+}, Sandeep SAHANY¹, Saroj Kanta MISHRA¹ ¹Indian Institute of Technology Delhi

AS28-D4-PM1-311-008 | AS28-A018

Climate-Biogeosphere-Anthroposphere Interactions over the Maritime-Continent Peatland Manabu D. YAMANAKA1,2#+ ¹Research Institute for Humanity and Nature, ²Kobe University

AS15 / Urban Climate

Thu - 01 Aug | MR327

Time	13:30-15:30
Chair(s)	Shaojing JIANG, Beijing Normal University
	Jizeng DU, Beijing Normal University

AS15-D4-PM1-327-001 | AS15-A001

Cooling an Arid City: The Energy-water Trade-offs of Urban Irrigation Jiachuan YANG1#+, Zhihua WANG2 ¹The Hong Kong University of Science and Technology, ²Arizona State University

AS15-D4-PM1-327-002 | AS15-A008 (Invited)

Uncertainties in the Impact of Urbanization on Heavy Miao YU1#+

¹China Meteorological Administration

AS15-D4-PM1-327-003 | AS15-A018 (Invited)

Urban Heat Island of San Antonio, Texas, from 1991 to 2010 Daniel BOICE1#+, Michelle GARZA2 ¹Scientific Studies and Consulting, ²San Antonio River Authority

AS15-D4-PM1-327-004 | AS15-A006

Urban Heat Island and Mitigation Potential with Cool Roofs in Kansas City Metropolitan Area Fengpeng SUN1#+ ¹University of Missouri - Kansas City

AS15-D4-PM1-327-005 | AS15-A005

Ceilometer Retrieval of Boundary Layer Height in Seoul and Evaluation of the Dilution Effect on Air Pollution Junhong LEE¹⁺, Jinkyu HONG^{1‡}, Je-Woo HONG¹, Keunmin LEE¹, Erik VELASCO², Yong Jae LIM³, Jae-Bum LEE³, Kipyo NAM³, Jihoon PARK³

¹Yonsei University, ²Independent Researcher, ³National Institute of Environmental Research

AS15-D4-PM1-327-006 | AS15-A014

Bangkok's PM 2.5 Air Quality in January 2019 and Weather Observations

Supaluk VIMALA^{1#+}, Karnjana SAENGPRAPAI¹, Sasiprapa TANYONG², Kanoksri SARINNAPAKORN²

¹Hydro-Informatics Institute (Public Organization), ²Hydro and Agro Informatics Institute

AS15-D4-PM1-327-007 | AS15-A004

Seasonal Variations in the Surface Energy and CO2 Flux over a High-rise, High-density, Residential Urban Area in the East Asian Monsoon Region Je-Woo HONG¹⁺, Jinkyu HONG¹⁺ ¹Yonsei University

AS08 / The Science and Prediciton of Heavy Precipitation and Floods

Thu - 01 Aug | MR302

 Time
 13:30-15:30

 Chair(s)
 Huiling YUAN, Nanjing University

AS08-D4-PM1-302-001 | AS08-A026 (Invited)

Multi-model Ensemble Forecast of Precipitation Based on the Method for Object-based Diagnostic Evaluation Xiefei ZHI^{1s+}, Luying JI¹ ¹Nanjing University of Information Science & Technology

AS08-D4-PM1-302-002 | AS08-A023

Selective Ensemble Precipitation Nowcast System and Development of Upstream Low-level Humidification Scheme Yasutaka WAKAZUKI^{1,2#+}, Daichi IGARASHI¹

¹Ibaraki University, ²Japan Agency for Marine-Earth Science and Technology

AS08-D4-PM1-302-003 | AS08-A027

Prediction of Extreme Heavy Precipitation Events Associated with Atmospheric Rivers over West Coast of India Using Mesoscale Modelling System

Satyanarayana A.N.V^{1#+}, Dhana Lakshmi DOULURI² ¹Indian Institute of Technology Kharagpur, ²PhD Student

AS08-D4-PM1-302-004 | AS08-A019

The Impact of Radar Reflectivity on Numerical Forecast of Typhoon Hato (1713) Based on WRF-EnKF System Hui XIAO¹⁵⁺

¹Guangzhou Institute of Tropical and Marine Meteorology, CMA

AS08-D4-PM1-302-005 | AS08-A029

Experiments of Nowcasting and Short-range Forecasts of Precipitation for Urban Flood Warning Management in China Huiling YUAN^{1‡+}, Han SHEN², Gang WANG² ¹Nanjing University, ²Meteorological Center of North China Regional

Air Traffic Management Bureau

AS08-D4-PM1-302-006 | AS08-A020

Ensemble Flood Forecasting of a Disastrous Flood Event in 2018 Japan

Tomoki USHIYAMA^{1,2#+}, Yousuke NAKAMURA¹ ¹Public Works Research Institute, ²National Graduate Institute for Policy Studies

ST07 / Solar Super Storms: in the Past, Present and Future ST01 / Systems Science Approaches to Heliophysics

Modeling and Data Analysis

Thu - 01 Aug | MR301

Chair(s) C. Alex YOUNG, NASA Goddard Space Flight Center James GREEN, NASA Headquarters

ST07-D4-PM1-301-001 | ST07-A002

Space Weather at Earth: How Bad Can it Get? James GREEN^{1#+} ¹NASA Headquarters

ST07-D4-PM1-301-002 | ST07-A004 (Invited)

Global Corona, Superflares and Super CMEs from the Young Sun

Vladimir AIRAPETIAN^{1#+}, Benjamin LYNCH², Meng JIN^{3,4}, Maria KAZACHENKO⁵, Theresa LUEFTINGER⁶, Oleg KOCHUKHOV⁷

¹NASA Goddard Space Flight Center and American University, ²University of California at Berkeley, ³Lockheed Martin ATC, ⁴SETI Institute, ⁵University of Colorado Boulder, ⁶University of Vienna, ⁷Upsalla University

ST07-D4-PM1-301-003 | ST07-A008

Geomagnetic Storms During the Last 100 Years Kalevi MURSULA^{1‡+}, Timo QVICK¹, Lauri HOLAPPA¹, Ville FILPPA¹ ¹University of Oulu

ST07-D4-PM1-301-004 | ST07-A007 (Invited)

Stellar Activity Levels of Solar-analog Superflare Stars Lisa WINTER^{1#+} ¹National Science Foundation

ST07-D4-PM1-301-006 | ST07-A009

Time-dependent Extreme Value Statistics of Space Weather Events C. Alex YOUNG^{1#+}, Peter SCHUCK¹ ¹NASA Goddard Space Flight Center

ST01-D4-PM1-301-005 | ST01-A005

Solar Flare Waiting Time Dynamics Jay JOHNSON^{1‡+}, Jesse SNELLING¹, Jacob WILLARD¹, Simon WING² ¹Andrews University, ²The Johns Hopkins University

OS04 / Extreme Events: Tropical Cyclones, Intense Rainfall, Dust Storm in the Warming Environment of the Asia-oceania Region

Thu - 01 Aug | Nicoll 1

Time 13:30-15:30

Chair(s) Narayana A. C., University of Hyderabad Prasanna Kumar SUKUMARAN, National Institute of Oceanography

OS04-D4-PM1-Nicoll 1-001 | OS04-A001 (Invited)

Monsoon Variability, Trend and Extremes Raghu MURTUGUDDE^{1‡+}, Roxy Mathew KOLL², Subimal GHOSH³

¹University of Maryland, ²Indian Institute of Tropical Meteorology, ³Indian Institute of Technology Bombay

OS04-D4-PM1-Nicoll 1-002 | OS04-A003 (Invited)

Extreme Indian Summer Monsoon Years: Status and Challenges

Suryachandra Rao ANGULURI^{1#+}, Prasanth APPUKUTTAN PILLAI¹, Ankur SRIVASTAVA¹, Maheswar PRADHAN¹ ¹Indian Institute of Tropical Meteorology

OS04-D4-PM1-Nicoll 1-003 | OS04-A005 (Invited)

Role of Biweekly SST Variability over the South China Sea and its Influence on the South China Sea Summer Monsoon Exclusively During the IOD Bakshi Hardeep VAID¹³⁺, P. S. POLITO²

¹Nanjing University of Information Science & Technology, ²Universidade de São Paulo

OS04-D4-PM1-Nicoll 1-004 | OS04-A002

Recent Extraordinary Monsoon Floods in South Peninsular India

Narayana A. C.^{1#+}, Vishwas S. KALE², C. P. PRIJU³ ¹University of Hyderabad, ²University of Pune, ³Centre for Water Resources Development and Management

OS04-D4-PM1-Nicoll 1-005 | OS04-A011

Differential Physical and Biological Response of the Simultaneous Occurrence of Tropical Cyclones over the Arabian Sea and the Bay of Bengal in October 2018 Riyanka ROY CHOWDHURY¹⁵⁺, Prasanna Kumar SUKUMARAN², Arun CHAKRABORTY¹

¹Indian Institute of Technology Kharagpur, ²National Institute of Oceanography

OS04-D4-PM1-Nicoll 1-006 | OS04-A007

Indian Monsoon Extremes and Their Links to Tropical-extratropical SSTs Maheswar PRADHAN¹⁺, Suryachandra Rao ANGULURI^{1‡}, Ankur SRIVASTAVA¹, Prasanth APPUKUTTAN PILLAI¹ ¹Indian Institute of Tropical Meteorology

OS04-D4-PM1-Nicoll 1-007 | OS04-A008

Enhancement of Nutrient Supply and Carbon Fluxes in the South China Sea Triggered by Extreme Weather Events Hsueh-Han HSIEH¹⁵⁺, Chin-Chang HUNG¹ ¹National Sun Yat-sen University

IG07 / Interdisciplinary Research on Water-related Disasters and Practical Applications for Disaster Risk Reduction

Thu - 01 Aug | MR300

Time	13:30-15:30
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Chair(s) Anawat SUPPASRI, Tohoku University Adam SWITZER, Nanyang Technological University

IG07-D4-PM1-300-001 | IG07-A013

Real-time Tsunami Forecasting for the Outer-rise Earthquakes Based on Deep Ocean Bottom Pressure Data Naotaka YAMAMOTO CHIKASADA^{1#+}, Toshitaka BABA² ¹NIED, ²Tokushima University

IG07-D4-PM1-300-002 | IG07-A002

Geomorphological Model of Sea Level and Land Surface Interaction Provides Solution for Underground Water Arsenic Pollution in Yangtze River Plain Zhongping LAI^{1#+}, Yantian XU² ¹Shantou University, ²China University of Geosciences

IG07-D4-PM1-300-003 | IG07-A009

Iterative Multipole Solution for Wave Interaction with Submerged Partially Perforated Semi-circular Breakwater Zuorui LYU¹⁵⁺, Yong LIU², Huajun LI², Nobuhito MORI¹ ¹Kyoto University, ²Ocean University of China

IG07-D4-PM1-300-004 | IG07-A007

Assessing Global Tsunami Risk Through the Perspective of Global Port Network

Takuro OTAKE¹, Anawat SUPPASRI¹⁺⁺, Fumihiko IMAMURA¹ ¹Tohoku University

IG07-D4-PM1-300-005 | IG07-A011

Statistical Analysis of Building Damage: The 2013 Super Typhoon Haiyan Case

Natt LEELAWAT^{1#+}, Tanaporn CHAIVUTITORN¹, Thawalrat TANASAKCHAROEN¹, Jing TANG², Carl Vincent C. CARO³, Alfredo Mahar LAGMAY⁴, Anawat SUPPASRI⁵, Jeremy BRICKER⁶, Carine J. YI⁷, Fumihiko IMAMURA⁵ ¹Chulalongkorn University, ²Thammasat University, ³Philippine Disaster Resilience Foundation, ⁴University of the Philippines Diliman, ⁵Tohoku University, ⁶Delft University of Technology, ⁷R. Park & Associates Inc.

IG07-D4-PM1-300-006 | IG07-A008

Optimal Allocation of Evacuation Routes and Refuges Considering Tsunami Inundation and River Flood Fukutaro KITAMURA^{1#+}, Daisuke INAZU¹, Tsuyoshi IKEYA¹, Akio OKAYASU¹

¹Tokyo University of Marine Science and Technology

IG07-D4-PM1-300-007 | IG07-A004

Research and Application of Rainstorm Flood Risk Assessment Technology Hong TIAN^{1#+} ¹Anhui Climate Center

ST09 / Cross-scale Couplings in Magnetospheric Boundary Layers: From Kinetic to MHD Scales

Thu - 01 Aug | MR309

Time	13:30-15:30
Chair(s)	Keizo FUJIMOTO, Beihang University
	Dongsheng CAI, University of Tsukuba

ST09-D4-PM1-309-001 | ST09-A005 (Invited)

Understanding Mercury's Kinetic Magnetosphere and Associated Boundary Layers Using Global Hybrid/Particle Simulations and Messenger Spacecraft Data in Preparation for Bepi-Colombo

David SCHRIVER^{1#+}, Pavel TRAVNICEK², Nicole ECHTERLING¹, Giovanni LAPENTA³ ¹University of California, Los Angeles, ²University of California, Berkeley, ³KU Leuven

ST09-D4-PM1-309-002 | ST09-A004

Plasma Specific Entropy in the Magnetosphere Joachim RAEDER^{1#+}, Doug CRAMER¹, Andrei RUNOV², Kai GERMASCHEWSKI¹ ¹University of New Hampshire, ²University of California, Los Angeles

ST09-D4-PM1-309-003 | ST09-A002 (Invited)

Comparison of Energy Conversion for Multiscale Processes in Magnetic Reconnection and Current Disruption Anthony LUI^{1*+} ¹The Johns Hopkins University

ST09-D4-PM1-309-004 | ST09-A001

Force and Energy Balance of the Reconnection Front Liangjin SONG¹⁺, Meng ZHOU^{1,2#}, Xiaohua DENG³, Zhihong ZHONG¹, Yongyuan YI¹, Huang JING¹, Hengyan MAN¹ ¹Nanchang University, ²University of California, Los Angeles, ³Wuh

¹Nanchang University, ²University of California, Los Angeles, ³Wuhan University

ST09-D4-PM1-309-005 | ST09-A006

Kinetic Properties of Ions in the Low Energy Layer in Earth's Magnetotail

Ensang LEE^{1#+}, Jinhy HONG¹, George PARKS² ¹Kyung Hee University, ²University of California, Berkeley

ST09-D4-PM1-309-006 | ST09-A003

Large-scale Energy Conversion in Collisionless Magnetic Reconnection Keizo FUJIMOTO^{1#+} ¹Beihang University

ST09-D4-PM1-309-007 | ST09-A007 (Invited)

Kinetic Physics of Magnetic Reconnection in Turbulence in the Earth's Bow Shock

Naoki BESSHO^{1#+}, Li-Jen CHEN², Shan WANG¹, Lynn WILSON³, Michael HESSE⁴

¹University of Maryland, ²NASA Goddard Space Flight Center, ³National Aeronautics and Space Administration, ⁴University of Bergen

IG18 / Tropical Hydroclimate Changes Since the Late Pleistocene IG17 / Carbon Dioxide Sequestration and Utilization (CCUS) in Energy Geosciences

Thu - 01 Aug | MR323

Time	13:30-15:30
Chair(s)	Yudha DJAMIL, Nanyang Technological University Qi LI, Chinese Academy of Sciences

IG18-D4-PM1-323-001 | IG18-A001 (Invited)

Variability of Precipitation $\delta 180$ in East Asia Inferred from Seasonal-resolved Speleothem Record from Hainan Island, China

Yanjun CAI¹⁵⁺, Zhisheng AN¹, Wenwen KONG², Hai CHENG³, R. Lawrence EDWARDS⁴, Inez FUNG²

¹Chinese Academy of Sciences, ²University of California, Berkeley, ³Xi'an Jiaotong University, ⁴University of Minnesota

IG18-D4-PM1-323-002 | IG18-A012 (Invited)

Arid Central Asia Drier Hydroclimatic Conditions Corresponded to Holocene Warmer Intervals Hai XU¹⁵⁺

¹Tianjin University

IG18-D4-PM1-323-003 | IG18-A005

A 450-year-long Indian Summer Monsoon Record from Myanmar Speleothem Trace Elements Guangxin LIU^{1*+}, Xianfeng WANG¹, Zhiyong ZHU², Hong-Wei CHIANG³, Shufang YUAN¹, Lin Thu AUNG^{1,4}, Phyo Maung MAUNG¹

¹Nanyang Technological University, ²Chinese Academy of Geological Sciences, ³National Taiwan University, ⁴Myanmar Geosciences Society

IG18-D4-PM1-323-004 | IG18-A014

Nd Isotopic Composition in the Northern Indian Ocean Since Late Quaternary: A Comparative Study of Seawater and Foraminifera Zhaojie YU^{1#+}

¹Chinese Academy of Sciences

IG17-D4-PM1-323-005 | IG17-A017

Surface Gas Monitoring of a CO2 Storage Injection Site at the CSIRO In Situ Laboratory Project

Matthew MYERS^{1‡+}, Cameron WHITE¹, Bobby PEJCIC¹, Andrew FEITZ², Jennifer ROBERTS³, Yun-Yeong OH⁴, Liang XU⁵, Linda STALKER¹, Chris DYT¹, Ludovic RICARD¹, Karsten MICHAEL¹, Arsham AVIJEGON¹, Allison HORTLE¹

¹Commonwealth Scientific and Industrial Research Organisation, ²Geoscience Australia, ³University of Strathclyde, ⁴Korea University, ⁵Chinese Academy of Sciences

IG17-D4-PM1-323-006 | IG17-A011 (Invited)

Geomechanical Footprint for Downhole Water Injection via Distributed Optic Fiber Sensing Integrating hybrid Brillouin-Rayleigh Backscattering Yankun SUN^{1‡+}, Ziqiu XUE¹, Tsutomu HASHIMOTO¹, Xinglin LEI², Yi ZHANG¹

¹Research Institute of Innovative Technology for the Earth, ²National Institute of Advanced Industrial Science and Technology

IG17-D4-PM1-323-007 | IG17-A019

Site Selection, Geological Characterization and Structural Stability Assessment of an Underground CO2 Storage in the Miocene Janggi Basin, SE Korea Min-Cheol KIM¹⁺, Rae-Yoon JEONG¹, Moon SON^{1#}

¹Pusan National University

IG17-D4-PM1-323-008 | IG17-A013

Observation of Changes in Vertical Sp Gradient Using Shallow Wells at the Seashore Test Site, Japan

Takuya HORIKAWA^{1*+}, Tsuneo ISHIDO¹, Hiroki GOTO¹, Yuji NISHI¹

¹National Institute of Advanced Industrial Science and Technology

AS14 / The Science and Prediction of Tropical Cyclones

Thu - 01 Aug | Nicoll 3

Time 13:30-15:30 Chair(s) Brian SODEN, University of Miami Kosuke ITO, University of the Ryukyus

AS14-D4-PM1-Nicoll 3-001 | AS14-A009

Binary Interaction Between TC Chanthu (2016) and a Nearby Cold Low

Miyabi HIGA¹, Kosuke ITO^{1*+}, Johnny CHAN² ¹University of the Ryukyus, ²City University of Hong Kong

AS14-D4-PM1-Nicoll 3-002 | AS14-A040

Correlation Between Northward Migration of Tropical Cyclone Tracks and Pacific Decadal Oscillation in the Western North Pacific

Minkyu LEE¹⁺, Dong-Hyun CHA^{1#}, Taehyung KIM¹, Woojin CHO¹

¹Ulsan National Institute of Science and Technology

AS14-D4-PM1-Nicoll 3-003 | AS14-A043

Saharan Dust on the Genesis and Development of Hurricanes Earl and Danielle (2010)

Bowen PAN¹⁺, Yuan WANG², Jenshan HSIEH¹, Renyi ZHANG^{1‡} ¹Texas A&M University, ²California Institute of Technology

AS14-D4-PM1-Nicoll 3-004 | AS14-A011

The Characteristics of Tropical Cyclone Formation in an Environment with Strong Low Frequency Vorticity in the Western North Pacific

Yi-Huan HSIEH^{1#+}, Cheng-Shang LEE¹, Hsu-Feng TENG² ¹National Taiwan University, ²National Center for Atmospheric Research

AS14-D4-PM1-Nicoll 3-005 | AS14-A004

The Dependence of Northwest Pacific Tropical Cyclone Intensification Rates on Environmental Factors Xinyan LU^{1#+}, Xuguang WANG², Lance M. LESLIE² ¹National Meteorological Centre, ²University of Oklahoma

AS14-D4-PM1-Nicoll 3-006 | AS14-A002

Variation of Tropical Cyclone Track in the Western North Pacific During ENSO Developing and Decaying Years Li TAO^{1#+}, Peiyan XIE¹

¹Nanjing University of Information Science & Technology

AS14-D4-PM1-Nicoll 3-007 | AS14-A007

Evaluation of the Monthly Potential of the 2018 Typhoon Activity and the Effect of the Positive PMM and SST of the Eastern Northwestern Pacific Takahiro ISHIYAMA^{1\$+}, Masaki SATOH¹ ¹The University of Tokyo

AS14-D4-PM1-Nicoll 3-008 | AS14-A025

Statistical Relationship Between Upper Ocean Heat Content and Sea Surface Temperature Underlying Tropical Cyclone Rapid Intensification in the Western North Pacific Cheng-Hsiang CHIH¹⁺, Chun-Chieh WU^{1‡} ¹National Taiwan University

ST19 / Hemispheric Symmetry and Asymmetry in the Solar-terrestrial Coupling ST20 / Solar Flare Forecasting Using Machine Learning

Thu - 01 Aug | MR308

Time 16:00-18:00

Chair(s) Kan LIOU, The Johns Hopkins University Applied Physics Laboratory Jeng-Hwa YEE, The Johns Hopkins University Applied Physics Laboratory Long XU, Chinese Academy of Sciences

ST19-D4-PM2-308-001 | ST19-A002

Dependence of the Spring-autumnal Asymmetry in Geomagnetic Activity on the Solar Main Dipole Magnetic Field Polarity over Last 140 Years Hao LUO^{1#+} ¹Chinese Academy of Sciences

ST19-D4-PM2-308-002 | ST19-A006 (Invited)

Evidence for Unipolar Bow Shock Current Closure Through the Ionosphere for IMF by Ramon LOPEZ^{1#+}, Fatemeh BAGHERI¹, Pauline DREDGER¹ ¹University of Texas at Arlington

ST19-D4-PM2-308-003 | ST19-A001

Hemispheric Asymmetry in Ionospheric Convection, Field-aligned Currents, and Joule Heating Gang LU^{1#+} ¹National Center for Atmospheric Research

ST20-D4-PM2-308-004 | ST20-A007 (Invited)

Deep Neural Networks Applied to Predictions of Solar Flares and Eruptions

Naoto NISHIZUKA^{1#+}, Yuki KUBO¹, Komei SUGIURA¹, Takahiro HASEGAWA^{2,3}, Mitsue DEN¹, Mamoru ISHII¹ ¹National Institute of Information and Communications Technology, ²The University of Tokyo, ³Japan Aerospace Exploration Agency

ST20-D4-PM2-308-005 | ST20-A008 (Invited)

On MUSER Observations for Solar Flares and Space Weather Monitoring

Yihua YAN^{1,2#+} ¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

ST20-D4-PM2-308-006 | ST20-A001

Solar Flare Occurrence Forecast and Onset Time Estimate Using Long Short-term Memory Neural Network Xin HUANG^{1#+}, Huaning WANG¹, Long XU¹ ¹Chinese Academy of Sciences

ST20-D4-PM2-308-007 | ST20-A005

Solar Flare Prediction Using Multiple Wavelengths of Solar-image Data

Xuexin YU^{1,2#+}, Long XU¹, Xin HUANG¹ ¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

SE03 / EPreparation Process of Earthquakes and Related Phenomena - Potential Precursory Anomalies, Earthquake Hydrology, Geochemistry and Other Phenomena Related to Induced and Natural Earthquakes

Thu - 01 Aug | Nicoll 2

Time 16:00-18:00

Chair(s) Peng HAN, Southern University of Science and Technology Yinlin JI, Nanyang Technological University

SE03-D4-PM2-Nicoll 2-001 | SE03-A009 (Invited)

Injection-driven Fracture Instability and Seismic Moment Release Yinlin JI¹⁺, Wei WU^{1#} ¹Nanyang Technological University

SE03-D4-PM2-Nicoll 2-002 | SE03-A002

Numerical Analysis on the Regional Seismic Activity After Water Storage in the Baihetan Reservoir

Tiantian DOU^{1*+}, Huihong CHENG¹, Huai ZHANG¹, Yaolin SHI¹ ¹University of Chinese Academy of Sciences

SE03-D4-PM2-Nicoll 2-003 | SE03-A016

The Observatory Groundwater Anomalies Before February 4 2018 Hualian Earthquake Swarms Fuqiong HUANG^{1*+}, Jun ZHONG¹ ¹China Earthquake Administration

SE03-D4-PM2-Nicoll 2-004 | SE03-A013 (Invited)

Southwestern Colombian Subduction Zone Structure from Spatial b-value Map of Intermediate-depth Earthquakes Ying CHANG^{1#+}, Peng HAN¹, Miao MIAO¹ ¹Southern University of Science and Technology

SE03-D4-PM2-Nicoll 2-005 | SE03-A012

Time-dependent Earthquake Forecast Incorporating Seismo-magnetic Data

Peng HAN^{I#+}, Jiancang ZHUANG², Katsumi HATTORI³ ¹Southern University of Science and Technology, ²Institute of Statistical Mathematics, ³Chiba University

SE03-D4-PM2-Nicoll 2-006 | SE03-A008

Petrogenesis of Fayalite Bearing Ferrosyenites from Settupalle Alkaline Complex, Southern India: Insight from Whole Rock Geochemistry Saikrishna KANDUKURI^{1#+} ¹Kakatiya University SE03-D4-PM2-Nicoll 2-007 | SE03-A007

Reexamination of Cosesmic Strain Caused by Historical Earthquakes in Japan Yasuyuki KANO^{1#+}

¹The University of Tokyo

ST15 / MHD Waves and Instabilities in the Solar Atmosphere: Identification and Modelling ST10 / The Magnetopause and the Dayside Solar Wind - Magnetosphere Interaction

Thu - 01 Aug | MR304

Time 16:00-18:00

Chair(s) Viktor FEDUN, The University of Sheffield Sergiy SHELYAG, Deakin University Ramon LOPEZ, University of Texas at Arlington

ST15-D4-PM2-304-001 | ST15-A001 (Invited)

No Unique Solution to the Seismological Problem of Standing Kink Waves Marcel GOOSSENS^{1#+}, Inigo ARREGUI²

¹KU Leuven, ²Instituto de Astrofisica de Canarias

ST15-D4-PM2-304-002 | ST15-A002 (Invited)

Synthetic Ultraviolet Emissions from Coronal Loops Experiencing Fast Sausage Oscillations Bo L1¹⁺⁺, Mijie SHI¹ ¹Shandong University

ST15-D4-PM2-304-003 | ST15-A003 (Invited)

Coronal Density and Temperature Calculated Using SDO/AIA by Forward Modelling EUV Emission and Seismology David PASCOE^{1*+} ¹KU Leuven

ST15-D4-PM2-304-004 | ST15-A006

Comparison of Radiative and Seismic Responses of Two Flares: September 6th, 2011 and September, 6th, 2017 Sergei ZHARKOV^{1#+}, Valentina ZHARKOVA², Sarah MATTHEWS³, Connor MACRAE¹, Malcolm DRUETT², Ingolf DAMMASCH⁴ ¹University of Hull, ²Northumbria University, ³University College London, ⁴Royal Observatory of Belgium

ST15-D4-PM2-304-005 | ST15-A007

Temperature Fluctuations in the Solar Chromosphere Observed with ALMA Shahin JAFARZADEH^{1#+}, Sven WEDEMEYER¹, Mikolaj SZYDLARSKI¹ ¹University of Oslo

ST10-D4-PM2-304-006 | ST10-A002

Characterizing the Neutral Line by the Curvature of the Magnetic Field in its Vicinity Y.J. MA^{1f+}, Chris RUSSELL¹, Yi QI¹, Cong ZHAO¹, Robert

STRANGEWAY¹, William PATERSON², Barbara GILES³, James BURCH⁴, Roy TORBERT⁵

¹University of California, Los Angeles, ²National Aeronautics and Space Administration, ³NASA Goddard Space Flight Center, ⁴Southwest Research Institute, ⁵University of New Hampshire

ST10-D4-PM2-304-007 | ST10-A003

Striking Variability of the Sq Current: Causality and Monitoring Jesper GJERLOEV¹⁵⁺, Matthew FRIEL¹ ¹The Johns Hopkins University Applied Physics Laboratory

ST10-D4-PM2-304-008 | ST10-A006

A Conceptual Model Toward Understanding the Generation of Throat Aurora Desheng HAN^{1#+} ¹Tongji University

ST10-D4-PM2-304-009 | ST10-A007

Statistics on the Magnetosheath Properties Related to Magnetopause Reconnection

Hui ZHANG^{1#}, Suiyan FU², Zuyin PU², Jianyong LU³, Jun ZHONG⁴, Changbo ZHU¹, Weixing WAN¹, Libo LIU¹ ¹Chinese Academy of Sciences, ²Peking University, ³Nanjing University of Information Science & Technology, ⁴Institute of Geology and Geophysics, Chinese Academy of Sciences

AS21 / Understanding Light-absorbing Carbon Aerosols Using Observations and Models

Thu - 01 Aug | MR303

Time 16:00-18:00

Chair(s) Chao LIU, Nanjing University of Information Science & Technology Byung-Gon KIM, Gangneung-Wonju National University

AS21-D4-PM2-303-001 | AS21-A001

Elucidating the Temperature Inversion in China in Association with Black Carbon Jianping GUO^{1#+}

¹Chinese Academy of Meteorological Sciences

AS21-D4-PM2-303-002 | AS21-A010 (Invited)

Black Carbon - Hydrometeor Interactions During Wet Scavenging in Mixed-phase Clouds Observed at a Mountain Site

Dantong LIU^{1#+}, Shuo DING¹, Delong ZHAO² ¹Zhejiang University, ²Beijing Weather Modification Office

AS21-D4-PM2-303-003 | AS21-A020

The Impact of the Aerosol Direct Radiative Forcing on Deep Convection and Air Quality in the Pearl River Delta Region Steve YIM^{1#+}

¹The Chinese University of Hong Kong

AS21-D4-PM2-303-004 | AS21-A002 (Invited)

Elucidating Variation and Trend of Black Carbon in China Based on Long-term Ground Observations Yong ZHANG^{1#+}

¹China Meteorological Administration

AS21-D4-PM2-303-005 | AS21-A011 (Invited)

Black Carbon Aging Under Urban Polluted Environment Using a Novel Quality Chamber

Song GUO^{1‡+}, Min HU¹, Jianfei PENG², Weizhao XU¹, Zhuofei DU¹, Dongjie SHANG¹, Hui WANG¹, Rongzhi TANG¹, Ying YU¹, Ruizhe SHEN¹, Rui TAN¹, Kefan LIU¹, Shiyi CHEN¹, Limin ZENG¹, Renyi ZHANG²

¹Peking University, ²Texas A&M University

AS21-D4-PM2-303-006 | AS21-A005

Aerosol Effect from Biomass Burning Emissions Around Southeast Asia in Spring Under El Nino Events Sixiao YANG^{1‡+}, William LAU², Song YANG¹, Zhenming JI¹ ¹Sun Yat-sen University, ²University of Maryland

AS21-D4-PM2-303-007 | AS21-A004

Long-term Trend of Visibility and its Relationship with Wind Speed in China Lijuan CAO^{1±+} ¹China Meteorological Administration

HS12 / Water Resilience in Coastal Areas: Processes, Consequences, and Potentials

Thu - 01 Aug | MR330

Time 16:00-18:00

Chair(s) Xuan YU, Sun Yat-sen University Jinliang HUANG, Xiamen University

HS12-D4-PM2-330-001 | HS12-A001 (Invited)

Prediction of Tsunami-induced Groundwater Salinization in Coastal Areas: 2-D Numerical Modeling of the Niijima Island, Japan Jiaqi LIU^{1#+}, Tomochika TOKUNAGA¹

¹The University of Tokyo

HS12-D4-PM2-330-002 | HS12-A008 (Invited)

Coupled Effects of Climate Variability and Land Use Pattern on Surface Water Quality: An Elasticity Perspective and Watershed Health Indicators Ayu ERVINIA¹⁺, Jinliang HUANG^{1‡}, Yaling HUANG¹, Jingyu LIN¹

¹Xiamen University

HS12-D4-PM2-330-003 | HS12-A009 (Invited)

A Coupling Modeling Approach for Water Resource Management in a River-reservoir Continuum Within a Coastal China Watershed Zhenyu ZHANG¹⁺, Jinliang HUANG^{2#}, Min ZHOU² ¹Xiaman University, ²Xiamen University

HS12-D4-PM2-330-004 | HS12-A003

A Flood Mitigation Decision Framework to Characterize the Impact of Climate Change and Urbanization in Coastal Cities Velautham DAKSIYA^{1#+}, Pradeep MANDAPAKA¹, Edmond LO¹ ¹Nanyang Technological University

HS12-D4-PM2-330-005 | HS12-A007

Mechanisms, Classification, and Vulnerability of Pumping-induced Seawater Intrusion in Heterogeneous Aquifers Xuan YU^{1#+}, Holly MICHAEL²

¹Sun Yat-sen University, ²University of Delaware

HS18 / Ecohydrological Processes and Modelling in a Changing Environment

Thu - 01 Aug | MR329

Time	16:00-18:00
Chair(s)	Yuting YANG, Tsinghua University Huimin LEI, Tsinghua University

HS18-D4-PM2-329-001 | HS18-A027

Eco-hydrological Modelling for Greater Nee Soon Freshwater Swamp Forest Jiandong LIU¹⁵⁺, Dongeon KIM^{1,2}, Canh Tien Trinh NGUYEN¹, Yixiong CAI³, Shie-Yui LIONG¹

¹National University of Singapore, ²University of Nice Sophia Antipolis, ³National Parks Board

HS18-D4-PM2-329-002 | HS18-A026

The Asynchronous Response of Carbon Gain and Water Loss Generate Spatio-temporal Pattern of WUE Along Elevation Gradient in Southwest China

Xiangyang SUN^{1#+}, Zhaoyong HU², Song CHUNLIN² ¹Institute of Mountain Hazards and Environment, Chinese Academy of Sciences, ²Chinese Academy of Sciences

HS18-D4-PM2-329-003 | HS18-A024

Hydrological Effect of Afforestation Practices over the Three-north Region of China Xianhong XIE^{1*+}, Shanshan MENG¹ ¹Beijing Normal University

HS18-D4-PM2-329-004 | HS18-A015

Effect of Changes in Throughfall on Fluxes of Greenhouse Gases, Dissolved Organic Carbon and N Leaching Under a Temperate Mature Forest, Northeastern China Xingkai XU^{1,2+}, Duan CUNTAO¹, Haohao WU¹, Han LIN¹, Xianbao LUO¹

¹Chinese Academy of Sciences, ²University of Chinese Academy of Sciences

HS18-D4-PM2-329-005 | HS18-A018

Sensitivity Analysis and Parameter Screening of CLM Hydrologic Parameters

Wei GONG^{1#+}, Qingyun DUAN^{1,2}, Chong ZHANG¹ ¹Beijing Normal University, ²Hohai University

HS18-D4-PM2-329-006 | HS18-A011

A Model for Geomorphological Changes of Tidal Creeks and Mudflat Ting-Yu CHENG¹⁺, Shang-Shu SHIH^{1‡} ¹National Taiwan University

HS18-D4-PM2-329-007 | HS18-A012

Quantitative Assessment of Hydrological Services Provided by Wetlands in a Northeast China Watershed Yanfeng WU^{1‡}, Guangxin ZHANG¹⁺, Alain N. ROUSSEAU² ¹Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, ²Eau Terre Environnement

HS17 / Water-food-energy Nexus Under Uncertain Future: Data, Tools, Modelling and Knowledge Integration

Thu - 01 Aug | MR328

Time 16:00-18:00

Chair(s) Jorge PENA ARANCIBIA, *Commonwealth Scientific and Industrial Research Organisation*

HS17-D4-PM2-328-001 | HS17-A011

Evaluation on Water-energy-food Collaborative Security in China

Cuishan LIU^{1#+}, Junliang JIN¹, Liu JING¹, Yanli LIU¹, Xiao LI² ¹Nanjing Hydraulic Research Institute, ²Shandong Agricultural University

HS17-D4-PM2-328-002 | HS17-A004

Probabilistic Approach for Regional Groundwater Balance in the Ganga Basin Using Land Surface and Groundwater Models Sreekanth J¹⁺, Akhilesh NAIR², Indu J.², Kaushika G.S.³ ¹CSIRO Land and Water, ²Indian Institute of Technology Bombay, ³Indian Institute of Technology Roorkee

HS17-D4-PM2-328-003 | HS17-A012 (Invited)

Exploring Stakeholder Pathways and Future Water, Energy, and Land Nexus Scenarios in the Indus Basin Adriano VINCA^{1‡}, Simon PARKINSON¹, Barbara WILLAARTS¹, Piotr MAGNUSZEWSKI¹, Simon LANGAN¹, Ting TANG¹⁺, Ansir ILYAS², Yaoping WANG³, Edward BYERS¹, Peter BUREK¹, Yoshihide WADA¹, Volker KREY¹, Keywan RIAHI¹ ¹International Institute for Applied Systems Analysis (IIASA), ²Lahore University of Management Sciences, ³The Ohio State University

HS17-D4-PM2-328-004 | HS17-A002

Impacts of Hydro-climatic Variability on the Energy System of the Greater Mekong Sub-region A.F.M. Kamal CHOWDHURY^{1‡+}, Thanh Duc DANG¹, Stefano GALELLI¹ ¹Singapore University of Technology and Design

HS17-D4-PM2-328-005 | HS17-A013

Water Resources Management for Large Coal-power Bases in Yellow River Under Nexus Approach Xiaojun WANG¹⁵⁺, Jianyun ZHANG¹, Shamsuddin SHAHID², Juan GAO³ ¹Nanjing Hydraulic Research Institute, ²Universiti Teknologi Malaysia, ³Hohai University

HS17-D4-PM2-328-006 | HS17-A014

Energy or Food? An Assessment of the Tradeoff Between the Capacity of Hydropower Generation and Food Security in Africa in 2050s

Xingcai LIU^{1#+}, Wenfeng LIU², Qiuhong TANG¹, Hong YANG³ ¹Chinese Academy of Sciences, ²Institute Pierre Simon Laplace, ³Swiss Federal Institute of Aquatic Science and Technology

HS17-D4-PM2-328-007 | HS17-A005

Irrigation Expansion, Groundwater Use and the Hydrologic Cycle in Northwest Bangladesh

Jorge PENA ARANCIBIA^{1#+}, Mainuddin MOHAMMED¹, Mobin AHMAD¹, Geoff HODGSON¹, Faisal KHANDAKAR², Catherine TICEHURST¹, Mohammed MANIRUZZAMAN², Mahboob GOLAM², Mac KIRBY¹

¹Commonwealth Scientific and Industrial Research Organisation, ²Bangladesh Rice Research Institute

PS14 / Small Body Explorations by Current and Future Missions

Thu - 01 Aug | MR310

Time 16:00-18:00

Chair(s) Makoto YOSHIKAWA, Japan Aerospace Exploration Agency Xian SHI, Max Planck Institute for Solar System Research

PS14-D4-PM2-310-001 | PS14-A008 (Invited)

An Engineering Model of the Near-nucleus Environment of Main Belt Comet 133P/Elst-Pizarro

Ying LIAO^{1#+}, Liang Liang YU¹, Ian LAI², Wing-Huen IP² ¹Macau University of Science and Technology, ²National Central University

PS14-D4-PM2-310-002 | PS14-A024 (Invited)

Constellation of Heterogeneous Wide-field Near-earth Object Surveyors

Zhuoxi HUO^{1#+}, Jiangchuan HUANG², Ji-Lin ZHOU³, Linzhi MENG², Ming YANG³, Susu SHAN⁴

¹Qian Xuesen Laboratory of Space Technology, ²China Academy of Space Technology, ³Nanjing University, ⁴National Astronomical Observatories, Chinese Academy of Sciences

PS14-D4-PM2-310-003 | PS14-A019 (Invited)

Asteroid Target Selection Method Based on Asteroids Database Xiaohui WANG^{1‡+}, Yuxian YUE¹, Haoran GU¹ ¹Beihang University

PS14-D4-PM2-310-004 | PS14-A015 (Invited)

The Proposed Comet Interceptor Mission to a Dynamically New Comet

Cecilia TUBIANA^{1#+}, Geraint JONES², Colin SNODGRASS³ ¹Max Planck Institute for Solar System Research, ²University College London, ³University of Edinburgh

PS14-D4-PM2-310-005 | PS14-A029 (Invited)

Centaurs: Transition Bodies Between Comets and Icy Satellites? Daniel BOICE^{1#+} ¹Scientific Studies and Consulting

PS14-D4-PM2-310-006 | PS14-A010 (Invited)

The Conundrum of the TNO Color Dichotomy – The Answer is Blow'n in the Wind Wing-Huen IP^{1#+}, Po-Yen LIU¹ ¹National Central University

PS14-D4-PM2-310-007 | PS14-A020

The Dynamical Evolution of the Retrograde TNOs I Putu Wira HADIPUTRAWAN^{1#+}, Wing-Huen IP¹ ¹National Central University

AS28 / Theory, Observations and Modelling of Maritime Continent Weather and Climate

Thu - 01 Aug | MR311

Chair(s) Masaki KATSUMATA, Japan Agency for Marine-Earth Science and Technology Tieh-Yong KOH, Singapore University of Social Sciences

AS28-D4-PM2-311-001 | AS28-A023 (Invited)

Equatorial Waves and High Impact Weather in South East Asia Samantha FERRETT^{1#+}, Steve WOOLNOUGH¹, Gui-Ying YANG¹, John METHVEN¹, Chris HOLLOWAY¹, Kevin HODGES¹ ¹University of Reading

AS28-D4-PM2-311-002 | AS28-A019

Modulation of the Boreal Winter Peak Rainfall over the South China Sea and Indo-pacific Maritime Continent by MJO and CCEWs

Yuan-huai TSAI¹, Mong-Ming LU^{1#+}, Chung-Hsiung SUI¹ ¹National Taiwan University

AS28-D4-PM2-311-003 | AS28-A022

Tropical Storm Pabuk: Its Formation, Evolution and Impact Based on Metocean Buoy Data

Mohd Fadzil Firdzaus MOHD NOR¹**, Sheeba Nettukandy CHENOLI¹, Azizan Abu SAMAH¹, Muhammad Yunus AHMAD MAZUKI¹, Noraini MOHYEDDIN¹, Yue FANG², Mohd Fadzil MOHD AKHIR³

¹University of Malaya, ²State Oceanic Administration, ³Universiti Malaysia Terengganu

AS28-D4-PM2-311-004 | AS28-A020

Observed Interaction of MJO and Diurnal Cycle Using Weather Radar in Bengkulu

Donaldi PERMANA^{1‡+}, Erwin MAKMUR², Thahir HUTAPEA², Jaka PASKI², Dodi ARDIANSYAH², Alfan PRAJA²

¹BMKG - Indonesian Agency for Meteorology, Climatology and Geophysics, ²Indonesian Agency for Meteorology, Climatology and Geophysics

AS28-D4-PM2-311-005 | AS28-A014

Characteristics of Precipitation Systems Around the Southwestern Coast of Sumatra During the Passage of the Convective Envelope of an MJO Event Biao GENG^{1&+}, Masaki KATSUMATA¹ ¹Japan Agency for Marine-Earth Science and Technology

AS28-D4-PM2-311-006 | AS28-A026

Topographic Influence of the Madden-Julian Oscillation During Pre-YMC 2015 Reni SULISTYOWATI^{1#+}, Lena SUMARGANA¹, Fadli SYAMSUDIN¹, Shuichi MORI² ¹Agency for the Assessment and Application of Technology, ²Japan Agency for Marine-Earth Science and Technology

AS28-D4-PM2-311-007 | AS28-A011

Multi-scale Climate Processes and Rainfall Variability in Sumatra, Peninsula Malaysia and Singapore Associated with ENSO in Boreal Fall and Winter Jianhua QIAN¹⁵⁺ ¹Meteorological Service Singapore

AS45 / Air Quality Modeling, Forecasting, and Data Assimilation

Thu - 01 Aug | MR327

Time 16:00-18:00

Chair(s) Daisuke GOTO, National Institute for Environmental Studies Myong-In LEE, Ulsan National Institute of Science and Technology

AS45-D4-PM2-327-001 | AS45-A003

Application of a Multi-model Ensemble Method for PM2.5 Estimation

Daisuke GOTO^{1#+}, Seiji SUGATA¹, Tie DAI², Yueming CHENG², Teruyuki NAKAJIMA³ ¹National Institute for Environmental Studies, ²Chinese Academy of Sciences, ³Japan Aerospace Exploration Agency

AS45-D4-PM2-327-002 | AS45-A013

An Improvement Study on Air Quality Forecasting Modeling Improvement in Korea Limseok CHANG^{1#+}, Yonghee LEE¹, Insuk SUH¹, Misuk JUNG¹, Jisu MYOUNG¹, Taehee KIM¹

¹National Institute of Environmental Research

AS45-D4-PM2-327-003 | AS45-A007

A Study on Optimal Interpolation Method for Combination of the CMAQ-predicted AOD and Remote-sensing Data Yonghee LEE^{1#+}, Taehee KIM¹, Jisu MYOUNG¹, Insuk SUH¹, Misuk JUNG¹, Limseok CHANG¹ ¹National Institute of Environmental Research

AS45-D4-PM2-327-004 | AS45-A001

Ensemble Data Assimilation and Inverse Modeling of Aerosols Using Data from Fengyun-4 Ping WANG^{1#+} ¹Chinese Academy of Meteorological Sciences

AS45-D4-PM2-327-005 | AS45-A008

Experimental Air Quality Forecasts in Korea Using the WRF-Chem Model

Myong-In LEE^{1‡+}, Ganghan KIM¹, Seunghee LEE¹, Hyuckjae LEE¹, Chang-Keun SONG¹, Hyeon-Kook KIM¹, Soyoung HA², Zhiquan LIU², Wei SUN²

¹Ulsan National Institute of Science and Technology, ²National Center for Atmospheric Research

AS45-D4-PM2-327-006 | AS45-A011

Development of Daily Particulate Matter Prediction System Using a Deep Long Short-term Memory Neural Network Model Hyun Soo KIM¹⁺, In Yong PARK¹, Chul Han SONG^{1‡}, Hong Kook KIM¹

¹Gwangju Institute of Science and Technology

AS45-D4-PM2-327-007 | AS45-A015

Modeling of Nocturnal Particulate Matters over Korean Peninsula by Regional Air Quality Model Hyun-Young JO¹⁺, Cheol-Hee KIM^{1#}, Hyo-Jung LEE¹, Yu-Jin JO¹

¹Pusan National University

AS45-D4-PM2-327-008 | AS45-A016

Sensitivity of PBL Parameterizations on PM10 and Ozone Simulation Using Chemical Transport Model WRF-Chem over a Sub-tropical Urban Airshed in India Medhavi GUPTA¹⁵⁺, Manju MOHAN¹

¹Indian Institute of Technology Delhi

AS47 / Storms, Lightning, and Their Effects on Human Society

Thu - 01 Aug | MR302

Time	16:00-18:00
Chair(s)	Doo-Sun PARK, Chosun University
	Yoav YAIR, IDC Herzliya

AS47-D4-PM2-302-001 | AS47-A002

Harvesting and Storing Electrical Energy from Lightning Tai-Yin HUANG^{1#+} ¹Penn State Lehigh Valley

AS47-D4-PM2-302-002 | AS47-A004

Lightning and Aerosol Relationship: Similarities and Differences Between Humid, Semi-humid and Arid Regions of North-India S. P. JNANESH¹, D.M. LAL¹, Sachin GHUDE¹, Suresh TIWARI¹,

S. P. JNANESH¹, D.M. LAL¹, Sachin GHUDE¹, Suresh HWARI¹, Manoj Kumar SRIVASTAVA^{2#+} ¹Indian Institute of Tropical Meteorology, ²Banaras Hindu University

AS47-D4-PM2-302-003 | AS47-A006 (Invited)

Prediction of the Typhoon Intensity Development by Monitoring Lightning Activity Mitsuteru SATO^{1#+}, 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

AS47-D4-PM2-302-004 | AS47-A001

The Sensitivity of East Mediterranean Winter Thunderstorms to Aerosols and Pollution Yoav YAIR¹⁵⁺, Barry LYNN² ¹IDC Herzliya, ²Hebrew University of Jerusalem

AS47-D4-PM2-302-005 | AS47-A008

Modulation of Tropical Cyclone Rainfall Area by Sea Surface Temperature and Environmental Flows Dasol KIM¹⁺, Chang-Hoi HO^{1‡}, Doo-Sun PARK², Johnny CHAN³, Youngsun JUNG⁴ ¹Seoul National University, ²Chosun University, ³City University of Hong Kong, ⁴The University of Oklahoma

AS47-D4-PM2-302-006 | AS47-A013

Dynamical Downscaling of Typhoon Jebi for the Storm Surge Yoshiyuki KAJIKAWA^{1#+}, Tsuyoshi YAMAURA² ¹Kobe University, ²RIKEN Advanced Institute for Computational Science

AS47-D4-PM2-302-007 | AS47-A014

Disaster Mitigation Strategies for Extreme Severe Storms in South Asian Countries Toru TERAO^{1‡+}, Someshwar DAS², Ajay GAIROLA³, Hirohiko

ISHIKAWA⁴ ¹Kagawa University, ²Central University of Rajasthan, ³Indian

Institute of Technology Roorkee, ⁴Kyoto University

AS47-D4-PM2-302-008 | AS47-A017

Comparison Between Tropical Storm "PABUK" In 2019 and the Past Extreme Events in Thailand Karnjana SAENGPRAPAI¹⁵⁺, Supaluk VIMALA¹, Sasiprapa TANYONG², Kanoksri SARINNAPAKORN² ¹Hydro-Informatics Institute (Public Organization), ²Hydro and Agro Informatics Institute

ST01 / Systems Science Approaches to Heliophysics Modeling and Data Analysis ST07 / Solar Super Storms: in the Past, Present and Future

Thu - 01 Aug | MR301

Time	16:00-18:00
Chair(s)	Simon WING, The Johns Hopkins University Jay JOHNSON, Andrews University

ST01-D4-PM2-301-001 | ST01-A001

Solar Wind Turbulence Effects on the Magnetosphere Simon WING^{1‡+}, Joe BOROVSKY², Jay JOHNSON³ ¹The Johns Hopkins University, ²Space Science Institute, ³Andrews University

ST01-D4-PM2-301-002 | ST01-A002 (Invited)

A System Science Approach to the Complex Magnetosphere Juan VALDIVIA^{1#+}, Benjamin TOLEDO¹, Jose ROGAN¹, Sylvain BLUNIER¹

¹Universidad de Chile

ST01-D4-PM2-301-003 | ST01-A003 (Invited)

Data Analytics Approaches to STP: Statistical Characterization of Solar Cycle Variation in Space Climate, and Dynamical Networks Approach to Space Weather

Sandra CHAPMAN^{1#+}, Elisabeth TINDALE¹, Lauren ORR¹, Aisling BERGIN¹, Jesper GJERLOEV², Nicholas WATKINS¹ ¹University of Warwick, ²The Johns Hopkins University Applied Physics Laboratory

ST01-D4-PM2-301-004 | ST01-A008 (Invited)

Now-casting and Predicting the Kp Index Using Historical Values and Real-time Observations

Yuri SHPRITS^{1#+}, Ruggero VASILE², Irina ZHELAVSKAYA² ¹GFZ German Research Center for Geosciences, ²GFZ German Research Centre for Geosciences

ST07-D4-PM2-301-005 | ST07-A003

Modeling of the Near-earth Plasma Environment for the Extreme Geomagnetic Storms

Natalia BUZULUKOVA^{1,2#+}, Mei-Ching FOK¹, Alex GLOCER¹, Robert REDMON³, Nat GOPALSWAMY¹

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

ST07-D4-PM2-301-006 | ST07-A005

The Role of Global-MHD and Integrated Radiation Belt Models in Forecasting Extreme Space Weather Events Ravindra DESAI^{1‡+}, Jonathan EASTWOOD¹, Lars MEJNERSTEN¹, Joseph EGGINGTON¹, Richard HORNE², Nigel MEREDITH², Jeremy CHITTENDEN¹ ¹Imperial College London, ²British Antarctic Survey

OS04 / Extreme Events: Tropical Cyclones, Intense Rainfall, Dust Storm in the Warming Environment of the Asia-oceania Region OS03 / Changing Climate and Adjusting Ecosystem in the Arctic and Antarctic Ocean

Thu - 01 Aug | Nicoll 1

Time	16:00-18:00
Chair(s)	Narayana A. C., University of Hyderabad
	Prasanna Kumar SUKUMARAN, National Institute of
	Oceanography
	Meibing JIN, Nanjing University of Information Science
	& Technology

OS04-D4-PM2-Nicoll 1-001 | OS04-A009

Indian Monsoon Extremes: The Unique Setting in the Bob and Links to Hydrological Cycle Ankur SRIVASTAVA^{1‡+}, Suryachandra Rao ANGULURI¹,

Ankur SKIVASTAVA¹⁺⁺, Suryachandra Kao ANGULUKI Subimal GHOSH² ¹Indian Institute of Tropical Meteorology, ²Indian Institute of

Inalan Institute of Tropical Meteorology, Inalan Institute of Technology Bombay

OS04-D4-PM2-Nicoll 1-002 | OS04-A013

Variability and Drivers of Northeast Asian Marine Heatwaves During Long-term Summer

Seonju LEE^{1#+}, Myung-Sook PARK¹, Minho KWON¹, Young Ho KIM¹, Young Gyu PARK¹

¹Korea Institute of Ocean Science and Technology

OS03-D4-PM2-Nicoll 1-003 | OS03-A007

Simulation and Analysis of the Response of Arctic Ocean Plankton to Environmental Change

Xiaofan LUO^{1#+}, Wei ZHAO¹, Hao WEI¹, Yongli ZHANG¹, Yali WANG¹, Yu QIN¹, Timothee BOURGEOIS², Hongtao NIE¹, Xianmin HU³, Youyu LU³

¹Tianjin University, ²Dalhousie University, ³Bedford Institute of Oceanography

OS03-D4-PM2-Nicoll 1-004 | OS03-A009

A Numerical Study of the Impacts of Storm on Upper Ocean in the Western Arctic Ocean Xuezhi BAI^{1#+}, Jie WANG¹ ¹Hohai University

OS03-D4-PM2-Nicoll 1-005 | OS03-A002

The Growing Impact of Surface Waves on Arctic Sea Ice Ecosystems Mark ORZECH^{1#+} ¹U.S. Naval Research Laboratory

OS03-D4-PM2-Nicoll 1-006 | OS03-A001

Ecosystem Response to Climate Changes in the Arctic Ocean Meibing JIN^{1,2#+}, Jihai DONG¹

¹Nanjing University of Information Science & Technology, ²University of Alaska Fairbanks

OS03-D4-PM2-Nicoll 1-007 | OS03-A006

Analysis on Determination of Melt-onset for Sea Ice in the Chukchi Sea Yali WANG^{1‡+}, Xiaofan LUO¹, Yu QIN¹, Yongli ZHANG¹,

Hongtao NIE¹, Hao WEI¹ ¹*Tianjin University*

OS03-D4-PM2-Nicoll 1-008 | OS03-A008

Extraction of Sea Ice in Arctic Based on HY-2A/B Satellite Altimeter Data

Chengfei JIANG^{1,2+}, Hao WEI¹, Mingsen LIN^{2#}, Youguang ZHANG², Yongjun JIA², Xiaofan LUO¹, Hongtao NIE¹ ¹Tianjin University, ²National Satellite Ocean Application Service

IG07 / Interdisciplinary Research on Water-related Disasters and Practical Applications for Disaster Risk Reduction

Thu - 01 Aug | MR300

 Time
 16:00-18:00

 Chair(s)
 Natt LEELAWAT, Chulalongkorn University

 Anawat SUPPASRI, Tohoku University

IG07-D4-PM2-300-001 | IG07-A005

Tsunami Disaster Mitigation in High Tourist Areas of Bali Indonesia

Sarah HALL^{1#+}, Ron HARRIS², Gilang SETIADI³, Chad EMMETT², Amelia COPE¹

¹Utah Valley University, ²Brigham Young University, ³UPN Veteran Yogyakarta

IG07-D4-PM2-300-002 | IG07-A019

Application of Conformal Map Function to Improve Similarity of SIND Model Dong Hyun KIM¹⁺, Hyung-Ju YOO¹, Hong-Teak KIM¹, Seung Oh LEE^{1#}

¹Hongik University

IG07-D4-PM2-300-003 | IG07-A021

Assessment of Urban Resilience to Flood Using PSR Framework and System Dynamics Jing HUANG^{1‡+}, Xiaomei YUAN¹, Huimin WANG¹ ¹Hohai University

IG07-D4-PM2-300-004 | IG07-A025

Modelling Climate Change Impacts to Farmers in the Restructured Weather Based Crop Insurance Scheme (RWBCIS) in India Iain WILLIS¹, Muhammad RAHIZ^{1#+} ¹JBA Risk Management Pte Ltd

IG07-D4-PM2-300-005 | IG07-A026

Toward Understanding 1.5°C Global Warming Impacts on Temperature and Precipitation Extremes at Different Timings: Before and After Overshooting Yanyu LU¹²⁺ ¹Anhui Climate Center

SS02 / The Brewer-Dobson and Hadley Circulations in a Changing Climate: Evolution and Impacts

Thu - 01 Aug | MR309

Time 16:00-18:00

Chair(s) Shigeo YODEN, Kyoto University Richard ECKMAN, National Aeronautics and Space Administration

SS02-D4-PM2-309-001 | SS02-A006 (Invited)

Widening and Weakening of the Hadley Circulation Under Global Warming Yongyun HU¹⁸⁺ ¹Peking University SS02-D4-PM2-309-002 | SS02-A002 (Invited)

Tightening of Tropical Ascent and the Implications for Global and Regional Hydrological Cycle

Hui SU^{I#+}, Jonathan JIANG¹, Chengxing ZHAI¹, Longtao WU¹, J. David NEELIN², Yuk YUNG³ ¹Jet Propulsion Laboratory, California Institute of Technology,

²University of California, Los Angeles, ³California Institute of Technology

SS02-D4-PM2-309-003 | SS02-A005 (Invited)

Improved Estimates of Recent Tropical Expansion and the Role of Natural Variability Versus Forced Change Sean DAVIS^{1*+} ¹NOAA Earth System Research Laboratory

SS02-D4-PM2-309-004 | SS02-A001 (Invited)

Past and Future Brewer-Dobson Circulation Changes and the Main Drivers

Lei WANG^{1*+}, Lorenzo POLVANI², Marta ABALOS³ ¹Fudan University, ²Columbia University, ³Universidad Complutense de Madrid

SS02-D4-PM2-309-005 | SS02-A003 (Invited) **Brewer-Dobson Circulation Diagnosed From Reanalysis Datasets** Chiaki KOBAYASHI^{1#+}, Toshiki IWASAKI² ¹Meteorological Research Institute, ²Tohoku University

AS14 / The Science and Prediction of Tropical Cyclones

Thu - 01 Aug | Nicoll 3

Time 16:00-18:00

Chair(s) M.K.(Peter) YAU, McGill University Yoshiaki MIYAMOTO, Keio University

AS14-D4-PM2-Nicoll 3-001 | AS14-A045 (Invited)

A Mechanism for the Dissipation of the Inner Eyewall During the Eyewall Replacement Cycle of Tropical Cyclones M.K.(Peter) YAU^{1#+} ¹McGill University

AS14-D4-PM2-Nicoll 3-002 | AS14-A014 (Invited)

Does Strong Vertical Wind Shear Certainly Lead to Weakening of Tropical Cyclone? Kelvin T. F. CHAN^{1#+} ¹Sun Yat-sen University

AS14-D4-PM2-Nicoll 3-003 | AS14-A006 (Invited)

Large-Eddy Simulation of Extreme Updrafts in the Tropical Cyclone Inner Core Liguang WU^{1#+}

¹Fudan University

AS14-D4-PM2-Nicoll 3-004 | AS14-A016 (Invited)

A Dynamical Mechanism for Secondary Eyewall Formation in Tropical Cyclones Yoshiaki MIYAMOTO^{1#+} ¹Keio University AS14-D4-PM2-Nicoll 3-005 | AS14-A030 **The Role of WISHE in the Rapid Intensification of Tropical Cyclones** Chieh-Jen CHENG¹⁺, Chun-Chieh WU^{1‡} ¹National Taiwan University

AS14-D4-PM2-Nicoll 3-006 | AS14-A038

Dynamic Efficiency of Latent Heat Release and the Rapid Intensification of Supertyphoon Haiyan (2013) Hung-Chi KUO¹⁺, Satoki TSUJINO^{1#}, Chien-Chang HUANG¹, Chung-Chieh WANG², Kazuhisa TSUBOKI³ ¹National Taiwan University, ²National Taiwan Normal University, ³Nagoya University

AS14-D4-PM2-Nicoll 3-007 | AS14-A032

Intensity Change of Tropical Cyclones Embedded in Moderate-sheared Environment: The Role of the Low-level Flow Direction Tsung-Yung LEE¹⁺, Chun-Chieh WU^{1‡} ¹National Taiwan University

AS14-D4-PM2-Nicoll 3-008 | AS14-A031 **The Role of Deep Convective Cells in Extreme Rapid Intensification** Jae-Deok LEE¹⁺, Chun-Chieh WU^{1‡} ¹National Taiwan University

OS Poster Presentations

Thu - 01 Aug, 13:30 - 15:30 | EXHIBITION HALL

OS01-D4-PM1-P-001 | OS01-A008

The Mineralogical Evidence of the Existence of Two Mass Sources Along a Traverse Route from Zhongshan Station to Dome A, Antarctica Liya ZHOU¹⁸⁺ ¹Nanjing University

OS01-D4-PM1-P-002 | OS01-A015

The Baroclinic Energy Conversion Associated with the High-latitude Eurasian Teleconnection Pattern During Summer

Xinyu LI^{1#+}, Riyu LU², Richard GREATBATCH³, Gen LI¹ ¹Hohai University, ²Chinese Academy of Sciences, ³GEOMAR Helmholtz Centre for Ocean Research Kiel

OS02-D4-PM1-P-003 | OS02-A004

Common Model Biases Reduce CMIP5's Ability to Simulate the Recent Pacific La Niña-like Cooling

Jing-Jia LUO^{1#+}, Gang WANG², Dietmar DOMMENGET² ¹Nanjing University of Information Science & Technology, ²Monash University

OS02-D4-PM1-P-005 | OS02-A010

New ENSO Monitoring System: Accounting For Climate Change

Thea TURKINGTON^{1#+}, Raizan RAHMAT¹, Bertrand TIMBAL² ¹Centre for Climate Research Singapore, ²National Environment Agency

OS02-D4-PM1-P-006 | OS02-A011

Monsoon Climate Variability over South and East Asia: A Review

Ramesh KRIPALANI^{1,2#+}

¹Indian Institute of Tropical Meteorology, ²Pukyong National University

OS02-D4-PM1-P-007 | OS02-A013

Decadal Sea Level Shift in the Tropical Pacific and its Linkage with the Recent Resumption of Global Ocean Warming

Sang-Chul CHA¹⁺, Jae-Hong MOON^{1#}, Yuhe Tony SONG² ¹Jeju National University, ²Jet Propulsion Laboratory, California Institute of Technology

OS02-D4-PM1-P-008 | OS02-A015

Bias of Dynamic Sea Level Simulated by CMIP5 Models in the Tropical Pacific Ocean Meixiang CHEN^{1‡+}, Shuyi XIE¹ ¹Hohai University

OS02-D4-PM1-P-009 | OS02-A020

Human Contribution to the Observed Increases in SST Threshold for Tropical Convection In-Hong PARK^{1#+}, Seung-Ki MIN¹ ¹Pohang University of Science and Technology

OS02-D4-PM1-P-010 | OS02-A025

Interannual and Interdecadal Variations of Subtropical Eastern North Pacific SST

Yi-Kai WU^{1#+}, Chi-Cherng HONG², Cheng-Ta CHEN¹ ¹National Taiwan Normal University, ²University of Taipei

OS02-D4-PM1-P-011 | OS02-A027

Projecting ENSO Amplitude Change Under Global Warming Lin ${\rm CHEN}^{1{\rm F}*}$

¹Nanjing University of Information Science & Technology

OS02-D4-PM1-P-012 | OS02-A028

Seasonal Rainfall Predictability of the Arabian Winter Monsoon Region Muhammad Adnan ABID^{1#+}, Fred KUCHARSKI¹, Mansour ALMAZROUI², In-Sik KANG³ ¹International Centre for Theoretical Physics, ²King Abdulaziz University, ³Second Institute of Oceanography

OS03-D4-PM1-P-015 | OS03-A003

Sea Level Variation in the Arctic Ocean in the Period 1979-2016 Kai XIAO^{1*+}, Meixiang CHEN¹, Xuezhu WANG², Qiang WANG², Wenhao ZHANG², Shuyi XIE¹ ¹Hohai University, ²Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research

OS03-D4-PM1-P-016 | OS03-A004

Critical Mechanisms for the Abnormal Event of Sea Ice Distribution in Pacific Sector of the Arctic During the Summer of 1998 Yongli ZHANG^{1#+}, Hao WEI¹, Hongtao NIE¹, Xiaofan LUO¹,

Yali WANG¹, Yu QIN¹, Chunming DONG¹, Xiaolan LUO², Youyu LU²

¹Tianjin University, ²Bedford Institute of Oceanography

OS03-D4-PM1-P-017 | OS03-A005

Analysis on the Simulated Pathway of Pacific Summer Water in the Arctic Ocean Yu QIN^{1#+}, Xiaofan LUO¹, Yali WANG¹, Yongli ZHANG¹,

Chunming DONG¹, Hongtao NIE¹, Hao WEI¹ ¹Tianjin University

OS03-D4-PM1-P-018 | OS03-A010

Transport of the Alaska Coastal Water over the Chukchi Borderland in the Summer of 2018 Hengling LENG^{1±+}, Xuezhi BAI¹ ¹Hohai University

OS03-D4-PM1-P-019 | OS03-A011

Changes in Water Mass Characteristics and Vertical Thermohaline Structure in the Eastern Chukchi Sea During Summer, 1974-2017 Yayu YANG^{1*+}, Xuezhi BAI¹ ¹Hohai University

OS04-D4-PM1-P-020 | OS04-A010

Cyclonic Intensity Study Using Sea Level Pressure Estimations from SCATSAT-1 Winds over Bay of Bengal During 2018 Purna CHAND¹, Arjun SURESH^{1#}, Nivedita SINGH²⁺, Deepa NATHALIA³, S. V. Kasi VISWANATH⁴, Neha SINGH¹ ¹Amity University, ²Mewar Institute, ³Panjab University, ⁴Andhra Pradesh State Disaster Management Authority

OS04-D4-PM1-P-021 | OS04-A012

Investigation of Cloud Microphysics, Precipitation and Three Dimensional Structure of Winds of Cyclone "Ockhi": Results from Space Borne Observations and Reanalysis Arun NAIR^{1,*+}, Vijay KANAWADE¹, Siddarth Shankar DAS², Abin THOMAS¹ ¹University of Hyderabad, ²Vikram Sarabhai Space Centre

OS05-D4-PM1-P-022 | OS05-A003

Dynamic Mechanism for Resuspension of Microphytobenthos and Cohesive Sediment in Intertidal Flat, Southwestern Korea Ho Kyung HA^{1#+}, Jong Seong KHIM², Hun Jun HA¹, Hosang KIM², Jungsung NOH² ¹Inha University, ²Seoul National University

OS05-D4-PM1-P-023 | OS05-A005

Environmental Change During the Holocene Traced by Ostracoda Occurrence in the Southern Part of Nakdong River Delta, Southeastern Korea Peninsula Daekyo CHEONG¹⁵⁺, Bokhye KIM¹ ¹Kangwon National University

OS05-D4-PM1-P-025 | OS05-A007

Monitoring of Coastal Shape Change Due to Man-made Construction in Wolchun Beach Dongseob SONG^{1‡+} ¹Kangwon National University

OS05-D4-PM1-P-026 | OS05-A009

Spatial Difference in Sedimentary Facies and Processes in the Tidal Flat Around the Imjado, Southwestern Coast of Korea

Hyunho YOON^{1#+}, Seungsoo CHUN², Gwangsoo LEE¹ ¹Korea Institute of Geoscience and Mineral Resources, ²Chonnam National University

OS05-D4-PM1-P-028 | OS05-A016

An Analysis of Upwelling Trend Along the Indian Coast Using Satellite Data

Manisha VITHALPURA^{1#+}, Shailee PATEL², Smitha RATHEESH³

¹ISHLS, Indus University, ²Indus University, ³Space Applications Centre

OS07-D4-PM1-P-029 | OS07-A002

Meridional Oscillation in Genesis Location of Tropical Cyclones in the Postmonsoon Bay of Bengal Kaigui FAN¹⁺, Xidong WANG^{1‡}, Gregory FOLTZ², Karthik BALAGURU³

¹Hohai University, ²NOAA Atlantic Oceanographic and Meteorological Laboratory, ³Pacific Northwest National Laboratory

OS07-D4-PM1-P-030 | OS07-A003

Does Atmosphere-ocean Coupling Have an Effect on the Prediction of 2016 Western North Pacific Tropical Cyclones? Xiangbo FENG¹⁺, Nicholas KLINGAMAN¹, Kevin HODGES¹ ¹University of Reading

OS07-D4-PM1-P-033 | OS07-A014

The Impact of Sea Surface Temperature on Zonal Movement of Western Pacific Subtropical High in Boreal Summer Hong LI¹⁺, Fanghua XU^{1‡} ¹Tsinghua University

OS07-D4-PM1-P-034 | OS07-A015

Experiments on Characteristics of Wind Waves Generation Under Stable-unstable Stratification Kenta MASUDA¹⁺, Toshinori OGASAWARA^{1‡} ¹Iwate University

OS08-D4-PM1-P-035 | OS08-A006

Increasing Hypoxia in the Changjiang Estuary During the Last Three Decades Deciphered from Sedimentary Redox-sensitive Elements Daidu FAN^{1#+}, Yijing WU¹ ¹Tongji University

OS08-D4-PM1-P-036 | OS08-A009

Recent Morphological Changes in the Southern Red River Delta (Viet Nam) and its Linkage with Human Activities Nguyen DAC VE¹⁺, Daidu FAN¹⁺, Bui VAN VUONG², Tran Dinh LAN², Vu DUY VINH²

¹Tongji University, ²Institute of Marine Environment and Resources

OS08-D4-PM1-P-037 | OS08-A018

HF Radar Observed Surface Currents and Waves Off Shandong Peninsula, China

Yuping YANG¹⁺, Chenghao WANG², Libo ZHANG¹, Jingping XU^{1#}

¹Southern University of Science and Technology, ²Ocean University of China

OS08-D4-PM1-P-038 | OS08-A020

Change in Hydrodynamics and its Feedback to Morphologic Evolution of the Huanghe (Yellow River) Delta Meng LIU¹⁺, Naishuang BI^{2±}, Xiao WU², Jingping XU¹

¹Southern University of Science and Technology, ²Ocean University of China

OS09-D4-PM1-P-039 | OS09-A001

Influence of Sequential Typhoons on Phytoplankton Blooms in the Northwestern South China Sea Tongyu WANG¹⁺, Shuwen ZHANG^{1‡}, Qiang LI¹ ¹Guangdong Ocean University

OS09-D4-PM1-P-040 | OS09-A005

Decadal Phytoplankton Biomass Fluctuation in the Western North Pacific Subtropical Gyre Wee CHEAH^{1#+}, Chun Hoe CHOW², Jen-Hua TAI³ ¹University of Malaya, ²National Taiwan Ocean University, ³Academia Sinica

OS10-D4-PM1-P-041 | OS10-A004

Effect of Salinity on Synechococcus Community Structure in the Coastal Area

Sze Ki LEUNG¹⁺, Hongbin LIU¹⁺, Xiaomin XIA² ¹The Hong Kong University of Science and Technology, ²Chinese Academy of Sciences

OS10-D4-PM1-P-042 | OS10-A006

Patterning Multitrophic Community and Trophic Structure in a Temperate, Low-turbidity Estuarine Bay of Korea Hee Yoon KANG^{1‡+}, Young-Jae LEE¹, Sung-Gyu YUN², Changseong KIM¹, Hyun Je PARK³, Young Kyun KIM¹, Yoonja KANG¹, Goutam Kumar KUNDU¹, Dongyoung KIM¹, Jaebin JANG¹, Chang-Ho MOON⁴, Chang-Keun KANG¹ ¹Gwangju Institute of Science and Technology, ²Daegu University, ³Gangneung-Wonju National University, ⁴Pukyung National University

OS10-D4-PM1-P-043 | OS10-A009

Isotopic Variation of Macroinvertebrates and Their Sources of Organic Matter Along an Estuarine Gradient Changseong KIM^{1#+}, Hee Yoon KANG¹, Young-Jae LEE¹, Sung-Gyu YUN², Chang-Keun KANG¹ ¹Gwangju Institute of Science and Technology, ²Daegu University

OS10-D4-PM1-P-044 | OS10-A013

Ecosystem Foodweb Analysis of Gwangyang Bay, Korea, Using a Trophic Flow Model Coupled with Stable Isotope Analysis

Yun-Ho KANG^{1#}, Chang-Keun KANG¹, Dongyoung KIM¹, Jin Hee WI¹, Young Kyun KIM¹, Yoonja KANG¹, Kwanghun LEE¹⁺ ¹Gwangju Institute of Science and Technology

OS11-D4-PM1-P-045 | OS11-A003

Role of Atmospheric Nutrient Pollution in Stimulating Phytoplankton Growth in Small Area and Shallow Depth Water Bodies: Arabian Gulf and the Sea of Oman Ashraf FARAHAT^{1*+}, Abdelgadir ABUELGASIM² ¹King Fahd University of Petroleum and Minerals, ²United Arab Emirates University

OS11-D4-PM1-P-046 | OS11-A005

Poleward Shift of the Pacific North Equatorial Current Bifurcation

Haihong GUO¹⁺, Zhaohui CHEN^{1,2‡}, Haiyuan YANG¹ ¹Ocean University of China, ²Qingdao National Laboratory for Marine Science and Technology

OS11-D4-PM1-P-047 | OS11-A006

Decadal Variability of Eddy Characteristics and Energetics in the Kuroshio Extension: Unstable Versus Stable States Haiyuan YANG¹⁺⁺, Bo QIU², Ping CHANG³, Zhaohui CHEN^{1,4}, Lixin WU¹

¹Ocean University of China, ²University of Hawaii, ³Texas A&M University, ⁴Qingdao National Laboratory for Marine Science and Technology

OS11-D4-PM1-P-048 | OS11-A007

Tropical Meridional Overturning Circulation Observed by Subsurface Moorings in the Western Pacific Lina SONG^{1#+}

¹Chinese Academy of Sciences

OS11-D4-PM1-P-049 | OS11-A010

Subseasonal Variations of the ENSO-related Maritime Continent Rainfall Anomalies During the Northern Winter and the Role of the Indian Ocean Zizhen DONG¹⁺, Lin WANG¹⁺ ¹Chinese Academy of Sciences

OS11-D4-PM1-P-050 | OS11-A012

Contrasting Intraseasonal Variations of the Equatorial Pacific Ocean Between the 1997-1998 and 2015-2016 El Niño Events Yilong LYU¹⁺, Yuanlong LI², Xiaohui TANG²⁺, Fan WANG², Jianing WANG²

¹Institute of Oceanology, Chinese Academy of Sciences, ²Chinese Academy of Sciences

OS11-D4-PM1-P-052 | OS11-A027

Annual Versus Semi-annual Eddy Kinetic Energy Variability in the Celebes Sea Chengcheng YANG¹⁺, Xiao CHEN^{1‡}, Xuhua CHENG¹ ¹Hohai University

OS11-D4-PM1-P-053 | OS11-A028

Interannual Variability of the Spring Wyrtki Jet Deng KANGPING¹⁺, Xuhua CHENG¹⁺ ¹Hohai University

OS11-D4-PM1-P-054 | OS11-A032

Ocean Circulation Plays a Crucial Role in Governing the Subsurface Thermal Variability in the Northwestern Tropical Pacific Ocean

Yi-Chia HSIN^{1#+}, Tzu-Ling CHIANG², Chau-Ron WU² ¹Academia Sinica, ²National Taiwan Normal University

OS12-D4-PM1-P-055 | OS12-A002

Topographic Changes of the Daehang-ri Intertidal Flat Induced by Anthropogenic Activities of the Saemangeum Dike Construction, the West Coast of Korea

Tae-Jin CHOI¹³⁺, Jin-Yong CHOI¹, Chansung OH², Yong-Jin YANG², Eui-Young JEONG³, Jung-Hoon CHOI² ¹Kunsan National University, ²Korea Rural Community Corporation, ³Korea Institute of Ocean Science and Technology

OS12-D4-PM1-P-057 | OS12-A004

Relative Sea Level Changes in Southeast Asia During the Common Era

Timothy SHAW^{1#+}, Nicole KHAN¹, Adam SWITZER¹, Daniel A. FRIESS², Benjamin HORTON^{1,3} ¹Nanyang Technological University, ²National University of Singapore, ³Rutgers University

OS12-D4-PM1-P-058 | OS12-A005

Coastline Recession on Small Remote Islands. A Case Study, Tanna Island, Vanuatu Serena LEE^{1#+}, Gaelle FAIVRE¹, Charles LEMCKERT^{1,2}, Rodger TOMLINSON¹ ¹Griffith University, ²University of Canberra

OS12-D4-PM1-P-059 | OS12-A007

Experimental Study on Verification of the Wave Attenuating Effect of a Pneumatic Breakwater According to Installation Conditions

Sung-Chul JANG^{1‡+}, Min-Su KIM¹, Junghyun PARK², Han-sam YOON¹

¹Pukyong National University, ²Korea Institute of Science and Technology Information

OS12-D4-PM1-P-060 | OS12-A011

Contribution of Surface Cooling Due to Mixing with Yellow Sea Bottom Water to Weather Conditions Around the Korean Peninsula Subin KIM^{1‡+}, Jae-Hong MOON¹

¹Jeju National University

OS13-D4-PM1-P-061 | OS13-A004

Enhanced Sulfate Reduction and Carbon Sequestration in Sediments Underlying the Core of the Arabian Sea Oxygen Minimum Zone Svetlana FERNANDES¹⁵⁺, Aninda MAZUMDAR¹, Wriddhiman GHOSH² ¹CSIR-National Institute of Oceanography, ²Bose Institute

OS13-D4-PM1-P-062 | OS13-A009

A Modeling Study on Origin of Jellyfish in the Waters Nearby Hongyanhe Nuclear Power Plant in the East Liaodong Bay, Bohai Sea (China) Xue SUN¹, Hao WEI¹, Haiyan ZHANG^{1#+}, Hongtao NIE¹ ¹Tianjin University

OS14-D4-PM1-P-063 | OS14-A001

Application of Infrared Spectroscopy in Microplastic Pollution Research Ranjani M^{1#+}, Veerasingam S², Venkatachalapathy RAMADOSS¹, Mugilarasan M¹ ¹Annamalai University, ²CSIR-National Institute of Oceanography

OS14-D4-PM1-P-064 | OS14-A005

Microplastic Pollution in a Heavily Urbanized Coastal Area: A Baseline Survey of Sevastopol Bay (The Black Sea) Andrei BAGAEV¹⁵⁺, Vladimir MUKHANOV², Daria LITVINYUK², Evgenii SAKHON² ¹Marine Hydrophysical Institute of the Russian Academy of Sciences, ²A.O. Kovalevsky Institute of Marine Biological Research

OS15-D4-PM1-P-065 | OS15-A001

Seasonal and Spatial Variations of the M2 Internal Tide in the Yellow Sea Kun LIU1 $^{\sharp_+}$

¹Qingdao National Laboratory for Marine Science and Technology Development Centre

OS15-D4-PM1-P-066 | OS15-A007

Tidal Hydrodynamics of Gulf of Khambhat, West Coast of India – A Numerical Approach Aditi MITRA^{1±+}, Sanil KUMAR¹ ¹National Institute of Oceanography

OS15-D4-PM1-P-067 | OS15-A008

Impact of Wave Induced Turbulent Kinetic Energy on Tropical Cyclone in Regional Atmosphere-ocean-wave Coupled Model Masashi TAKAGI¹⁺, Nobuhito MORI¹, Junichi NINOMIYA² ¹Kyoto University, ²Kanazawa University

OS15-D4-PM1-P-068 | OS15-A009

How Does Wave Directional Distribution Affect the Likelihood of Rogue Waves? Mark ORZECH¹⁵⁺, Jie YU¹ ¹U.S. Naval Research Laboratory

OS15-D4-PM1-P-069 | OS15-A013

Regional Scale Seawater CO2 System Modeling in Coral Triangle Area: Preliminary Results Faisal AMRI^{1,2#+}, Takashi NAKAMURA¹, Lawrence Patrick Cases BERNARDO¹, Kazuo NADAOKA¹

¹Tokyo Institute of Technology, ²Institut Teknologi Bandung

OS15-D4-PM1-P-071 | OS15-A018

Analysis on the Spatial and Temporal Sensitivities of Key Parameters in Swan Model: An Example for Chan-hom Typhoon Waves in the East China Sea

Yao XU¹⁺, Jicai ZHANG^{2#}, Yun XU², Wangmin YING², Yaping WANG¹, Zhumei CHE³, Ye ZHU³

¹Nanjing University, ²Zhejiang University, ³The Ocean and Fisheries Bureau

OS15-D4-PM1-P-072 | OS15-A019

Numerical Modeling of Storm Tides over the Maritime Continent

Bijoy THOMPSON^{1‡+}, Pavel TKALICH¹, Jianyu LIU², Xiangming SUN², Claudio SANCHEZ³, Xiang-Yu HUANG² ¹National University of Singapore, ²Centre for Climate Research Singapore, ³UK Met Office

OS15-D4-PM1-P-073 | OS15-A020

Impacts of Relative Vorticity on Critical Latitude Effects on Internal Tides, Waves, and Mixing

Tianyu ZHOU^{1#+}, Zhibo SHAO¹, Weihong LIN¹, Jiarui CHEN¹, Muzhi ZHOU¹, Paul HARTLIPP², Robin ROBERTSON¹ ¹Xiamen University Malaysia, ²University of New South Wales

OS15-D4-PM1-P-074 | OS15-A022

Online Isolation of Near-inertial Internal Waves in Ocean General Circulation Models Zhuo SONG^{1‡+}, Zhao JING¹, Lixin WU¹ ¹Ocean University of China

OS15-D4-PM1-P-075 | OS15-A029

North Pacific Ocean Storm Track Responses to Oceanic Eddies in the Kuroshio Extension Region Jin-Lin JI¹⁺, Changming DONG^{2,3#}, Dake CHEN⁴

¹Xiamen University, ²Nanjing University of Information Science & Technology, ³University of California, Los Angeles, ⁴State Oceanic Administration

OS15-D4-PM1-P-076 | OS15-A030

In-situ Measurements of Bottom Boundary Layer in Mariana Trench

Qian LIU^{1#+}, Haiqin DUAN², Zhiwen WANG², Meng LIU¹, Jingping XU¹ ¹Southern University of Science and Technology, ²Ocean University of China

OS15-D4-PM1-P-077 | OS15-A033

Submesoscale Eddies in the East China Sea Revealed from SAR Images

Ji YUXIANG^{1,3}, Guangjun XU², Changming DONG^{1,3} ¹Nanjing University of Information Science & Technology, ²Guangdong Ocean University, ³University of California, Los Angeles

OS15-D4-PM1-P-078 | OS15-A036

Numerical Study of Long-term Variation of Salt-water Intrusion in Yangtze River Estuary Haiyun SHI^{1#+}, Changming DONG^{1,2}, Chunhui LI¹ ¹Nanjing University of Information Science & Technology, ²University of California, Los Angeles

OS16-D4-PM1-P-080 | OS16-A001

Educational Ocean Salinity Monitoring Activities in the High School and Constructing Applicational Model Ryo NAKAMURA^{1#+} ¹Miyagi Rifu High School

OS16-D4-PM1-P-081 | OS16-A002

Seasonal-to-interannual Variability of Upper-layer Vertical Stratification in the Tropical Pacific Xuhua CHENG¹^t, Wei DUAN¹⁺ ¹Hohai University

OS16-D4-PM1-P-083 | OS16-A004

Micronesia's Climate History Unlocked by Coral Porites: Refining Sr/Ca and Stable Oxygen Isotope Calibrations from the Western Pacific Warm Pool Ahmad Taufiq MOHAMED MOHTAR^{1#+}, Nathalie GOODKIN^{1,2}, Konrad HUGHEN³, Iulia M. STREANGA⁴ ¹Nanyang Technological University, ²American Museum of Natural History, ³Woods Hole Oceanographic Institution, ⁴University of Edinburgh

OS17-D4-PM1-P-085 | OS17-A001

Trend Analysis of Global Ocean Surface Wave as Represented in the ERA-Interim for 1979-2010 Lingli WU^{1#+} ¹Hohai University

OS17-D4-PM1-P-086 | OS17-A002

Reconstruction of Three-dimensional Ocean Structure from Sea Surface Data: An Application of isQG Method to Southwest Indian Ocean Zhiqiang CHEN¹⁺, Xidong WANG^{1#} ¹Hohai University

OS17-D4-PM1-P-088 | OS17-A016

Improved Multichannel Singular Spectrum Analysis to the Monthly Gravity Field Solutions from GRACE Data Fengwei WANG¹⁺, Yunzhong SHEN^{1#}, Qiujie CHEN¹, Weiwei LI²

¹Tongji University, ²Shandong University of Science and Technology

OS17-D4-PM1-P-089 | OS17-A018

Adaptive Image Assimilation for Velocity Inversion Long LI^{1,2#+}, Arthur VIDARD², Francois LE DIMET², Jianwei MA³

¹Lab. Jean Kuntzmann, Grenoble Alpes University, ²Universite Grenoble Alpes, ³Harbin Institute of Technology

OS18-D4-PM1-P-090 | OS18-A001

Chemical Properties of Tsunami Deposits Caused by the Great East Japan Earthquake Yoshishige KAWABE¹⁺⁺, Junko HARA¹ ¹National Institute of Advanced Industrial Science and Technology

OS18-D4-PM1-P-091 | OS18-A013

Simulations of the Upper-ocean Response to Hurricane Frances Peida HAN¹⁺, Xiping YU^{1#} ¹Tsinghua University

OS18-D4-PM1-P-092 | OS18-A018

High-resolution Tsunami Modeling at Patong Beach, Phuket, Thailand Kittichote VEERANUNTAWET^{1*+}, Passakorn PANANONT², Kevin P. FURLONG¹ ¹Penn State University, ²Kasetsart University

OS18-D4-PM1-P-093 | OS18-A025

Revised Earthquake Sources Along Manila Trench for Tsunami Hazard Assessment in the South China Sea Linlin Ll^{1#+}, Qiang QIU², Ya-Ju HSU³, Yu WANG^{4,5}, Chung-Han CHAN⁵, Adam SWITZER⁵ ¹National University of Singapore, ²University of Southern California, ³Academia Sinica, ⁴National Taiwan University, ⁵Nanyang Technological University

OS18-D4-PM1-P-094 | OS18-A027

Fundamental Study to Estimate Tsunami Force Acting on Bridge Girders Based on Moving Particle Semi-implicit Method

Yoshihisa MARUYAMA^{1#+}, Toshiki KIKUCHI¹, Gaku SHOJI² ¹Chiba University, ²University of Tsukuba

OS18-D4-PM1-P-095 | OS18-A030

Hydraulic Experiment on Collision Force on a Building of Tsunami Bore Accompanied by an Automobile Toshinori OGASAWARA^{1‡}, Ryusei SATOH¹⁺ ¹Iwate University

OS18-D4-PM1-P-096 | OS18-A031

Characteristics of Ocean Currents at Various Wind Speeds Based on Observations in Amitori Bay, Iriomote Island, Japan

Toshinori OGASAWARA^{1#}, Ayano ISHIKAWA¹⁺, Tomokazu MURAKAMI²

¹Iwate University, ²National Research Institute for Earth Science and Disaster Resilience

OS18-D4-PM1-P-099 | OS18-A036

Experimental Study on Force of a Tsunami Carrying Sediment Koshu KISE^{1‡+}, Taro ARIKAWA¹ ¹Chuo University OS18-D4-PM1-P-101 | OS18-A042

Transport Mechanism of Coastal Boulders in Ilocos Norte, Philippines Inferred from Coastal Geomorphology and Boulder Sedimentology Edrian TUBALADO^{1#+}, Alec Benjamin RAMIREZ¹, Ace Matthew CANTILLEP¹, Kathrine MAXWELL¹, Noelynna RAMOS¹ ¹University of the Philippines Diliman

OS18-D4-PM1-P-103 | OS18-A044

Experimental Study on Scour Behind Vertical Seawall Due to Tsunami Overflow Kohei SUZUKI¹, Taro ARIKAWA^{1‡+} ¹Chuo University

OS18-D4-PM1-P-104 | OS18-A049

Feasible Study for Predicting Tsunami Height by Using Oceanographic Radar Installed in Wakayama Prefecture Shuji SETO^{1#+}, Tomoyuki TAKAHASHI², Hirofumi HINATA³, Ryotaro FUJI⁴, Fumihiko IMAMURA¹ ¹Tohoku University, ²Kansai University, ³Ehime University, ⁴Kokusai Kogyo Co., Ltd.

OS18-D4-PM1-P-105 | OS18-A050

Modelling of Tsunami Floating Bodies Acting on a Bridge Deck Gaku SHOJI^{1#+}, Xiaojiao LIU¹ ¹University of Tsukuba

OS18-D4-PM1-P-106 | OS18-A051

Seiche Effects in Lake Tekapo New Zealand in an Mw8.2 Alpine Fault Earthquake Xiaoming WANG¹, Caroline HOLDEN¹, William POWER¹, Yaoru LIU²⁺⁺, Joshu MOUNTJOY³ ¹GNS Science, ²Tsinghua University, ³National Institute of Water and Atmospheric Research

OS18-D4-PM1-P-107 | OS18-A054

Tsunami Risk Assessment Considering Tsunami Wave Correlation Using Copulas Yo FUKUTANI¹⁺⁺ ¹Kanto Gakuin University

OS18-D4-PM1-P-108 | OS18-A055

Characteristics of Beach Erosion in Headland Bays Due to Wave Action: Taking the Narrabeen Beach in Australia as an Example Xi FENG^{1±+} ¹Hohai University

OS18-D4-PM1-P-109 | OS18-A058

The Destruction of a Cemented Rubble Mound Seawall by a Tsunami Radianta TRIATMADJA^{1#+}, Nur YUWONO¹, Djoko LEGONO¹,

Radianta TRIATMADJA^{2,e}, Nur TOWONO², Djoko LEGONO², Redha INABAH¹, David S.V.L. BANGGUNA¹, Kuswandi KUSWANDI², Warniyati SEIMAHUIRA¹ ¹Universitas Gadjah Mada, ²Institut Teknologi Medan

OS19-D4-PM1-P-111 | OS19-A001

Application of Convolutional Neural Network in Intelligent Classification of Sea Ice Yanrong CUI^{1#+}, Bin ZOU¹, Lijian SHI¹, Huang LEI¹ ¹National Satellite Ocean Application Service

OS19-D4-PM1-P-112 | OS19-A002

Polar Sea Ice Concentration Retrieval Based on Neural Networks

Sen LIU^{1#+}, Bin ZOU¹, Lijian SHI¹, Tao ZENG¹, Yanrong CUI¹ ¹National Satellite Ocean Application Service

OS19-D4-PM1-P-113 | OS19-A003

Preliminary Conception of a Smart Ocean Ting LIU¹⁺, Bin ZOU¹, Xiaobin YIN^{2‡}, Lei ZHOU², Yongcun CHENG², Zhou WU¹, Lijian SHI¹ ¹National Satellite Ocean Application Service, ²Beijing PIESAT

Information Technology Co., Ltd

OS19-D4-PM1-P-114 | OS19-A004

Convolutional Neural Network Classification of Coastal Wetland Combined with Hyperspectral Image and Lidar Data Ma YI^{1‡}, Bin ZOU²⁺

¹Ministry of Natural Resources, ²National Satellite Ocean Application Service

SE Poster Presentations

Thu - 01 Aug, 13:30 - 15:30 | EXHIBITION HALL

SE01-D4-PM1-P-115 | SE01-A001

New Paleomagnetic Results of Sedimentary and Basaltic Rocks from the South China Sea Basins Xixi ZHAO^{1#+}, Qingsong LIU², Weiwei CHEN¹, Wei YUAN¹ ¹Tongji University, ²Southern University of Science and Technology

SE01-D4-PM1-P-116 | SE01-A002

Towards the Interpretation of Magnetic Lineations in Deformed Sedimentary Rocks (West Spitsbergen Fold-and-thrust Belt) Using Anisotropy of In-phase and Out-of-phase Magnetic Susceptibility and Partial Anhysteretic Remanence

Martin CHADIMA^{1,2#+}, Katarzyna DUDZISZ³, Michael WACK⁴, Stuart GILDER⁴

¹Advanced Geoscience Instruments Company, ²Czech Academy of Sciences, ³Polish Academy of Sciences, ⁴Ludwig Maximilians University

SE01-D4-PM1-P-117 | SE01-A010

Geomagnetic Excursions Between 2.1 and 2.9 Ma at IODP Site U1314 in the North Atlantic Masao OHNO^{1#+}, Tatsuya HAYASHI¹ ¹Kyushu University

SE01-D4-PM1-P-118 | SE01-A013

Paleoclimatic Evolution During the Last Glacial Maximum and Last Deglaciation in the Northern South China Sea: Evidence from Magnetic Investigation of Core Sediments Mingkun L1^{1±+}, Tingping OUYANG¹, Zhaoyu ZHU², Andrew ROBERTS³, David HESLOP³, Xiang ZHAO³, Chengjing TIAN⁴, Shasha PENG², Hexian ZHONG⁴, Xuechao PENG⁴, Yan QIU⁴ ¹South China Normal University, ²Chinese Academy of Sciences, ³Australian National University, ⁴Guangzhou Marine Geological Survey

SE01-D4-PM1-P-119 | SE01-A016

Timing of Initial Development of the Taiwan Orogen and its Evolution from Magnetobiostratigraphic Analysis of the Southern Taiwan Foreland Basin

Chorng-Shern HORNG^{1#+}, Andrew ROBERTS², Kai-Shuan SHEA³

¹Academia Sinica, ²Australian National University, ³Ministry of Economic Affairs

SE01-D4-PM1-P-120 | SE01-A020

Kartochka Formation (Southwestern Siberian Platform) as a Promising Object for Studying the Geomagnetic Field During the Meso-Neo-Proterozoic Maya Supochron Vladimir PAVLOV^{1#+}

¹Institute of Physics of the Earth of Russian Academy of Sciences

SE02-D4-PM1-P-122 | SE02-A003

Deformation Microstructures of Co-seismic Gouge from a Surface Rupture of the 2008 Wenchuan Earthquake Jiaxiang DANG^{1#+}, Yongsheng ZHOU¹ ¹China Earthquake Administration

SE02-D4-PM1-P-123 | SE02-A009

Crustal Anisotropy in the Shanxi Rift of China Inferred from Receiver Functions and its Tectonic Implication Yan CAI¹⁵⁺

¹China Earthquake Administration

SE02-D4-PM1-P-124 | SE02-A010

The Holocene Activity and Slip-rate of the Weixi-Qiaohou Fault Zone in Northwestern Margin of the Sichuan-Yunnan Block Zufeng CHANG^{1#+} ¹Yunnan Earthquake Agency

SE02-D4-PM1-P-125 | SE02-A012

History of Megathrust Earthquakes Along the Sagami Trough, Central Japan

Junki KOMORI^{1#+}, Ryosuke ANDO¹, Masanobu SHISHIKURA² ¹The University of Tokyo, ²National Institute of Advanced Industrial Science and Technology

SE02-D4-PM1-P-126 | SE02-A013

Estimation of Sedimentary Thickness in Tangshan Earthquake Region, China with Dense Seismic Array and Sp Converted Phase

Feng BAO^{1#+}, Zhiwei LI², Sidao NI¹ ¹Chinese Academy of Sciences, ²Institute of Geodesy and Geophysics,

Chinese Academy of Sciences

SE02-D4-PM1-P-127 | SE02-A014 Quaternary Fault Analysis in the Middle Extension of the Yangsan Fault, SE Korea: Structural Characteristics and Paleoseismological Interpretations Hee-Cheol KANG¹⁺, Youngseok SONG¹, Sangmin HA¹, Min-Cheol KIM¹, Moon SON^{1‡} ¹Pusan National University

SE02-D4-PM1-P-128 | SE02-A015

The Seismicity and Fault Interactions Between the Anninghe-Zemuhe Fault and the Daliangshan Fault: Insights from a Numerical Modeling Study Li YIN^{1±+}, Gang LUO¹ ¹University of Chinese Academy of Sciences

SE02-D4-PM1-P-129 | SE02-A017

An Equivalent Body Force Approach to Implement Fault Slip in the Visco-elastic Lateral Heterogeneous Ellipsoidal Earth Model

Luyuan HUANG^{1#+}, Huihong CHENG², Yaolin SHI² ¹China Earthquake Administration, ²University of Chinese Academy of Sciences

SE02-D4-PM1-P-130 | SE02-A018

The November 2017 Mw 5.5 Pohang Earthquake in SE Korea: Geological Setting and Major Features of the Causative Fault and Surface Deformation

Min-Cheol KIM¹⁺, Seongjun LEE¹, Cheol Woo SONG¹, Sangmin HA¹, Moon SON^{1‡}, Hee-Cheol KANG¹ ¹Pusan National University

SE02-D4-PM1-P-131 | SE02-A019

Block Boundries of Uppercrust in the North-eastern Tibet from Pg-wave Velocity and Anisotropy Joint Tomography Shunping PEI^{1#+} ¹Institute of Tibetan Plateau Research, Chinese Academy of Sciences

SE02-D4-PM1-P-132 | SE02-A020

Density Variation in the Crust Before Jiuzhaigou, Sichuan, Ms7.0 Earthquake of 2017 Jiapei WANG^{1‡+}, Kai SUN¹, Zhongya LI¹ ¹China Earthquake Administration

SE02-D4-PM1-P-134 | SE02-A025

Underground Structure Along the Kego Fault Zone, Northern Kyushu, Japan, Inferred from Dense Gravity Survey Jun NISHIJIMA^{1#+}, Yasuhiro FUJIMITSU¹ ¹Kyushu University

SE02-D4-PM1-P-135 | SE02-A026

Study on the Distributional and Morphological Characteristics of Quaternary Monogenetic Volcanoes in Jeju Island, Korea Jeonghyun LEE^{1#+}, Sung-Hyo YUN^{1,2}

¹Pusan National University, ²The Jeju Volcanological Institute

SE02-D4-PM1-P-136 | SE02-A027

Numerical Modeling on Influence of Giant Strike Slip Fault to Tectonic Deformation Pattern in Tibet Plateau Lianwang CHEN^{1#+} ¹China Earthquake Administration

SE02-D4-PM1-P-137 | SE02-A028

InSAR Measurement of the Crustal Deformation over Permafrost and Periglacial Environment of Western Tibet Yunhua LIU^{1#+}

¹Institute of Geology, China Earthquake Administration

SE02-D4-PM1-P-138 | SE02-A031 (Invited)

Petrogenesis and Geochemistry of Cenozoic Basaltic Rocks from Leiqiong Area, South China Yung-Tan LEE^{1,2*+}, Pin-Chang CHOU³ ¹Geological Society in Taipei, ²Aletheia University, ³National Taiwan

SE02-D4-PM1-P-139 | SE02-A036

Normal University

A Study of Water Quality Change Around Mt.Ontake After Eruption Kazuki ASAMI^{1#+}, Koji KODERA¹ ¹Hosei University

SE03-D4-PM1-P-140 | SE03-A003

Importance of Selecting Suitable Effective Friction Coefficient During the Calculation of Coulomb Failure Stress

Huihong CHENG¹⁵⁺, Tiantian DOU¹, Huai ZHANG¹, Yaolin SHI¹

¹University of Chinese Academy of Sciences

SE03-D4-PM1-P-141 | SE03-A006

Groundwater Level Changes of Maanshan Well Before and After the 2011 Tohoku 9.0 Earthquake Fuqiong HUANG^{1±+}, Jun WANG², Jun ZHONG¹ ¹China Earthquake Administration, ²Anhui Earthquake Administration SE03-D4-PM1-P-144 | SE03-A014

Numerical Simulations of Hydro-mechanical Coupling Effect on the Static Coulomb Stress Changes: Implications for Earthquake Triggering

Miao MIAO^{1*}, Shoubiao ZHU^{2,3}, Peng HAN¹, Ying CHANG¹⁺ ¹Southern University of Science and Technology, ²China Earthquake Administration, ³University of Chinese Academy of Sciences

SE03-D4-PM1-P-145 | SE03-A015

Possible Anomalous Changes in Solar Quiet-daily Geomagnetic Variation Sq Related to the 2011 Off the Pacific Coast of Tohoku Earthquake (Mw 9.0) Xiao-Can LIU^{1‡}, Katsumi HATTORI², Peng HAN³⁺, Huaran CHEN¹

¹China Earthquake Administration, ²Chiba University, ³Southern University of Science and Technology

SE03-D4-PM1-P-146 | SE03-A017

The Velocity Structure of the Eastern Bayan Har Block and the Jiuzhaigou Ms7.0 Earthquake Wen YANG¹⁺, Xuemei ZHANG^{1‡}, Jia CHENG¹, Mei LI¹, Fuqiong HUANG¹ ¹China Earthquake Administration

SE05-D4-PM1-P-147 | SE05-A011

Oblique Convergence, Indentation and Pop-up Tectonics in Taiwan: Insights from Field Observations and Analog Models

Chia-Yu LU^{1#+}, Chih-Tung CHEN², Malavieille JACQUES³ ¹National Taiwan University, ²National Central University, ³Montpellier University

SE06-D4-PM1-P-148 | SE06-A005

Geology, Petrology and Tungsten Mineralization of the Seikphu Taung-Padatchuang Area, Pyinmana Township, Central Myanmar Lwin YIN MIN¹⁺, Khin Mar PHYU^{2‡} ¹Yangon University, ²Ministry of Education

SE06-D4-PM1-P-149 | SE06-A009

Controversial on Coloration of Tanzanite After Heat Treatment

Teerarat PLUTHAMETWISUTE¹⁵⁺, Bhuwadol WANTHANACHAISAENG², Chatree SAIYASOMBAT³, Chakkaphan SUTTHIRAT^{1,4}

¹Chulalongkorn University, ²Srinakharinwirot University, ³Synchrotron Light Research Institute (Public Organization), ⁴The Gem and Jewelry Institute of Thailand (GIT)

SE06-D4-PM1-P-150 | SE06-A010

Mineral Inclusions in Sapphire from Basalt-related Deposits in Phan Thiet, Binh Thuan Province, Southern Vietnam Vu DOAN THI ANH^{1,2#+}, Chakkaphan SUTTHIRAT^{1,3}, Christoph HAUZENBERGER⁴, Abhisit SALAM¹

¹Chulalongkorn University, ²Vietnam National University, Ho Chi Minh City, ³The Gem and Jewelry Institute of Thailand (GIT), ⁴University of Graz

SE06-D4-PM1-P-151 | SE06-A028

The Impurities Study of Three Kinds of Colored Jasper on Yogyakarta, Indonesia Kemala WIJAYANTI^{1‡+}, Mega Fatimah ROSANA¹, Euis TINTIN YUNINGSIH¹ ¹Padjadjaran University

SE06-D4-PM1-P-152 | SE06-A030

Geoelectrochemical Methodin in Searching for Concealed Copper Deposits in Jiangsan of Zhejiang Xianrong LUO^{1#+}, Wen GAO¹, Fei OUYANG¹, Meilan WEN¹ ¹Guilin University of Technology

SE07-D4-PM1-P-153 | SE07-A001

Seismological Evidence of Hales Discontinuity in Northeastern India

Aakash ANAND^{1#+}, Dipok BORA², Kajaljyoti BORAH¹, Jayanta Madhab BORGOHAIN² ¹Indian Institute of Science Education and Research Kolkata, ²Diphu Government College

SE07-D4-PM1-P-154 | SE07-A003

Frequency-dependent Anisotropy Inferred from Moho-converted Ps Splitting in the Eastern Margin of the Tibetan Plateau Chang Qing SUN^{1#+} ¹China Earthquake Administration

SE07-D4-PM1-P-155 | SE07-A005

Cenozoic Structure and Exhumation Mechanism of the Metamorphic Complexes in Southeast Tibet: Implication for Intraplate Deformation Xiaoyu CHEN¹⁺, Junlai LIU^{1#} ¹China University of Geosciences (Beijing)

SE07-D4-PM1-P-156 | SE07-A007

Identifying the Unstable and Heterogeneous Anisotropic Layers Beneath Northeast Indian Lithosphere by Characterization of Null Measurements Poulommi MONDAL¹⁺, Debasis D. MOHANTY^{1,2#} ¹North East Institute of Science and Technology, ²Academy of Scientific and Industrial Research (AcSIR)

SE07-D4-PM1-P-157 | SE07-A008

Active Crustal Deformation in Southeastern Tibetan Plateau: The Kinematics and Dynamics

Yujiang LI^{1#+}, Mian LIU^{2,3}, Yuhang LI¹, Lianwang CHEN¹ ¹China Earthquake Administration, ²University of Missouri, ³Chinese Academy of Sciences

SE08-D4-PM1-P-159 | SE08-A002

Electrical Conductivity of Talc at High Pressures and Temperatures Libing WANG¹⁺, Duojun WANG^{1#}

¹University of Chinese Academy of Sciences

SE08-D4-PM1-P-160 | SE08-A006

Research on Three-dimensional Magnetotelluric Axial Anisotropic Inversion Kunpeng WANG¹^{s+}, Hui CAO¹ ¹Chengdu University of Technology

SE08-D4-PM1-P-162 | SE08-A010

Zircon U-Pb Dating of the Middle Miocene Igneous Rocks in the Outer Zone of Southwest Japan and its Implication to the Tectonics of the Miocene Southwest Japan Margin Hironao SHINJOE^{1#+}, Yuji ORIHASHI², Ryo ANMA³ ¹Tokyo Keizai University, ²Hirosaki University, ³Tokushima

University

SE08-D4-PM1-P-163 | SE08-A014

Slow-slip Detection Capability of the Tokai Strainmeter Network Kazuyoshi NANJO^{1#+} ¹University of Shizuoka

SE08-D4-PM1-P-164 | SE08-A015

Trillium Slim Borehole 120, a New Small-diameter High-performance Seismometer Alastair FENWICK¹⁸⁺

¹Nanometrics Inc.

SE08-D4-PM1-P-165 | SE08-A016

New Very Low Power Broadband Seismic Digitizer for Dense Autonomous Research Arrays Alastair FENWICK^{1#+} ¹Nanometrics Inc.

SE08-D4-PM1-P-166 | SE08-A019

Petrography and Geochemistry of Neogene Sandstones from Bojeador Formation and Batac Formation of Central Ilocos Sur, Philippines: Implications for Provenance and Tectonic Setting Madeleine SANTOS^{1#+}, Lanze Allen MAGALONA¹, Bing Bong SALINAS¹, Carlo ARCILLA¹

¹University of the Philippines Diliman

SE09-D4-PM1-P-167 | SE09-A004

A Geostatistical Analysis Approach to Calibrate Models Predicting Spatial Distribution of Tephra Thickness Maricar RABONZA^{1*+}, David LALLEMANT¹ ¹Nanyang Technological University

SE09-D4-PM1-P-168 | SE09-A007

Combining Petrologic and Seismic Studies to Constrain Magma Storage Conditions Beneath Marapi Volcano, West Sumatra, Indonesia Dini NURFIANI^{1#+}, Wang XIN¹, Kristianto KRISTIANTO², Hetty TRIASTUTY², Dannie HIDAYAT¹, Shengji WEI¹, Benoit TAISNE¹, Caroline BOUVET DE MAISONNEUVE¹ ¹Nanyang Technological University, ²Center for Volcanology and

¹Nanyang Technological University, ²Center for Volcanology and Geological Hazard Mitigation

SE09-D4-PM1-P-169 | SE09-A016

Magma Evolution and Eruption Time of Ciremai Volcano: Insight from Mineralogical Composition and Crystal Size Distribution

Wildan HAMZAH^{1#+}, Idham Andri KURNIAWAN¹, Mirzam ABDURRACHMAN¹, Erza WINANTO¹ ¹Bandung Institute of Technology

SE09-D4-PM1-P-170 | SE09-A019

Application of Remotely Piloted Aircrafts (RPAs) in Volcano Monitoring and Hazard Assessment

Robjunelieaaa LIM^{1#+}, Cathy POGAY¹, Marinel DEGONES¹, Ericson BARISO¹, Marie Thess QUILALANG¹, Danikko John RIVERA¹, Daniel Jose BUHAY¹, Bartolome BAUTISTA¹, Renato SOLIDUM¹

¹Philippine Institute of Volcanology and Seismology

SE09-D4-PM1-P-171 | SE09-A020

Petrographic and Geochemical Correlation of the Volcanic Member of Bojeador Formation in Ilocos Region, Philippines Elisha Jane MAGLALANG^{1‡+}, Mara Dominique AGUISANDA¹, Cris Reven GIBAGA², Carlo ARCILLA¹ ¹University of the Philippines Diliman, ²University of the Philippines

SE10-D4-PM1-P-173 | SE10-A011

Distribution and Lateral Variations of ULVZ at the Boundary of African LLSVP An FAN¹⁺, Xinlei SUN^{2#}

¹College of Earth and Planetary Sciences, University of Chinese Academy of Sciences, Beijing, ²Chinese Academy of Sciences

SE10-D4-PM1-P-174 | SE10-A014

Multiple Geophysical Approaches to Investigating Structure and Properties of Earth Lithosphere: Three Central Europe Case Studies

Miroslav BIELIK^{1#+}, Ilya PRUTKIN², Peter VAJDA³, Jaroslava PANISOVA³, Barbora ŠIMONOVÁ¹, Jana DÉREROVÁ³ ¹Comenius University, ²Jena University, ³Slovak Academy of Sciences

SE11-D4-PM1-P-175 | SE11-A001

Geothermal State of the Songliao Basin Constrained by Surface Heat Flow and Curie Depth Jian WANG^{1‡+}, Chun-Feng Ll² ¹China Earthquake Administration, ²Zhejiang University

SE11-D4-PM1-P-177 | SE11-A010

Seismic Evidence on a Hidden Proterozoic Orogenic Belt Beneath Super Thick Sedimentary Cover, W Yangtze Block, China You WU^{1#+}

¹Sun Yat-sen University

SE11-D4-PM1-P-178 | SE11-A011

Seismic Evidence of the Tectonic Affinity of the Yungbwa Ophiolitic Complex, Western Tibet Yang YU^{1‡+} ¹Sun Yat-sen University

SE11-D4-PM1-P-179 | SE11-A012 (Invited)

Imaging Crustal Deformation in the Northeastern Corner of Tibetan Plateau by a Dense Short-period Seismic Array Xiaobo TIAN^{1#+}, Zhiming BAI¹, Zhen LIU¹, Yunhao WEI² ¹Chinese Academy of Sciences, ²China Earthquake Administration

SE12-D4-PM1-P-180 | SE12-A001

The Comprehensive Isoseismal Map of North China Yuejun LYU^{1#+}

¹China Earthquake Administration

SE12-D4-PM1-P-181 | SE12-A002

Seismic Hazard Assessment for Middle-north Section of Xiaojiang Fault Zone Considering Geometrical Structures Jingwei LIU^{1#+}, Yuejun LYU¹, Lifang ZHANG¹, Zhuojuan XIE¹ ¹China Earthquake Administration

SE12-D4-PM1-P-182 | SE12-A004

Seismicity in Northeastern Tibetan Plateau: Insights from a Geodynamic Model Yunqiang SUN^{1‡+}, Gang LUO¹ ¹University of Chinese Academy of Sciences

SE12-D4-PM1-P-183 | SE12-A006

Relative Sea Level and Inferred Tectonic Uplift Recorded by Coral Microatolls in La Union, Philippines Gina SARKAWI¹⁺⁺, Aron MELTZNER¹, Anandh GOPAL¹,

Joanne LIM¹, Andrew MITCHELL¹, Loraine Faye SARMIENTO², Jennifer WEIL-ACCARDO¹, Kathrine MAXWELL^{1,3}, Junki KOMORI⁴, Chuan-Chou SHEN⁵, Shou-Yeh GONG⁶, Ke LIN^{1,5}, Yanbin LU¹, Xianfeng WANG¹, Noelynna RAMOS³

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SE12-D4-PM1-P-184 | SE12-A007

Analysis of 1999 Chi-Chi Earthquake Aftershocks with ETAS Models

Yiwun LIAO $^{\imath \ast \ast}$, Jiancang ZHUANG², Ya-Ting LEE¹, Kuo-Fong MA¹

¹National Central University, ²Institute of Statistical Mathematics

SE12-D4-PM1-P-185 | SE12-A008

Site-dependent Uniform Hazard Response Spectra for a Major Reservoir Project in Taiwan Jia Cian GAO^{1#+}, Chyi Tyi LEE¹ ¹National Central University

SE12-D4-PM1-P-187 | SE12-A010

The Numerical Simulations on Multiple-segment Fault Rupture of the 1935 Hsinchu-Taichung, Taiwan, Earthquake Ming-Hsuan YEN^{1#+}, Shiann-Jong LEE², Kuo-Fong MA¹, Ya-Ting LEE¹ ¹National Central University, ²Academia Sinica

SE12-D4-PM1-P-188 | SE12-A012

Evaluating the Tectonic Activity of the Vigan-Aggao Fault in Ilocos Norte, Philippines Using Morphometric Indices Ace Matthew CANTILLEP^{1#+}, Noelynna RAMOS¹ ¹University of the Philippines Diliman

SE12-D4-PM1-P-189 | SE12-A016

Emergent Coral Reef Platforms in Bohol Island, Central Philippines: Records of Paleo-sea Level and Coseismic Uplift in the Late Quaternary Noelynna RAMOS^{1#}, Kathrine MAXWELL¹⁺, J. Bruce H.

SHYU², Hong-Wei CHIANG², Yu-Chen CHOU², Chuan-Chou SHEN²

¹University of the Philippines Diliman, ²National Taiwan University

SE12-D4-PM1-P-191 | SE12-A018

Distribution and Morphological Patterns of Emergent Marine Terraces in Cebu Island, Philippines: Insights from Field Data and Digital Terrain Analysis Noelynna RAMOS^{1#+}, Kathrine MAXWELL¹, Regina Martha LUMONGSOD¹, Raul Benjamin MENDOZA¹, Lyndon NAWANAO JR.¹, Carla DIMALANTA¹ ¹University of the Philippines Diliman

SE12-D4-PM1-P-192 | SE12-A020

Study of Past Megathrust and Intraplate Earthquakes Using Sediment Records from Lakes Maninjau and Singkarak, West Sumatra

Katleen WILS^{1‡}, Mudrik DARYONO², Nore PRAET¹, Sabine SCHMIDT³, Januar RIDWAN^{4,5}, Purnama SUANDHI⁶, Arianto SANTOSO⁷, Aan DIANTO⁷, Bambang SUWARGADI⁷, Danny NATAWIDJAJA⁷, Marc DE BATIST¹⁺

¹Ghent University, ²Indonesian Institute of Sciences - LIPI, ³National Center for Scientific Research, ⁴Research Center for Geotechnology, Indonesian Institute of Science, ⁵Kanazawa University, ⁶GDA Consulting, ⁷Indonesian Institute of Sciences

SE12-D4-PM1-P-193 | SE12-A022

Coseismic and Postseismic Deformation of the 2016 Meinong Earthquake, Southwestern Taiwan: Implication for Mud Diapiric Deformation

Jui-Chi LEE^{1*+}, Yu-Nung Nina LIN¹, Sylvain BARBOT², Kuo-Hsin TSENG³, Chung-Pai CHANG³ ¹Academia Sinica, ²University of Southern California, ³National Central University

SE12-D4-PM1-P-194 | SE12-A027

Constraining Crustal Earthquake Source Parameters in Myanmar with Recently Deployed Broadband Seismic Network and an Updated 3D Velocity Model Wardah FADIL^{1*+}, Shengji WEI¹, Wang XIN¹, Yu WANG^{1,2}, Eric LINDSEY¹, Phyo Maung MAUNG¹ ¹Nanyang Technological University, ²National Taiwan University

SE12-D4-PM1-P-195 | SE12-A029

The EOS-Myanmar Broadband Seismic Network: Installation, Site Classification, Local Seismicity Reports and Velocity Structure Studies

Phyo Maung MAUNG^{1#+}, Shengji WEI¹, Muzli MUZLI^{1,2}, Chen MENG¹, Wardah FADIL¹, Wang XIN¹, Paramesh BANERJEE¹, Dannie HIDAYAT¹, Oo THAN³, Pa Pa TUN³, Saw PYAE⁴, Saw Myat MIN⁴, Bor-Shouh HUANG⁵

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Hydrology, 4Myanmar Earthquake Committee, 5Academia Sinica

SE12-D4-PM1-P-196 | SE12-A031

Investigation of Earthquake Amplification and Seismic Vulnerability Across Lombok Island West Nusa Tenggara, Indonesia

Mochammad RANDY CAESARIO HARSUKO¹⁺, Zulfakriza ZULFAKRIZA^{1‡}, Andri Dian NUGRAHA¹, Muzli MUZLI², Nanang T PUSPITO¹, Shengji WEI³

¹Bandung Institute of Technology, ²Meteorological, Climatological and Geophysical Agency, ³Nanyang Technological University

SE12-D4-PM1-P-198 | SE12-A037

Landform Development Processes of the Western Hengchun Tableland in Southern Taiwan Based on Uplifted Coastal Features

Sze-Chieh LIU^{1#+}, J. Bruce H. SHYU¹, Yuan-Lu TSAI¹, Chuan-Chou SHEN¹

¹National Taiwan University

SE13-D4-PM1-P-200 | SE13-A003

Assessing Landslide Susceptibility in the Zengwen Reservoir Watershed Using Climate Change Projection Data Fang-Yi CHU^{1‡+}, Chi-Wen CHEN¹, Tingyeh WU¹, Jun-Jih LIOU¹

¹National Science and Technology Center for Disaster Reduction

SE13-D4-PM1-P-201 | SE13-A007

A New Algorithm for Mapping Complete SAR Geometric Distortion Based on Open Source DEM Qian SUN¹⁸⁺ ¹Hunan Normal University

SE13-D4-PM1-P-202 | SE13-A008

Deformation Features of Anti-dip Slopes Considering the Scale Effect Wen-Chao HUANG¹⁵⁺, Yu-Yi CHANG¹, Jia-Hao HU¹, Po-Yen

CHAO¹ ¹National Central University

SE13-D4-PM1-P-203 | SE13-A011

Various Interpolation Methods for Rainfall Estimation Beth Zaida UGAT¹⁵⁺, Wilbur MANIBO², Decibel FAUSTINO-ESLAVA¹, Joey Philip TORRES², Jenielyn PADRONES², Nathaniel BANTAYAN², Cristino Jr. TIBURAN², Loucel CUI¹, Carla DIMALANTA³ ¹University of the Philippines Los Baños, ²University of the Philippines, ³University of the Philippines Diliman

SE13-D4-PM1-P-204 | SE13-A015

Frictional and Kinematical Characteristics of the Hungtsaiping Landslide, Taiwan

Jia-Jyun DONG^{1#+}, Yu-Chen CHEN¹, Huai-Houh HSU² ¹National Central University, ²National Kaohsiung University of Science and Technology

SE14-D4-PM1-P-205 | SE14-A002

Fractal Analysis of the Epicentral Field of Earthquakes and Their Time Series, Fault and Drinage Systems of the Sikhote-Alin and Adjacent Territories Gulshat GILMANOVA^{1#+}, Aleksei DIDENKO¹, Vladimir ZAKHAROV² ¹Far Eastern Branch of the Russian Academy of Sciences, ²Moscow State University

SE14-D4-PM1-P-206 | SE14-A003

New Slip Rates for the Tianjingshan Fault Using Optically Simulated Luminescence, GPS, and Paleoseismic Data, Northeast Tibet, China

Xinnan LI^{1#+}, Chuanyou LI¹, Ian PIERCE², Peizhen ZHANG³, Wenjun ZHENG³, Jinyuan DONG¹, Gan CHEN³, Ming AI¹, Guangxue REN¹, Quanxing LUO¹ ¹China Earthquake Administration, ² University of Nevada, ³Sun Yat-sen University

SE14-D4-PM1-P-207 | SE14-A010

Seismicity and Fault Interaction in Fault Systems: Insights from a Geodynamic Modeling Yajing GAO^{#+}, Gang LUO, Yunqiang SUN University of Chinese Academy of Sciences

SE14-D4-PM1-P-208 | SE14-A017

Active Tectonics of the Kabaw Fault Zone, Western Myanmar Kaung SITHU^{1#+}, Htay LWIN¹, Saw Ngwe KHAING^{2,3} ¹University of Yangon, ²Hinthada University, ³Myanmar Earthquake Committee

SE17-D4-PM1-P-210 | SE17-A006

Processing the Low Frequency of Residual Orbit Liang LEI^{1‡+}, Jinhai YU¹ ¹University of Chinese Academy of Sciences

SE17-D4-PM1-P-214 | SE17-A013

Estimating Regional Groundwater Recharge Beneath Thick Unsaturated Zones Using a Grace-based Water Budget Method Longqun ZHENG¹⁺, Yun PAN^{1±}, Huili GONG¹, Qingquan ZHANG¹

¹Capital Normal University

SE18-D4-PM1-P-215 | SE18-A006

Mining Continuous Seismic Waveform to Quantify Our Ability to See Significant Changes in a Volcanic System Chiou Ting TAN^{1#+}, Benoit TAISNE¹, Winchelle Ian SEVILLA², Christian CLARITO², Yizhou LUO¹, Lauriane CHARDOT¹, Corentin CAUDRON³

¹Nanyang Technological University, ²Philippine Institute of Volcanology and Seismology, ³Royal Observatory of Belgium

SE18-D4-PM1-P-216 | SE18-A007

Evaluate the Influence of Instrumental Bias on Single Analysis Based on Network Geometry Yizhou LUO^{1‡+}, Benoit TAISNE¹, Chiou Ting TAN¹ ¹Nanyang Technological University

SE18-D4-PM1-P-217 | SE18-A008 (Invited)

Microgravity Observations in Mayon Volcano, Philippines During and After the 2018 Eruptions Paul Karson ALANIS^{1#+}, Jerome DE LIMA¹, Naomi PALLERA², Mariton BORNAS¹

¹Philippine Institute of Volcanology and Seismology, ²Silangan Mindanao Mining Company, Incorporated

SE18-D4-PM1-P-218 | SE18-A009

Ground Deformation Analysis of the 2018 Mayon Volcano Eruption Using GPS Brian James AGGANGAN¹⁵⁺ ¹Philippine Institute of Volcanology and Seismology

SE18-D4-PM1-P-219 | SE18-A010

PHIVOLCS-LAVA - Volcano Monitoring System from Archiving to Analysis Accessible Anytime and Anywhere Maricel CAPA1#, Mary Jane CATAPANG1+, Mariton BORNAS1, Robert GARLOPE¹, Christina WIDIWIJAYANTI², Nang THIN ZAR WIN², Renato SOLIDUM¹, Kenn John VERACRUZ¹, Nerissa SENA¹, Fidel COSTA²

¹Philippine Institute of Volcanology and Seismology, ²Nanyang Technological University

SE18-D4-PM1-P-220 | SE18-A011

Characterization of Seismic Activity Associated with the 2018 **Mayon Volcano Eruption**

Winchelle Ian SEVILLA1#+, Christian CLARITO1, Lois Abigail JUMAWAN¹, April Angelique DOMINGUIANO¹, Eduardo LAGUERTA¹, Mariton BORNAS¹, Benoit TAISNE², Chiou Ting TAN², Shu Hui YEO², Jurgen NEUBERG³, Renato SOLIDUM¹

¹Philippine Institute of Volcanology and Seismology, ²Nanyang Technological University, ³University of Leeds

SE18-D4-PM1-P-221 | SE18-A013

First Continuous MultiGAS Station in Taal Volcano, Philippines

Raul Ryan REBADULLA1#+, Dave Benedict EMERENCIANA1, Maria Concepcion BARAIRO¹, Eric Lino ARCONADO¹, Paolo RENIVA¹, Mariton BORNAS¹, Renato SOLIDUM¹ ¹Philippine Institute of Volcanology and Seismology

SE18-D4-PM1-P-222 | SE18-A017

Monitoring Three-dimensional Deformations for Kilauea Volcano by Integrating Multi-source InSAR Point Clouds Jun HU1#+, Yuqi TANG1, Qian SUN2

¹Central South University, ²Hunan Normal University

SE19-D4-PM1-P-223 | SE19-A001

Seismic Velocity Imaging of a Real Dataset Using Migration **Velocity Analysis**

Woohyun SON1#+, Byoung-Yeop KIM1, Yonghwan JOO1, Jungkyun SHIN¹

¹Korea Institute of Geoscience and Mineral Resources

SE19-D4-PM1-P-224 | SE19-A007

Amplitude Fluctuation of High-frequency Seismic Waves Propagating in the Heterogeneous Crust Kazuo YOSHIMOTO1#+, Shunsuke TAKEMURA2 ¹Yokohama City University, ²The University of Tokyo

SE19-D4-PM1-P-225 | SE19-A009

Preliminary Result of Tomographic Imaging Beneath the Sunda-banda Arc Transition Zone, Indonesia Using YS Seismic Network

Andri Dian NUGRAHA1#, Pepen SUPENDI1+, Sri WIDIYANTORO¹, Chalid Idham ABDULLAH¹, Cooper W. HARRIS², Meghan MILLER³, Phil CUMMINS³ ¹Bandung Institute of Technology, ²University of Southern

California., ³Australian National University

SE19-D4-PM1-P-226 | SE19-A016

Crustal and Uppermost Mantle Structure in Nanling Area **Revealed from Sp and Ps Receiver Functions** Xinfu LI1#+

¹China University of Geosciences (Beijing)

SE19-D4-PM1-P-227 | SE19-A020

The Crustal Structures in Central China:Revealed from High-resolution Seismic-reflection Profiling Across the Daba Shan and Gravity, Magnetic Anomalies Shang PAN1+, Xiao XU1#, Rui GAO1, Liang Hui GUO2

¹Sun Yat-sen University, ²China University of Geosciences

SE19-D4-PM1-P-228 | SE19-A022

Crustal Azimuthal Anisotropy Beneath Abaga Area in Inner Mongolia Zhengyang QIANG^{1#+}, Qingju WU¹ ¹China Earthquake Administration

SE20-D4-PM1-P-229 | SE20-A003

The Analysis of Spectral Characteristics of Gravity Data Based on Crustal Layer Density Data Derived from CRUST1.0 Lilu CUI1#+ ¹Wuhan University

SE20-D4-PM1-P-230 | SE20-A004

High Mantle Temperature Beneath the Proto-adare Basin, Antarctica: The Possible Cause of Synchronous Rifting Across the Continental-ocean Boundary Young-Gyun KIM1#+, Byung-Dal SO1, Jong Kuk HONG2 ¹Kangwon National University, ²Korea Polar Research Institute

SE20-D4-PM1-P-231 | SE20-A006

Crust/Mantle Strength Ratios as First-order Indicators for **Determining Deformation Style of Lithospheres** Jonathan POH1#+, Philippe YAMATO1, Thibault DURETZ1, Patrick LEDRU², Denis GAPAIS¹ ¹University of Rennes 1, ²Orano Canada Inc

SE20-D4-PM1-P-232 | SE20-A007

Transient Creep of Dunites and its Importance in Earthquake **Cycle Models** Sagar MASUTI1#+, Sylvain BARBOT1, Fidel COSTA1, Shun-Ichiro KARATO²

¹Nanyang Technological University, ²Yale University

SE21-D4-PM1-P-234 | SE21-A003

Geochemical Characteristics and Their Implications of Peridotites from Kedanshan Ophiolite. Inner Mongolia, China

Qing LIU1#+, Hui LI1, Quanlin HOU1 ¹University of Chinese Academy of Sciences

SE21-D4-PM1-P-235 | SE21-A008

Contrasted East Asia and South America Tectonics Driven by **Deep Mantle Flow**

Ting YANG1#+, Louis MORESI2, Michael GURNIS3, Shaofeng LIU⁴, Dan SANDIFORD², Simon WILLIAMS⁵, Fabio CAPITANIO⁶

¹Southern University of Science and Technology, ²The University of Melbourne, ³California Institute of Technology, ⁴China University of Geosciences (Beijing), 5The University of Sydney, 6Monash University

SE21-D4-PM1-P-236 | SE21-A009

A New Discovery of Sodic-amphibole in Metasomatic Zones Around Serpentinite, Yuli Belt, Eastern Taiwan: Metamorphic Conditions and Tectonic Implications Dominikus Deka DEWANGGA1#+, Chin-Ho TSAI1, Yoshiyuki IIZUKA², Chih-Ying YEH¹, Yui KOUKETSU³ ¹National Dong Hwa University, ²Academia Sinica, ³Nagoya University

SE21-D4-PM1-P-237 | SE21-A010

The North Fijian Basin: A Case Study of the Geodynamics of **Collision and Overriding Plate Deformation** Rebecca FARRINGTON1#+, Maria SETON2, Louis MORESI1, Simon WILLIAMS²

¹The University of Melbourne, ²The University of Sydney

SE21-D4-PM1-P-238 | SE21-A011

Thermo-mechanical Models on the Trench Retreat and Back-Arc Spreading Chih-Chin LEE^{1#+}, Eh TAN² ¹National Taiwan University, ²Academia Sinica

SE21-D4-PM1-P-239 | SE21-A013

Craton Stability: Shape Matters Too? Catherine COOPER¹, Rebecca FARRINGTON^{2#+}, Meghan MILLER³

¹Washington State University, ²The University of Melbourne, ³Australian National University

SE21-D4-PM1-P-240 | SE21-A014

Effects of Slab Windows on the Physical State of the Upper Mantle: Constraints from Receiver Function Investigations in the Indochina Peninsula and Alaska

Stephen GAO $^{1\sharp\ast},$ Kelly LIU¹, Youqiang YU², Haider DAHM³, Fansheng KONG4

¹Missouri University of Science and Technology, ²Tongji University, ³Misan University, ⁴Ministry of Natural Resources

SE22-D4-PM1-P-241 | SE22-A001

A Geodynamic Modeling Study on Hydrothermal Mineralization in Porphyry Systems Cheng CHANG^{1*+}, Gang LUO¹ ¹University of Chinese Academy of Sciences

SE22-D4-PM1-P-242 | SE22-A004

Preliminary Results from a New Occurrence of a Sheeted Dyke Complex in the Ophiolite Complex of Telupid (Sabah, Malaysia)

Nur 'Aqidah Binti HAJI NORAZME^{1#+}, Basilios TSIKOURAS¹, Chun-Kit LAI¹

¹Universiti Brunei Darussalam

SE22-D4-PM1-P-243 | SE22-A005

Ore Paragenesis and Fluid Inclusion Study on the Balatoc Diatreme-hosted 90 Vein, Acupan, Baguio Mineral District Acer Jian FIGUEROA^{1#+}, Jillian Aira GABO-RATIO¹, Karl JABAGAT¹, Aljess RAMOS²

¹University of the Philippines Diliman, ²Benguet Corporation

SE22-D4-PM1-P-244 | SE22-A009

Geology and Geochemistry of Miocene Volcanic Rocks in Northeastern Borneo

Nur 'Aqidah Binti HAJI NORAZME^{1#+}, Chun-Kit LAI¹, Ikrar Teguh MANDIRI², Basilios TSIKOURAS¹, Utreck RUMBIAK³, Lejun ZHANG⁴, Sebastien MEFFRE⁴

¹Universiti Brunei Darussalam, ²JResources, PT Sago Prima Pratama, ³Padjadjaran University, ⁴University of Tasmania

SE22-D4-PM1-P-245 | SE22-A012

Mineral Deposit Evolution of the Bagacay Volcanogenic Massive Sulfide Deposit, Samar, Philippines: Insights from Ore Mineral Paragenetic Studies

Jessamin Belle DEMEGILLO^{1,*+}, Jillian Aira GABO-RATIO¹, Akira IMAI², Kotaro YONEZU², Nichole Anthony PACLE¹, Thomas TINDELL²

¹University of the Philippines Diliman, ²Kyushu University

SE22-D4-PM1-P-246 | SE22-A014

Mapping Alteration Zones in the Southern Part of the Mankayan Mining District Using GIS and Remote Sensing Jenielyn PADRONES^{1‡+}, Bryan Derek PINKIHAN², Jan Joseph DIDA², Jayson ARIZAPA¹, Cristino Jr. TIBURAN¹, Arvin TRINIDAD³, Graciano YUMUL JR. ³

¹University of the Philippines, ²University of the Philippines Los Banos, ³Apex Mining Company Inc.

SE22-D4-PM1-P-247 | SE22-A026

Multiphase Magmatism Along Sagaing Fault in Central Myanmar: Zircon Age and Whole-rock Geochemical Constraints

Nur 'Aqidah Binti HAJI NORAZME¹⁺, Khin ZAW^{2‡}, Chun-Kit LAI¹, Sebastien MEFFRE², Tin Aung MYINT³

¹Universiti Brunei Darussalam, ²University of Tasmania, ³Mandalay University

SE23-D4-PM1-P-249 | SE23-A005

Petrography and Geochemistry of Gabbros from Central Palawan, Philippines

Jesley Mei DYCOCO^{1#+}, Betchaida PAYOT¹, Gabriel Theophilus VALERA¹, Valerie Shayne OLFINDO², Florence Annette LABIS², Julius PASCO²

¹University of the Philippines Diliman, ²University of the Philippines

SE23-D4-PM1-P-250 | SE23-A007

Podiform Chromitites from the Ulugan Bay, Palawan Island, Philippines

Betchaida PAYOT^{1#+}, Gabriel Theophilus VALERA¹, Julius PASCO², Jesley Mei DYCOCO¹, Florence Annette LABIS² ¹University of the Philippines Diliman, ²University of the Philippines

SE24-D4-PM1-P-251 | SE24-A002

Analysis of Anisotropy Using Well Data in Gas Hydrate Bearing Sediments: A Case Study in Mahanadi Offshore Basin, (NGHP)-01, India

Dip Kumar SINGHA^{1#+}, Pradeep Kumar SHUKLA¹, Kalachand SAIN²

¹Banaras Hindu University, ²CSIR-National Geophysical Research Institute

SE24-D4-PM1-P-253 | SE24-A004

Development of New Quantitatively Index of Non-linear Soil Response Jyun-Yan HUANG^{1#+}

¹National Center for Research on Earthquake Engineering

SE24-D4-PM1-P-254 | SE24-A014

Concrete Raw Materials Utilized in Greater Manila Area, Philippines: Framework of Geological, Chemical and Physical Evaluation for Quality Control Maria Elizabeth LAUS^{1‡+}, Marlon CONATO¹, Carlo ARCILLA¹, Nancy AGUDA¹, Antonio REYNO¹, Jeremy James JIMENEZ¹, Richard YBAÑEZ¹

¹University of the Philippines Diliman

SE30-D4-PM1-P-255 | SE30-A003

Development of Geologic Model Using High-resolution Seismic Data in the Korea Plateau Gwangsoo LEE^{1#+}, Byoung-Yeop KIM¹, Boyeon YI¹ ¹Korea Institute of Geoscience and Mineral Resources

SE30-D4-PM1-P-256 | SE30-A006

Petrogenesis of the Granitic Rocks in Northern Palawan Island: Constraints from Geochemistry and Sr-Nd Isotopes Jenielyn PADRONES^{1‡+}, Akira IMAI², Ryohei TAKAHASHI ³, Kenichiro TANI⁴, Jillian Aira GABO-RATIO⁵ ¹University of the Philippines, ²Kyushu University, ³Akita University, ⁴National Museum of Nature and Science, ⁵University of the Philippines Diliman

SE30-D4-PM1-P-257 | SE30-A010

Seismic Array Observations in the Northern Manila Trench Area Using Ocean Bottom Seismometers An LI¹, Jing-Yi LIN^{1#+}, Shao-Jinn CHIN¹ ¹National Central University

SE30-D4-PM1-P-259 | SE30-A014

Mapping and Tectonic Geomorphology of Offshore Extension of the Philippine Fault in Surigao Strait Deo Carlo LLAMAS^{1,2*+}, Bryan MARFITO¹, Emmanuelle MITIAM¹

¹*Philippine Institute of Volcanology and Seismology,* ²*University of the Philippines*

SE30-D4-PM1-P-260 | SE30-A015

What Cause the Common-mode Error in Array GPS Displacement Fields: Case Study for Taiwan in Relation to Atmospheric Mass Loading

Utpal KUMAR^{1#+}, Benjamin Fong CHAO², Emmy Tsui-Yu CHANG³

¹Institute of Earth Sciences, ²Academia Sinica, ³National Taiwan University

Day 05 02 Aug, Fri

Day 05 - 02 Aug 2019, Friday Program Overview

r rogram Overview			
Time / Room	AM1	AM2	PM1
	08:30 - 10:30	11:00 - 12:30	13:30 - 15:30
MR308	ST23 p.M184	ST33 p.M191	
MR304	ST13 <i>p.M185</i>	ST12 <i>p.M192</i>	
MR303	AS33 p.M185	AS33 p.M192	
MR330	HS32 p.M186	HS33 <i>p.M193</i>	
MR329	HS10 p.M186	HS10 p.M193	
MR328	HS15 p.M187	HS16 p.M193	
MR310	PS10 <i>p.M187</i>	PS10 p.M194	
MR311	AS04 p.M188	AS04 p.M194	
MR327	OS01 p.M188	OS01 p.M194	
MR302	AS40 p.M189	AS40 p.M195	
MR301	AS13 p.M189	AS13 p.M195	
MR300	BG11 p.M190	BG11 p.M196	
MR309	ST25 p.M190	ST25 p.M196	
MR323	IG15 p.M191	IG15 p.M197	
Nicoll 1		SE14 p.M195	
Nicoll 2	SE18 p.M184	SE28 p.M191	Closing p.F9

Sessions & Conveners

* Main Convener

AS04-Madden-Julian Oscillation and Its Global Impacts

*Ziniu XIAO Chinese Academy of Sciences, Jian LING Chinese Academy of Sciences

AS13-Passive and Active 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

AS33-The Multi-scale Effects of Topography on Monsoons *Kalli FURTADO Met Office, Haoming CHEN Chinese Academy of Meteorological Sciences, Jian LI Chinese Academy of Meteorological Sciences

AS40-Precipitation Science and Application of Satellite Data *Yukari TAKAYABU The University of Tokyo, Kenji

NAKAMURA Dokkyo University, Kusuma RAO Indian Space Research Organization, Geun-Hyeok RYU Korea Meteorological Administration, Gail SKOFRONICK-JACKSON NASA Goddard Space Flight Center

BG11-Biogeosciences General Session

*Punyasloke BHADURY Indian Institute of Science Education and Research Kolkata, Long CAO Zhejiang University, Bhoopesh MISHRA University of Leeds, Prabir K. PATRA Japan Agency for Marine-Earth Science and Technology

HS10-Hydrologic Extremes in a Changing Climate

*C. T. DHANYA Indian Institute of Technology Delhi, Rajib MAITY Indian Institute of Technology Kharagpur, Sonali PATTANAYAK Indian Institute of Science, Shailesh SINGH National Institute of Water and Atmospheric Research

HS15-Land and Water Management for Sustainability

*Shailesh SINGH National Institute of Water and Atmospheric Research, Jun NIU China Agricultural University, Bellie SIVAKUMAR University of New South Wales

HS16- Impacts and Consequences of Changing Climate and Landuse on Hydrology

*Shailesh SINGH National Institute of Water and Atmospheric Research, C. T. DHANYA Indian Institute of Technology Delhi, Rajib MAITY Indian Institute of Technology Kharagpur, Mingna WANG China Institute of Water Resources and Hydropower Research

HS32-"Spatial Hydrology: Extreme Erosion Processes, Hydrological Connectivity, and Remote Sensing Applications"

*Ben JARIHANI University of the Sunshine Coast, David HIGGITT Beijing Jiaotong University (Lancaster University College), Sim REANEY Durham University, Roy SIDLE University of the Sunshine Coast, Jet-Chau WEN National Yunlin University of Science and Technology

HS33-Hydrometeorological Applications and Hydrologic Prediction: Severe Weather Precipitation Detection, Estimation, and Forecast

*Youcun QI Institute of Geographic Sciences and Resources Research, Basudev BISWAL Indian Institute of Technology Hyderabad, Jie CAO Chinese Academy of Sciences, Guangyao GAO Chinese Academy of Sciences, Man ZHANG University of Oklahoma

IG15-Data-driven Modeling in Geoscience

*Shin-ichi ITO The University of Tokyo, Ryoichiro AGATA Japan Agency for Marine-Earth Science and Technology, Dmitri KONDRASHOV University of California, Los Angeles, Shunichi NOMURA The Institute of Statistical Mathematics

OS01-The Southern Ocean and Polar Regions and Their Roles in Climate

*Robin ROBERTSON Xiamen University Malaysia, Wenju CAI Ocean University of China and Qingdao National Laboratory for Marine Science and Technology, Sheeba Nettukandy CHENOLI University of Malaya, Seong-Joong KIM Korean Polar Research Institute

PS10-Aeronomy and Plasma Physics of Planetary Environments

*Robert LILLIS University of California, Berkeley, Jun CUI National Astronomical Observatories of China, Dominique DELCOURT French National Centre for Scientific Research, Shotaro SAKAI The University of Tokyo, Varun SHEEL Physical Research Laboratory

ST12-Wave-particle Interactions in the Magnetosphere

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

ST13-New Perspectives on Earth's Inner Magnetosphere from Multipoint Satellite Observations and Data-ingestive Modeling

*Drew TURNER The Aerospace Corporation, Satoshi KURITA Nagoya University, Xinlin LI University of Colorado Boulder, Wenlong LIU Beihang University

ST23-Coupling Between Inner-magnetospheric and Ionospheric Particle Populations

*Dedong WANG GFZ German Research Center for Geosciences, Yoshizumi MIYOSHI Nagoya University, Zhigang YUAN Wuhan University, Chao YUE University of California, Los Angeles, Qiugang ZONG Peking University

ST25-Turbulence and Particle Energization in Space, Astrophysical and Laboratory Plasmas

*Shiyong HUANG Wuhan University, Jiansen HE Peking University, Fouad SAHRAOUI Plasma Physics Laboratory

ST33-Ionospheric Weather Induced by Solar and Terrestrial Activities

*Jann-Yenq (Tiger) LIU National Central University, Katsumi HATTORI Chiba University, Dimitar OUZOUNOV Chapman University, Xuhui SHEN China Earthquake Administration, Valerio TRAMUTOLI University of Basilicata

SE14-Active Tectonics, Faults and Large Fast & Slow Earthquakes

*Sushil KUMAR Wadia Institute of Himalayan Geology, Sudhir RAJAURE Ministry of Industry

SE18-Linking Numerical, Analytical and Experimental

Modelling with Remote and Local Volcano Monitoring Data *Benoit TAISNE Nanyang Technological University, Fidel COSTA Nanyang Technological University, Adel EMADZADEH Nanyang Technological University, Paul LUNDGREN Jet Propulsion Laboratory, California Institute of Technology, Alberto ROMAN Jet Propulsion Laboratory

SE28-Advances in Fiber-optic Technologies for Geophysical Applications

*Philippe JOUSSET GFZ German Research Centre for Geosciences, Yosuke AOKI The University of Tokyo, Yunyue LI National University of Singapore, Benoit TAISNE Nanyang Technological University

ST23 / Coupling Between Inner-magnetospheric and Ionospheric Particle Populations

Fri - 02 Aug | MR308

Time	08:30-10:30
Chair(s)	Yoshizumi MIYOSHI, Nagoya University Dedong WANG, GFZ German Research Center for Geosciences

ST23-D5-AM1-308-001 | ST23-A008

Local Generation of EMIC Waves Near the Plasmapause: Coordinated Magnetosphere-ionosphere-ground Observations Khan-Hyuk KIM^{1#+}, Hyuck-Jin KWON², Hyomin KIM³, Ho JIN¹, Jehyuck SHIN¹, Tanja FROMM⁴, Jürgen MATZKA⁵, Marc LESSARD⁶

¹Kyung Hee University, ²Korea Polar Research Institute, ³New Jersey Institute of Technology, ⁴Alfred Wegner Institute Helmholtz Centre for Polar and Marine Research, 5GFZ German Research Centre for Geosciences, 6University of New Hampshire

ST23-D5-AM1-308-002 | ST23-A012

Precipitation of Radiation Belt Electrons by EMIC Waves with Conjugated Observations of NOAA and Van Allen Satellites Zhigang YUAN1#+, Kun LIU1, Xiongdong YU1, Fei YAO1, Shiyong HUANG¹, Dedong WANG², Zhihai OUYANG¹ ¹Wuhan University, ²GFZ German Research Center for Geosciences

ST23-D5-AM1-308-003 | ST23-A003

Reanalysis of Radiation Belt Electron Phase Space Density Using Four Spacecraft and the Verb Code

Juan Sebastian CERVANTES VILLA1#, Yuri SHPRITS2+, Adam KELLERMAN3, Alexander DROZDOV4, Nikita ASEEV1, Angelica CASTILLO¹

¹GFZ German Research Centre for Geosciences, ²GFZ German Research Center for Geosciences, ³Institute of Geophysics and Planetary Physics, 4University of California, Los Angeles

ST23-D5-AM1-308-004 | ST23-A005 (Invited)

The Coupling Between Ring Current and Radiation Belt **Through Magnetic Dips** Lunjin CHEN1#+

¹The University of Texas at Dallas

ST23-D5-AM1-308-005 | ST23-A004 (Invited)

Magnetosphere-ionosphere Connection of Storm-time Region-2 Field-aligned Current and Ring Current: Arase and **AMPERE Observations**

Shun IMAJO1#+, Masahito NOSÉ1, Ayako MATSUOKA2, Satoshi KASAHARA3, Shoichiro YOKOTA4, Mariko TERAMOTO1, Tetsuo MOTOBA⁵, Brian ANDERSON⁵, Reiko NOMURA⁶, Akiko FUJIMOTO7, Iku SHINOHARA2, Yoshizumi MIYOSHI1

¹Nagoya University, ²Japan Aerospace Exploration Agency, ³The University of Tokyo, ⁴Osaka University, ⁵The Johns Hopkins University Applied Physics Laboratory, 6National Astronomical Observatory of Japan, 7Kyushu Institute of Technology

ST23-D5-AM1-308-006 | ST23-A001

Controlling Effect of Wave Models and Plasmapause Position on the Dynamic Evolution of Radiation Belt Electrons Dedong WANG1#+, Yuri SHPRITS1, Irina ZHELAVSKAYA1 ¹GFZ German Research Center for Geosciences

SE18 / Linking Numerical, Analytical and Experimental Modelling with Remote and Local Volcano Monitoring Data

Fri - 02 Aug | Nicoll 2

Time	08:30-10:30
Chair(s)	Benoit TAISNE, Nanyang Technological University Paul LUNDGREN, Jet Propulsion Laboratory, California
	Institute of Technology Alberto ROMAN, Jet Propulsion Laboratory, California Institute of Technology

SE18-D5-AM1-Nicoll 2-001 | SE18-A014

Locally Thin Crust and High Crustal VP/VS Beneath the Armenia Volcanic Highland of the Lesser Caucasus in West Asia

Tai-Lin TSENG1#+, Chih-Ming LIN1, Bor-Shouh HUANG2 ¹National Taiwan University, ²Academia Sinica

SE18-D5-AM1-Nicoll 2-002 | SE18-A016

Geomorphological Studies on Bromo Volcanic Complex Through Remote Sensing and Field Observation to Understand its Volcanic Evolution and Vulnearability to Volcanic Hazard Achmad Nazar ABRORY1#+, Mirzam ABDURRACHMAN2 ¹Institut Teknologi Bandung, ²Bandung Institute of Technology

SE18-D5-AM1-Nicoll 2-003 | SE18-A005

Optimizing the Use of Volcano Monitoring Database to **Anticipate Eruption** Christina WIDIWIJAYANTI^{1#+}, Fidel COSTA¹, Nang THIN ZAR WIN1, Tania ESPINOSA-ORTEGA1

¹Nanyang Technological University

SE18-D5-AM1-Nicoll 2-004 | SE18-A002

Dynamics of Unrest at a Large Silicic Volcanic System: Domuyo Volcano, Argentina Paul LUNDGREN1#+, Társilo GIRONA1, Sergey SAMSONOV2, Vincent REALMUTO¹, M. Grace BATO¹ ¹Jet Propulsion Laboratory, California Institute of Technology, ²Natural Resources Canada

SE18-D5-AM1-Nicoll 2-005 | SE18-A004

Joint Inversion and Assimilation Technique to Understand Inter-eruptive Deformation Processes at Sierra Negra and Kilauea Volcanoes

Mary Grace BATO1#+, Paul LUNDGREN1, Marco BAGNARDI1, Virginie PINEL²

¹Jet Propulsion Laboratory, California Institute of Technology, ²Université Savoie-Mont Blanc

SE18-D5-AM1-Nicoll 2-006 | SE18-A001 (Invited)

Numerical Models for Time-dependent Conduit Magma Flow in Dome-forming Eruptions Applied to Mount St. Helens 2004-2008

Ying Qi WONG1#+, Paul SEGALL1 ¹Stanford University

SE18-D5-AM1-Nicoll 2-007 | SE18-A003

Closing Magmatic Conduits: Constraints from Geodetic Observations and Dynamical Models

Alberto ROMAN1#+, Marco BAGNARDI1, Paul LUNDGREN1 ¹Jet Propulsion Laboratory, California Institute of Technology

SE18-D5-AM1-Nicoll 2-008 | SE18-A012

Near Real Time Estimation of Plume Height for the Mayon 2018 Eruption from Infrasound Anna PERTTU^{1#+}, Benoit TAISNE¹, Yizhou LUO¹, Christian CLARITO², Winchelle Ian SEVILLA² ¹Nanyang Technological University, ²Philippine Institute of Volcanology and Seismology

ST13 / New Perspectives on Earth's Inner Magnetosphere from Multipoint Satellite Observations and Data-ingestive Modeling

Fri - 02 Aug | MR304

Time 08:30-10:30 Chair(s) Drew TURNER, The Aerospace Corporation Satoshi KURITA, Nagoya University

ST13-D5-AM1-304-001 | ST13-A005 (Invited)

Drift-bounce Resonance Between PC5 Pulsations and Ions at Multiple Energies in the Nightside Magnetosphere: Arase and MMS Observations

Satoshi OIMATSU^{1#+}, Masahito NOSÉ², Mariko TERAMOTO², Kazuhiro YAMAMOTO¹, Ayako MATSUOKA³, Satoshi KASAHARA⁴, Shoichiro YOKOTA⁵, Kunihiro KEIKA⁴, Guan LE⁶, Reiko NOMURA⁷, Akiko FUJIMOTO⁸, Oleg TROSHICHEV⁹, Dmitry SORMAKOV⁹, Yoshimasa TANAKA¹⁰, Manabu SHINOHARA¹¹, Iku SHINOHARA³, Yoshizumi MIYOSHI², James SLAVIN¹², Robert ERGUN¹³, Per-Arne LINDQVIST¹⁴ ¹Kyoto University, ²Nagoya University, ³Japan Aerospace Exploration Agency, ⁴The University of Tokyo, ⁵Osaka University, ⁶NASA Goddard Space Flight Center, ⁷National Astronomical Observatory of Japan, ⁸Kyushu Institute of Technology, ⁹Arctic and Antarctic Research Institute, ¹⁰National Institute of Polar Research, ¹¹National Institute of Technology, Kagoshima College, ¹²University of Michigan, ¹³University of Colorado Boulder, ¹⁴KTH Royal Institute of Technology

ST13-D5-AM1-304-002 | ST13-A003

Multi-year Measurements of Radiation Belt Electrons: Acceleration, Transport, and Loss

Daniel BAKER^{1#+}, Vaughn HOXIE¹, Hong ZHAO¹, Xinlin LI¹, Allison JAYNES², Shri KANEKAL³, Scot ELKINGTON¹ ¹University of Colorado Boulder, ²The University of Iowa, ³NASA Goddard Space Flight Center

ST13-D5-AM1-304-003 | ST13-A006 (Invited)

Electron Scattering by Chorus Waves Generating Pulsating Aurora

Satoshi KASAHARA^{1‡+}, Yoshizumi MIYOSHI², Shoichiro YOKOTA³, Takefumi MITANI⁴, Yoshiya KASAHARA⁵, Shoya MATSUDA⁴, Atsushi KUMAMOTO⁶, Ayako MATSUOKA⁴, Yoichi KAZAMA⁷, Harald FREY⁸, Vassilis ANGELOPOULOS⁹, Satoshi KURITA², Kunihiro KEIKA¹, Kanako SEKI¹, Iku SHINOHARA⁴

¹The University of Tokyo, ²Nagoya University, ³Osaka University, ⁴Japan Aerospace Exploration Agency, ⁵Kanazawa University, ⁶Tohoku University, ⁷The Academia Sinica Institute of Astronomy and Astrophysics (ASIAA), ⁸University of California, Berkeley, ⁹University of California, Los Angeles

ST13-D5-AM1-304-004 | ST13-A002

Chorus and Microbursts: Quantifying the Connection with a Substantial Dataset of Simultaneous Low- and High-altitude High Time Resolution Observations

Aaron BRENEMAN¹⁴⁺, John SAMPLE², Arlo JOHNSON², Mykhaylo SHUMKO², Alex CREW³, Chris COLPITTS¹, Harlan SPENCE⁴, Berhard BLAKE⁵, Robyn MILLAN⁶

¹University of Minnesota, ²Montana State University, ³The John Hopkins University, ⁴University of New Hampshire, ⁵The Aerospace Corporation, ⁶Dartmouth University

ST13-D5-AM1-304-005 | ST13-A007

Multi-point Observations of Chorus Properties and Propagation in the Inner Magnetosphere Using Conjunctions Between Arase and Van Allen Probes

Chris COLPITTS^{1#+}, Yoshizumi MIYOSHI², Cynthia CATTELL¹, John WYGANT¹, Yoshiya KASAHARA³, Yuto KATOH⁴, Aaron BRENEMAN¹, George HOSPODARSKY⁵, Masahiro KITAHARA⁴ ¹University of Minnesota, ²Nagoya University, ³Kanazawa University, ⁴Tohoku University, ⁵The University of Iowa

ST13-D5-AM1-304-006 | ST13-A001 (Invited)

Multi-satellite Observations of Bump-on-tail Energy Spectrum of Radiation Belt Electrons

Hong ZHAO^{1#+}, William JOHNSTON², Dan BAKER¹, Binbin NI³, Allison JAYNES⁴, Shri KANEKAL⁵, Berhard BLAKE⁶, Seth CLAUDEPIERRE⁶, Geoffrey REEVES⁷, Alexander BOYD⁸ ¹University of Colorado Boulder, ²Air Force Research Laboratory, ³Wuhan University, ⁴The University of Iowa, ⁵NASA Goddard Space Flight Center, ⁶The Aerospace Corporation, ⁷Los Alamos National Laboratory, ⁸New Mexico Consortium

ST13-D5-AM1-304-007 | ST13-A009 (Invited)

Formation of Reversed Energy Spectrum of Radiation Belt Electrons Caused by Plasmaspheric Hiss Scattering Binbin NI¹⁵⁺, Hong ZHAO², Dan BAKER², Wenxun ZHANG¹, Zheng XIANG¹, Xudong GU¹, William JOHNSTON³, Allison JAYNES⁴, Shri KANEKAL⁵, Berhard BLAKE⁶, Seth CLAUDEPIERRE⁶, Michael TEMERIN⁷, Geoffrey REEVES⁸, Herbert FUNSTEN⁸, Alexander BOYD⁹

¹Wuhan University, ²University of Colorado Boulder, ³Air Force Research Laboratory, ⁴The University of Iowa, ⁵NASA Goddard Space Flight Center, ⁶The Aerospace Corporation, ⁷University of California, Berkeley, ⁸Los Alamos National Laboratory, ⁹New Mexico Consortium

AS33 / The Multi-scale Effects of Topography on Monsoons

Fri - 02 Aug | MR303

Chair(s) Jian LI, Chinese Academy of Meteorological Sciences Kalli FURTADO, Met Office

AS33-D5-AM1-303-001 | AS33-A005 (Invited)

Simulating Mesoscale Orographic Cyclones and Orographic Forcing of the Asian Summer Monsoons in High Resolution Global Climate Models

Reinhard SCHIEMANN^{1,2#+}, Julia CURIO², Andrew TURNER^{1,2}, Kai Chi WONG^{1,2}, Sengfeng LIU³

¹National Centre for Atmospheric Science, ²University of Reading, ³Chinese Academy of Sciences

AS33-D5-AM1-303-002 | AS33-A013 (Invited)

The Synergetic Effects Between the Tibetan Plateau and Tropical Ocean on the Interannual Variability of East Asian Summer Monsoon Anmin DUAN^{1*+}, Sengfeng LIU¹ ¹Chinese Academy of Sciences

AS33-D5-AM1-303-003 | AS33-A011

Diurnal Cycle of the Asian Summer Monsoon Guixing CHEN^{1*+} ¹Sun Yat-sen University

AS33-D5-AM1-303-004 | AS33-A019

Structure, Lifecycle and Environmental Conditions of Tibetan Plateau Vortices Julia CURIO¹⁵⁺, Reinhard SCHIEMANN^{1,2}, Kevin HODGES¹, Andrew TURNER^{1,2}, Nicholas KLINGAMAN^{1,2} ¹University of Reading, ²National Centre for Atmospheric Science

AS33-D5-AM1-303-005 | AS33-A004

Review on Integrated Meteorological Observation and Research at Dali National Climate Observatory Anlun XU^{1#+}, Jian Ll² ¹Dali National Climate Observatory, ²Chinese Academy of

Meteorological Sciences

AS33-D5-AM1-303-006 | AS33-A006

Warm Season Nocturnal Rainfall over the Eastern Periphery of the Tibetan Plateau and its Relationship with Rainfall Events in Adjacent Regions Haoming CHEN¹⁺⁺, Jian LI¹ ¹Chinese Academy of Meteorological Sciences

HS32 / "Spatial Hydrology: Extreme Erosion Processes, Hydrological Connectivity, and Remote Sensing Applications"

Fri - 02 Aug | MR330

Time 08:30-10:30

Chair(s) Ben JARIHANI, University of the Sunshine Coast Jet-Chau WEN, National Yunlin University of Science and Technology

HS32-D5-AM1-330-001 | HS32-A012 (Invited)

An Application of Natural Disaster Management Using Scientific Analysis Jyun-Lin CHEN^{1#}, Jet-Chau WEN¹⁺

¹National Yunlin University of Science and Technology

HS32-D5-AM1-330-002 | HS32-A016

Analysis on the Formation Mechanism and Trend of Near-shore Scour Geomorphology in the Estuarine Turbidity Maxima of Yangtze Heqin CHENG^{1±+}, Jiufa LI¹ ¹East China Normal University

HS32-D5-AM1-330-003 | HS32-A017

Projected Changes in Rainfall Extremes and Population Exposure over Low Elevation Coastal Regions of Southeast Asia Pradeep MANDAPAKA^{1#+}, Edmond LO¹

¹Nanyang Technological University

HS32-D5-AM1-330-004 | HS32-A009

The Development of Water Quality Monitoring System for Small Scale Waterbody in Urban Catchment by Sentinel-2 Bowen CHEN¹, Jeanne Jinhui HUANG^{1‡}, Han CHEN¹⁺, Jingshu WANG¹ ¹Nankai University

HS32-D5-AM1-330-005 | HS32-A004

Retrieving Vegetation Transpiration by Wet-boundary Algorithm for Two-layer Remote Sensing Model Han CHEN^{1±+}, Jeanne Jinhui HUANG¹ ¹Nankai University

HS32-D5-AM1-330-006 | HS32-A013

Application of Image Recognition Technology on the Measurement of Ground Sill and Hydraulic Dredge Pit Shu-Yuan YANG¹⁺, Fong-Zuo LEE^{1#}, Jihn-Sung LAI¹, Hong-Yuan LEE¹, Cheng-Chi LIU¹, Hsing-Jui WANG¹, Chih-Hsien YANG¹ ¹National Taiwan University

HS10 / Hydrologic Extremes in a Changing Climate

Fri - 02 Aug | MR329

Time	08:30-10:30
Chair(s)	Rajib MAITY, Indian Institute of Technology Kharagpur C. T. DHANYA, Indian Institute of Technology Delhi

HS10-D5-AM1-329-001 | HS10-A003

Modeling Spatiotemporal Dynamics of Drought in the Gauged and Ungauged Basins Under Climate Change Getachew TEGEGNE DAMTEW¹⁺⁺, Young-Oh KIM¹, Gi Joo

KIM¹, Hee Won JEE¹, Daeho KIM¹ ¹Seoul National University

HS10-D5-AM1-329-002 | HS10-A004

Future Projection of Extreme Rainfall over Kolkata City Ujjwal SAHA^{1#+}

¹Indian Institute of Engineering Science and Technology, Shibpur

HS10-D5-AM1-329-003 | HS10-A013

Observed Change in Spatio-temporal Distribution of Global Probable Maximum Precipitation in a Changing Climate Subharthi SARKAR¹⁺, Rajib MAITY^{1‡} ¹Indian Institute of Technology Kharagpur

HS10-D5-AM1-329-004 | HS10-A020

Simulation and Assessment of Return Flows Across Canal Systems in the Upper Yamuna River Basin Using the WEAP Model

Dinesh KUMAR¹⁺, C. T. DHANYA^{1#}, Saman RAZAVI², Ashvani GOSAIN¹

¹Indian Institute of Technology Delhi, ²University of Saskatchewan

HS10-D5-AM1-329-005 | HS10-A019

A Sub-grid Based Large Scale Flood Inundation Modeling and its Application in Chennai Basin, India Nithila DEVI N.¹, Soumendra Nath KUIRY^{1±+} ¹Indian Institute of Technology Madras

HS10-D5-AM1-329-006 | HS10-A021

Anthropogenic Impact on Drought and Poor Harvests in Afghanistan in 2017/18

Weili DUAN^{1**}, Shan ZOU¹, Naota HANASAKI², Hideo SHIOGAMA², Yaning CHEN³, Zhi LI¹, Gonghuan FANG¹ ¹Chinese Academy of Sciences, ²National Institute for Environmental Studies, ³Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences

HS10-D5-AM1-329-007 | HS10-A024

A Study on Nonstationarity of Flood Peak Time Series in Yalong River, China Jie GAO¹⁵⁺, Long YANG² ¹China Renewable Energy Engineering Institute, ²Nanjing University

HS10-D5-AM1-329-008 | HS10-A025

GIS-based Storm Surge Modelling for the Pearl River Delta Region, China Wei JIAN^{1*+}, Edmond LO¹, Tso-Chien PAN¹ ¹Nanyang Technological University

HS15 / Land and Water Management for Sustainability

Fri - 02 Aug | MR328

 Time
 08:30-10:30

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

 Jun NIU, China Agricultural University

HS15-D5-AM1-328-001 | HS15-A008

Water-energy-food Nexus and the Role of Large Dams Bellie SIVAKUMAR^{1,2#+}, Ji CHEN³, Haiyun SHI⁴

¹University of New South Wales, ²Indian Institute of Technology Bombay, ³The University of Hong Kong, ⁴Southern University of Science and Technology

HS15-D5-AM1-328-002 | HS15-A003

Sustainability of Agricultural Water Use over an Inland River Basin in Northwest China Yue DONG¹, Jun NIU¹⁺, Shaozhong KANG^{1#} ¹China Agricultural University

HS15-D5-AM1-328-003 | HS15-A001

Reassessment of Reservoir Sedimentation Rates Under Monsoon Climate with Combined Optical and Microwave Remote Sensing Joy SANYAL^{1#+} ¹Tokyo Institute of Technology

HS15-D5-AM1-328-004 | HS15-A005

An Assessment of Irrigation and Hydropower Impacts in the Tonle Sap Basin

Thomas COCHRANE¹⁺⁺, Mike ARNAIZ¹, Chantha OEURNG² ¹University of Canterbury, ²Cambodia Institute of Technology

HS15-D5-AM1-328-005 | HS15-A009

Estimation of South-west Monsoonal Surface Runoff by Using SCS-CN Method for an Ungauged Watershed in Kodagu, India Rishudh THAKUR¹⁺, Dillip Kumar BARIK^{1#} ¹Vellore Institute of Technology

HS15-D5-AM1-328-006 | HS15-A012

Satellite Evidence for Carbon and Water Consequences of the 'Grain for Green' Program in Chinese Loess Plateau Fubo ZHAO^{1#+}, Yiping WU¹ ¹Xi'an Jiaotong University

HS15-D5-AM1-328-007 | HS15-A015

Transition Characteristics from Warm-dry to Warm-wet and Vegetation Dynamic Responses in the Southeastern Part of the Qinghai-Tibet Plateau Ruotong WANG¹⁺, Liu LIU^{1‡}, Jingxia HENG¹, Zongxue XU², Qiankun NIU¹ ¹China Agricultural University, ²Beijing Normal University

HS15-D5-AM1-328-008 | HS15-A006

Characterising Flow Pathways Across the Landscape to Characterise the Linkages Between Land and Water Quality Impacts

Shailesh SINGH^{1**}, M S , SRINIVASAN¹, Richard MUIRHEAD², Roland STENGER³, Murray CLOSE⁴, Andrew MANDERSON⁵, Ross Monaghan MONAGHAN², Les BASHER⁵, Diana SELBIE², Chris TANNER¹

¹National Institute of Water and Atmospheric Research, ²AgResearch Ltd., ³Lincoln Agritech, ⁴Environmental Sciences and Research Ltd., ⁵Landcare Research

PS10 / Aeronomy and Plasma Physics of Planetary Environments

Fri - 02 Aug | MR310

Chair(s) Robert LILLIS, *University of California, Berkeley* Pierre HENRI, *CNRS*

PS10-D5-AM1-310-001 | PS10-A013

Mars Seen by MAVEN: Magnetosphere or Induced Magnetosphere?

Janet LUHMANN^{1‡+}, Jasper HALEKAS², Jared ESPLEY³, Mehdi BENNA³, David MITCHELL¹, Chaunfei DONG⁴, Y.J. MA⁵, Shannon CURRY¹, Shaosui XU¹, Patrick DUNN¹, Suranga RUHUNUSIRI², Gina DI BRACCIO³, David A. BRAIN⁶, Bruce JAKOSKY⁶

¹University of California, Berkeley, ²The University of Iowa, ³NASA Goddard Space Flight Center, ⁴Princeton Plasma Physics Laboratory, ⁵University of California, Los Angeles, ⁶University of Colorado Boulder

PS10-D5-AM1-310-002 | PS10-A006 (Invited)

Global Simulations of Magnetic Reconnection in the Martian Magnetotail: A Two-way Coupled Magnetohydrodynamics with Embedded Particle-in-cell Model

Y.J. MA¹⁵⁺, Chris RUSSELL¹, Gabor TOTH², Yuxi CHEN², Andrew NAGY², Yuki HARADA³, Bruce JAKOSKY⁴

¹University of California, Los Angeles, ²University of Michigan, ³Kyoto University, ⁴University of Colorado Boulder

PS10-D5-AM1-310-003 | PS10-A024

The Martian Hydrogen Corona as Inferred from Measured He+/He+2 Ratios in the Solar Wind Near Mars Charles LUE^{1#+}, Hans NILSSON¹, Jasper HALEKAS², Mats HOLMSTRÖM¹ ¹Swedish Institute of Space Physics, ²The University of Iowa

PS10-D5-AM1-310-004 | PS10-A012

A Statistical Study of Flux Ropes in the Martian Ionosphere Jiapeng GUO^{1#+} ¹Sun Yat-sen University

PS10-D5-AM1-310-005 | PS10-A018

Seasonal Changes in the Polar Ionosphere and Thermosphere on Mars

Marcin PILINSKI^{1#+}, Laila ANDERSSON¹, Christopher FOWLER², Ed THIEMANN¹

¹University of Colorado Boulder, ²University of California, Berkeley

PS10-D5-AM1-310-006 | PS10-A009

Evaluating Local Ionization Balance in the Nightside Martian Upper Atmosphere During Maven Deep Dip Campaigns Jun CUI^{1,2#+}, Xiaoshu WU², Roger YELLE³, Shaosui XU⁴, Niklas EDBERG⁵, Eric VIGREN⁵

¹Sun Yat-sen University, ²Chinese Academy of Sciences, ³The University of Arizona, ⁴University of California, Berkeley, ⁵Swedish Institute of Space Physics

PS10-D5-AM1-310-007 | PS10-A019 (Invited)

Insight and MAVEN: A First Comparison Between Magnetic Field Measurements from the Surface of Mars and from Orbit Matthew FILLINGIM^{1#+}, Christopher RUSSELL², Steven JOY², Peter CHI², Yanan YU², Catherine JOHNSON³, Anna MITTELHOLZ³, Benoit LANGLAIS⁴, Janet LUHMANN¹, Jared ESPLEY⁵, Jasper HALEKAS⁶, Bruce BANERDT⁷, Bruce JAKOSKY⁸ ¹University of California, Berkeley, ²University of California, Los Angeles, ³University of British Columbia, ⁴University of Nantes, ⁵NASA Goddard Space Flight Center, ⁶The University of Iowa, ⁷Jet Propulsion Laboratory, ⁸University of Colorado Boulder

AS04 / Madden-Julian Oscillation and Its Global Impacts

Fri - 02 Aug | MR311

Time 08:30-10:30 Chair(s) Ziniu XIAO, Chinese Academy of Sciences Wen ZHOU, City University of Hong Kong

AS04-D5-AM1-311-001 | AS04-A008

What Determines Propagation Speed of the Madden-julian Oscillation?

Guosen CHEN^{1#+}, Bin WANG²

¹Nanjing University of Information Science & Technology, ²University of Hawaii

AS04-D5-AM1-311-002 | AS04-A011

Why Do Atmosphere-ocean Interactions Improve Predictions of the Madden-Julian Oscillation? Nicholas KLINGAMAN^{1,2*+}, Charlotte DEMOTT³

¹National Centre for Atmospheric Science, ²University of Reading, ³Colorado State University

AS04-D5-AM1-311-003 | AS04-A009

Dynamics for the MJO Eastward Propagation Lu WANG^{1#+} ¹Nanjing University of Information Science & Technology

AS04-D5-AM1-311-004 | AS04-A015

A Variable-resolution Route to the MJO in GFDL FVGFS Lucas HARRIS¹⁵⁺, Kun GAO², Baoqiang XIANG³, Shannon REES⁴

¹National Oceanic and Atmospheric Administration, ²Princeton University, ³University Corporation for Atmospheric Research/Geophysical Fluid Dynamics Laboratory, ⁴National Center for Atmospheric Research/ Geophysical Fluid Dynamics Laboratory

AS04-D5-AM1-311-005 | AS04-A006

A Case Study of the Impact of Interactions Between Tropical and Mid-latitude Intraseasonal Oscillations Around the Tibetan Plateau on the Extreme Yangtze Floods Jiangyu MAO¹⁺⁺, Jianying LI² ¹Institute of Atmospheric Physics, Chinese Academy of Sciences, ²China University of Geosciences

AS04-D5-AM1-311-006 | AS04-A007

Intraseasonal Variability of the Summer Monsoon Rainfall over the Lower Reach of the Yangtze River Basin Ouyang YU^{1‡+} ¹Nanjing University of Information Science & Technology

OS01 / The Southern Ocean and Polar Regions and Their Roles in Climate

Fri - 02 Aug | MR327

 Time
 08:30-10:30

 Chair(s)
 Robin ROBERTSON, Xiamen University Malaysia

OS01-D5-AM1-327-001 | OS01-A005

Understanding the Uncertainty in the 21st Century Dynamic Sea Level Projections: The Role of the AMOC Changlin CHEN^{1#+}, Wei LIU² ¹Fudan University, ²University of California, Riverside

OS01-D5-AM1-327-002 | OS01-A003

What Caused the Remarkable February 2018 North Greenland Polynya? Kent MOORE^{1‡+}, Axel SCHWEIGER², Jinlun ZHANG², M. STEELE² ¹University of Toronto Mississauga, ²University of Washington

OS01-D5-AM1-327-003 | OS01-A001

Predictability of Wintertime Storm Tracks and Surface Climate over Eurasia from Arctic Sea Ice Anomalies in the Period 1979-2017 Pawel SCHLICHTHOLZ^{1#+}

¹Institute of Oceanology of the Polish Academy of Sciences

OS01-D5-AM1-327-004 | OS01-A004

Effects of Ocean Slow Response Under Low Warming Targets Shang-Min LONG^{1‡+}, Shang-Ping XIE², Yan DU³, Qinyu LIU⁴, Gang HUANG³, Xiao-Tong ZHENG⁴, Kaiming HU³ ¹Hohai University, ²University of California San Diego, ³Chinese Academy of Sciences, ⁴Ocean University of China

OS01-D5-AM1-327-005 | OS01-A002

Future Observations of the Changing Southern Ocean Robin ROBERTSON^{1#+}, Andrew CONSTABLE² ¹Xiamen University Malaysia, ²Australian Antarctic Division

OS01-D5-AM1-327-006 | OS01-A009

Variations of Antarctic Ocean Gyres Observed in the Time-variable Gravity of GRACE Satellite Chunchun GAO^{1,2}, Benjamin Fong CHAO^{1#+} ¹Academia Sinica, ²Nanyang Normal University

OS01-D5-AM1-327-007 | OS01-A006

Evidence for Link Between Modelled Trends in Antarctic Sea Ice and Underestimated Westerly Wind Changes Wenju CAI^{1,2*+}, Ariaan PURICH³

¹Ocean University of China and Qingdao National Laboratory for Marine Science and Technology, ²Commonwealth Scientific and Industrial Research Organisation, ³University of New South Wales

AS40 / Precipitation Science and Application of Satellite Data

Fri - 02 Aug | MR302

Time 08:30-10:30

Chair(s) Takuji KUBOTA, Japan Aerospace Exploration Agency Shoichi SHIGE, Kyoto University

AS40-D5-AM1-302-001 | AS40-A021 (Invited)

Status and Plans for in the U.S. GPM Project George HUFFMAN¹⁵⁺, Scott BRAUN¹ ¹NASA Goddard Space Flight Center

AS40-D5-AM1-302-002 | AS40-A010

Early Results for Version 06 IMERG

George HUFFMAN^{1#+}, Jackson TAN², David BOLVIN³, Eric NELKIN³

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

AS40-D5-AM1-302-003 | AS40-A023

Five-year Outcomes of the Global Precipitation Measurement Mission for Precipitation Sciences in Japan

Yukari TAKAYABU^{1#+}, Takuji KUBOTA², Toshio IGUCHI³, Shinta SETO⁴, Jun AWAKA⁵, Atsushi HAMADA⁶, Chie YOKOYAMA¹, Kaya KANEMARU¹, Shoichi SHIGE⁷, Moeka YAMAJI², Kenji NAKAMURA⁸, Riko OKI²

¹The University of Tokyo, ²Japan Aerospace Exploration Agency, ³National Institute of Information and Communications Technology, ⁴Nagasaki University, ⁵Tokai University, ⁶Graduate School of Science and Engineering, University of Toyama, ⁷Kyoto University, ⁸Dokkyo University

AS40-D5-AM1-302-004 | AS40-A003

Recent Results of the Global Precipitation Measurement (GPM) Mission in Japan

Takuji KUBOTA^{1**}, R⁻iko OKI¹, Moeka YAMAJI¹, Yuki KANEKO¹, Toshio IGUCHI², Nobuhiro TAKAHASHI³, Yukari TAKAYABU⁴

¹Japan Aerospace Exploration Agency, ²National Institute of Information and Communications Technology, ³Nagoya University, ⁴The University of Tokyo

AS40-D5-AM1-302-005 | AS40-A005

Enhancing Data Assimilation of GPM Observations: Past 6 Years and Future Plans

Takemasa MIYOSHI^{1,2#+}, Shunji KOTSUKI³, Koji TERASAKI³, Kenta KUROSAWA³, Shigenori OTSUKA¹, Kaya KANEMARU⁴, Hisashi YASHIRO³, Masaki SATOH⁴, Hirofumi TOMITA³, Kozo OKAMOTO⁵, Eugenia KALNAY²

¹RIKEN Center for Computational Science, ²University of Maryland, ³RIKEN Advanced Institute for Computational Science, ⁴The University of Tokyo, ⁵Japan Meteorological Agency

AS40-D5-AM1-302-006 | AS40-A006

Evaluation of GPM IMERG Estimates Considering Spatial Sampling Errors Due to the Gauge Network Configuration: A Case Study over a Tropical Urban Region Pradeep MANDAPAKA^{1#+}, Edmond LO¹ ¹Nanyang Technological University

AS40-D5-AM1-302-007 | AS40-A001

Adjustment of Radar–gauge Rainfall Discrepancy Due to Raindrop Drift and Evaporation Using the Weather Research and Forecasting (WRF) Model Qiang DAI^{1#+}, Qiqi YANG¹, Dawei HAN² ¹Nanjing Normal University, ²Bristol University

AS13 / Passive and Active Sensing of the Chemistry and Dynamics of the Middle and Upper Atmosphere

Fri - 02 Aug | MR301

08:30-10:30
Iain REID, ATRAD Pty Ltd
Jeng-Hwa YEE, The Johns Hopkins University Applied
Physics Laboratory

AS13-D5-AM1-301-001 | AS13-A006

Climatology of Mesopause Density Using a Global Distribution of Meteor Radars

Wen YI¹⁺, Xianghui XUE^{1‡}, Iain REID^{2,3}, Damian MURPHY⁴, Chris HALL⁵, Masaki TSUTSUMI⁶, Baiqi NING⁷, Guozhu LI⁷, Robert VINCENT³, Jinsong CHEN⁸, Tingdi CHEN¹ 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, ⁸China Research Institute of Radiowave Propagation

AS13-D5-AM1-301-002 | AS13-A005 (Invited)

Long Term Variations in Vertical Velocities in the Southern Hemisphere Summer MLT Robert VINCENT¹⁵⁺, Sujata KOVALAM¹, Damian MURPHY²,

Iain REID^{1,3}, Joel YOUNGER^{1,3} ¹University of Adelaide, ²Australian Antarctic Division, ³ATRAD Pty Ltd

AS13-D5-AM1-301-003 | AS13-A019 (Invited)

Interhemispheric Coupling Study by Observations and Modelling (ICSOM) Kaoru SATO^{1#+} ¹The University of Tokyo

AS13-D5-AM1-301-004 | AS13-A004

Impact of Medium-energy Electron Precipitation on Ozone and Middle Atmosphere Dynamics in WACCM Simulations Yvan ORSOLINI^{1#+}, Sigmund GUTTU², Frode STORDAL², Varavut LIMPASUVAN³

¹Norwegian Institute of Air Research, ²University of Oslo, ³Coastal Carolina University

AS13-D5-AM1-301-005 | AS13-A016

Semidiurnal Tidal Perturbations During SSW in SuperDARN and WACCM-X

Varavut LIMPASUVAN¹⁵⁺, Yvan ORSOLINI², Patrick ESPY^{3,4}, Robert HIBBINS^{3,4}, Jiarong ZHANG¹

¹Coastal Carolina University, ²Norwegian Institute of Air Research, ³Norwegian University of Science and Technology, ⁴University of Bergen

AS13-D5-AM1-301-006 | AS13-A008 (Invited)

Investigation of Photochemistry on the Bottom Side of the Mesospheric Na Layer by Na Lidar Tao YUAN^{1#+} ¹Utah State University

AS13-D5-AM1-301-007 | AS13-A014

Study the Volume Emission Rates Emitted from O2(0-1) and O(1S) Nightglow by GBAII Yuanhe TANG¹⁺⁺ ¹Xi'an University of Technology

BG11 / Biogeosciences General Session

Fri - 02 Aug | MR300

Time 08:30-10:30

Chair(s) Prabir K. PATRA, Japan Agency for Marine-Earth Science and Technology Long CAO, Zhejiang University

BG11-D5-AM1-300-001 | BG11-A001

Plant Response to Climate Change in the Permafrost Peatlands of Great Hing'an Mountain, Northeast China Xianwei WANG^{1#+} ¹Chinese Academy of Sciences

BG11-D5-AM1-300-002 | BG11-A018

An Observational and Modeling Study of the Radiation Transfer in Forest Canopy in Huainan, China Qiudan DAI¹⁺⁺

¹Institute of Atmospheric Physics, Chinese Academy of Sciences

BG11-D5-AM1-300-003 | BG11-A016

Soil Organic Carbon and Soil Aggregation Enhancement from Vermicompost Management Enriched with Biofertilizers Gilbert HINGE¹⁵⁺, Pulendra DUTTA¹, Arup Kumar SARMA¹ ¹Indian Institute of Technology Guwahati

BG11-D5-AM1-300-004 | BG11-A019

Multipartite and Synergistic Microbial Mechanisms Controlling Sub-surface Arsenic (As) Release in Aquifers of Bengal Basin, India: A Geomicrobiological Investigation Balaram MOHAPATRA¹⁺, Anumeha SAHA¹, Pinaki SAR^{1#} ¹Indian Institute of Technology Kharagpur

BG11-D5-AM1-300-005 | BG11-A022

Paleothermocline Reconstruction Based on Planktonic Foraminifera of Halang Formation in Banyumas, Cantral Java, Indonesia

Winda EKA MANDIRI PUTERI^{1#+}, Anisa Ulfatu HASANAH^{1,2}, Lia JURNALIAH², Marfasran HENDRIZAN^{3,4} ¹Institute of Technology Bandung, ²padjadjaran university, ³Indonesian Institute of Sciences, ⁴Kiel University

BG11-D5-AM1-300-006 | BG11-A004

Tethyan Larger Benthic Foraminifera from Eastern Tethys, Meghalaya, India and Their Paleobiogeographic Implications Vinod TEWARI^{1#+} ¹Sikkim University

BG11-D5-AM1-300-007 | BG11-A014

A Modeling Study on Summertime Oxygen Deficit in the Bohai Sea of China

Haiyan ZHANG^{1#+}, Simeng QIAN¹, Hao WEI¹, Liang ZHAO² ¹Tianjin University, ²Tianjin University of Science and Technology

ST25 / Turbulence and Particle Energization in Space, Astrophysical and Laboratory Plasmas Fri - 02 Aug | MR309

Time 08:30-10:30

Chair(s) Fouad SAHRAOUI, Plasma Physics Laboratory

ST25-D5-AM1-309-001 | ST25-A001 (Invited)

Understanding Electron-scale Electric Field Fluctuations in Solar Wind Kinetic Turbulence: Artemis Observations Chadi SALEM^{1#+}, John BONNELL¹, Elizabeth HANSON¹, Christopher CHASTON^{1,2}, Kristopher KLEIN³, Luca FRANCI⁴, Daniel VERSCHAREN⁵

¹University of California, Berkeley, ²University of Sydney, ³The University of Arizona, ⁴Queen Mary College, ⁵University College London

ST25-D5-AM1-309-002 | ST25-A004

Diffusion Range and Dissipation Spectrum of Kinetic Alfvenic Turbulence Jiansen HE^{1#+}, Xingyu ZHU¹, Die DUAN¹, Daniel VERSCHAREN² ¹Peking University, ²University College London

ST25-D5-AM1-309-003 | ST25-A014 (Invited)

MMS Observation of Anisotropic Particle Distributions in an Alfvén Vortex

Tieyan WANG^{1‡+}, Olga ALEXANDROVA², Denise PERRONE³, Malcolm DUNLOP^{1,4}, Xiangcheng DONG⁴, Robert BINGHAM¹, Yuri KHOTYAINTSEV⁵, Chris RUSSELL⁶, Barbara GILES⁷, Roy B. TORBERT^{8,9}, Robert ERGUN¹⁰, James BURCH⁹

¹Rutherford Appleton Laboratory, ²Observatoire de Paris, ³Imperial College London, ⁴Beihang University, ⁵Swedish Institute of Space Physics, ⁶University of California, Los Angeles, ⁷NASA Goddard Space Flight Center, ⁸University of New Hampshire, ⁹Southwest Research Institute, ¹⁰University of Colorado Boulder

ST25-D5-AM1-309-004 | ST25-A006

Testing of the Taylor Frozen-in-flow Hypothesis at Electron Scales in the Solar Wind Turbulence Shiyong HUANG^{1#+}, Fouad SAHRAOUI² ¹Wuhan University, ²Plasma Physics Laboratory

ST25-D5-AM1-309-005 | ST25-A002

Composition of Wave Modes in Magnetosheath Turbulence from Sub-ion to Sub-electron Scales Xingyu ZHU¹⁺, Jiansen HE^{1‡}, Daniel VERSCHAREN², Jinsong ZHAO³

¹Peking University, ²University College London, ³Chinese Academy of Sciences

ST25-D5-AM1-309-006 | ST25-A013

The Non-resonant and Resonant Instability of Kinetic Alfven Wave in the Electron Beam-return Current System and Applications to Some Processes in Solar Flare and Earth's Aurora Ling CHEN^{1#+}, Liang XIANG¹

¹Chinese Academy of Sciences

ST25-D5-AM1-309-007 | ST25-A018

Downstream Structures and Ion Dynamics at a Rippled Quasi-parallel Shock: 2-D Hybrid Simulations Yufei HAO^{1#+}, Quanming LU², De-Jin WU¹, Xinliang GAO² ¹Chinese Academy of Sciences, ²University of Science and Technology of China

IG15 / Data-driven Modeling in Geoscience

Fri - 02 Aug | MR323

Time 08:30-10:30

Chair(s) Shunichi NOMURA, The Institute of Statistical Mathematics Ryoichiro AGATA, Japan Agency for Marine-Earth Science and Technology

IG15-D5-AM1-323-001 | IG15-A014 (Invited)

Adaptive Estimation of the Observation-error Covariance and its Application to Particle Filtering Genta UENO¹⁸⁺

¹The Institute of Statistical Mathematics

IG15-D5-AM1-323-002 | IG15-A005

Data-driven Stochastic Parameterization of Multi-scale Flow Interactions in Ocean Models Dmitri KONDRASHOV^{1#+}

¹University of California, Los Angeles

IG15-D5-AM1-323-003 | IG15-A016

Bias Correction for the Distribution of Aftershocks Within Short-term Period Immediately After Large Main Shock Kosuke MORIKAWA^{1#+}, Hiromichi NAGAO², Shin-ichi ITO², Shin'ichi SAKAI², Naoshi HIRATA² ¹Osaka University, ²The University of Tokyo

IG15-D5-AM1-323-004 | IG15-A008

Decomposition of Multiple Seasonal Components in a Seasonal Adjustment Model Tomoya HABA¹, Hiromichi NAGAO^{1#+}, Shin-ichi ITO¹ ¹The University of Tokyo

IG15-D5-AM1-323-005 | IG15-A009 (Invited)

Illuminating the Mechanical Properties of the Central Chile Subduction Zone Using Space Geodetic Observations Qiang QIU¹⁵⁺, Sylvain BARBOT², Jonathan WEISS³, Tim J WRIGHT³, James FOSTER⁴, Alexander SAUNDERS³, Michael G BEVIS⁵, Robert SMALLEY JR⁶, Luis Eduardo LENZANO⁷, Jorge BARON⁸, Juan Carlos BAEZ SR⁹, Arturo ECHALAR¹⁰, Jon AVERY¹¹

¹University of Southern California, ²Nanyang Technological University, ³University of Leeds, ⁴University of Hawaii at Manoa, ⁵The Ohio State University, ⁶University of Memphis, ⁷El Instituto Argentino de Nivología, Glaciología y Ciencias Ambientales Mendoza,

⁸Universidad Nacional de Cuyo, ⁹University of Chile Santiago, ¹⁰Instituto Geográfico Militar La Paz, ¹¹University of Hawaii

IG15-D5-AM1-323-006 | IG15-A015

Statistical Distribution of Natural Times: A New View of Earthquake Hazard Assessment Sumanta PASARI^{1#+} ¹BITS Pilani

IG15-D5-AM1-323-007 | IG15-A007

A Study of the Relation Between the Occurrence of Large Earthquakes and Time-dependent Decrease in B Value Kazuyoshi NANJO^{1#+}, Masao NAKATANI², Shunichi NOMURA³, Toshiyasu NAGAO⁴

¹University of Shizuoka, ²The University of Tokyo, ³The Institute of Statistical Mathematics, ⁴Tokai University

ST33 / Ionospheric Weather Induced by Solar and Terrestrial Activities

Fri - 02 Aug | MR308

 Time
 11:00-12:30

 Chair(s)
 Tzu-Wei FANG, University of Colorado Boulder Nicola GENZANO, University of Basilicata

ST33-D5-AM2-308-001 | ST33-A004 (Invited)

Model Simulation of Storm-time Equatorial Electrodynamics Using First-principle Models Tzu-Wei FANG^{1±+}, Tim FULLER-ROWELL¹, Daniel WELLING², Mariangel FEDRIZZI¹ ¹University of Colorado Boulder, ²The University of Texas at Arlington,

ST33-D5-AM2-308-002 | ST33-A003

Enhanced Dynamo E Field to Modify Ionosphere Before Large Earthquake Koichiro OYAMA^{1,2#+}

¹National Cheng Kung University, ²Asia Space Environment Research Consortium

ST33-D5-AM2-308-003 | ST33-A009 (Invited)

A Brief Introduction on CSES Mission and its Preliminary Results Qiao WANG^{1#+}, Xuhui SHEN¹, Zhima ZEREN¹, Yanyan YANG¹,

Qiao WANG¹⁺⁺, Xuhui SHEN¹, Zhima ZEREN¹, Yanyan YANG¹, Rui YAN¹, Jian-Pingq HUANG¹ ¹China Earthquake Administration

ST33-D5-AM2-308-004 | ST33-A006

Statistical Correlation Analysis Between Large Earthquakes (M≥6) Occurred in Indonesia and Significant TIR Anomalies Highlight Using RST Methodology on HIMAWARI-8/AHI TIR Data

Nicola GENZANO^{1#+}, Valerio TRAMUTOLI¹, Roberto COLONNA¹, Carolina FILIZZOLA², Mariano LISI¹, Nicola PERGOLA²

¹University of Basilicata, ²National Research Council

ST33-D5-AM2-308-005 | ST33-A008

Statistical Analysis and Assessment of Pre-seismic Ionospheric Electron Density Anomalies Using Ionosonde Data During 1958-2017, Over Japan Katsumi HATTORI^{1#+}, Sanaka SAITO¹, Chie YOSHINO¹, Peng

HAN²

¹Chiba University, ²Southern University of Science and Technology

SE28 / Advances in Fiber-optic Technologies for Geophysical Applications

Fri - 02 Aug | Nicoll 2

Time 11:00-12:30

Chair(s) Philippe JOUSSET, GFZ German Research Centre for Geosciences Benoit TAISNE, Nanyang Technological University

SE28-D5-AM2-Nicoll 2-001 | SE28-A005

Fibre-optic Distributed Strain Sensing: Dense Monitoring of Ground Motion

Philippe JOUSSET^{1,2#+}, Thomas REINSCH¹, Trond RYBERG¹, Hanna BLANCK³, Andy CLARKE⁴, Rufat AGHAYEV⁴, Gylfi HERSIR³, Michael WEBER^{1,5}, Charlotte M. KRAWCZYK^{1,6} ¹GFZ German Research Centre for Geosciences, ²Bureau of Geological and Mining Research, ³ÍSOR Iceland Geosurvey, ⁴Silixa Ltd., ⁵University of Potsdam, ⁶Technical University of Berlin

SE28-D5-AM2-Nicoll 2-002 | SE28-A001 (Invited)

The Potential of Distributed Acoustic Sensing in Teleseismic Studies: Insights from the Goldstone Experiment Chunquan YU¹⁺⁺, Zhongwen ZHAN², Nathaniel J. LINDSEY^{3,4}, Jonathan B. AJO-FRANKLIN⁴, Michelle ROBERTSON⁴ ¹Southern University of Science and Technology, ²California Institute of Technology, ³University of California, Berkeley, ⁴Lawrence Berkeley National Laboratory

SE28-D5-AM2-Nicoll 2-003 | SE28-A004

Near-surface Velocity Change Monitoring in Urban Environments with DAS and Quarry Blasts

Gang FANG¹⁺, Yunyue LI^{1#}, Yumin ZHAO¹, Xuan FENG², Diming YU³

¹National University of Singapore, ²Jilin University, ³Cambridge Sensing Pte. Ltd.

SE28-D5-AM2-Nicoll 2-004 | SE28-A002 (Invited)

Extracting Geotechnical Information in an Urban Environment Using Distributed Acoustic Sensing and a Free-floating Fiber-optic Cable

Zack SPICA^{1#+}, Eileen MARTIN², Biondo BIONDI³, Greogory BEROZA³

¹The University of Tokyo, ²Virginia Tech, ³Stanford University

SE28-D5-AM2-Nicoll 2-005 | SE28-A003

A Velocity-based Earthquake Detection System Using Downhole DAS Data Biondo BIONDI¹⁺⁺, Ariel LELLOUCH¹, Siyuan YUAN¹, Zack SPICA¹, William ELLSWORTH¹ ¹Stanford University

-Sunjora aniversity

SE28-D5-AM2-Nicoll 2-006 | SE28-A006

Volcanic and Seismic Hazards Assessment Using Distributed Strain Sensing Optical Fibres

Philippe JOUSSET^{1,2‡+}, Gilda CURRENTI³, Frederik TILMANN^{1,4}, Luciano ZUCCARRELO^{3,5}, Athena CHALARI⁶, Thomas REINSCH¹, Charlotte M. KRAWCZYK^{1,7}

¹GFZ German Research Centre for Geosciences, ²Bureau of Geological and Mining Research, ³National Institute of Geophysics and Volcanology, ⁴Free University of Berlin, ⁵University of Granada, ⁶Silixa Ltd., ⁷Technical University of Berlin

ST12 / Wave-particle Interactions in the Magnetosphere

Fri - 02 Aug | MR304

Time	11:00-12:30
Chair(s)	Yuto KATOH, Tohoku University

ST12-D5-AM2-304-001 | ST12-A002 (Invited)

Multipoint Observations of Energetic Particle Injections and Their Effect on Chorus Wave Activity in the Inner Magnetosphere

Drew TURNER^{1#+}, Geoffrey REEVES², Christine GABRIELSE³, Ian COHEN⁴, Joseph FENNELL¹, Trevor LEONARD⁵, Matthew ARGALL⁶, Yoshizumi MIYOSHI⁷

¹The Aerospace Corporation, ²Los Alamos National Laboratory, ³University of California, Los Angeles, ⁴The Johns Hopkins University Applied Physics Laboratory, ⁵University of Colorado Boulder, ⁶University of New Hampshire, ⁷Nagoya University

ST12-D5-AM2-304-002 | ST12-A011 (Invited)

A Model Study of Correlated Electron Bursts and Whistler Chorus Emission in the Earth's Radiation Belts David SCHRIVER^{1#+}, Nicole ECHTERLING¹, James ROEDER², Joseph FENNELL²

¹University of California, Los Angeles, ²The Aerospace Corporation

ST12-D5-AM2-304-003 | ST12-A004 (Invited)

Nonlinear Dynamics of Electrons in Excitation of Whistler Waves with Adiabatic and Non-adiabatic Frequency Chirping Xin TAO^{1±+}, Yifan WU¹, Fulvio ZONCA², Liu CHEN³

¹University of Science and Technology of China, ²Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), ³Zhejiang University

ST12-D5-AM2-304-004 | ST12-A009 (Invited)

Spatial Distribution of Fine-structured and Unstructured EMIC Waves Observed by the Arase Satellite Shoya MATSUDA^{1#+}, Yoshiya KASAHARA², Yoshizumi

MIYOSHI³, Reiko NOMURA⁴, Masafumi SHOJI³, Ayako MATSUOKA¹, Yasumasa KASABA⁵, Satoshi KURITA³, Mariko TERAMOTO³, Keigo ISHISAKA⁶

¹Japan Aerospace Exploration Agency, ²Kanazawa University, ³Nagoya University, ⁴National Astronomical Observatory of Japan, ⁵Tohoku University, ⁶Toyama Prefectural University

ST12-D5-AM2-304-005 | ST12-A003 (Invited)

High-frequency Thermal Fluctuations and Instabilities in the Radiation Belt Environment Junga HWANG^{1#+}, Peter H. YOON² ¹Korea Astronomy and Space Science Institute, ²University of Maryland

AS33 / The Multi-scale Effects of Topography on Monsoons

Fri - 02 Aug | MR303

 Time
 11:00-12:30

 Chair(s)
 Anmin DUAN, Chinese Academy of Sciences

AS33-D5-AM2-303-001 | AS33-A010 (Invited)

Influence of Synoptic Pattern and Low-level Wind Speed on Diurnal Variations of Orographic Convection in Summer over Pearl River Delta, South China Kun ZHAO^{1*+}, Xiaona RAO¹ ¹Nanjing University

AS33-D5-AM2-303-002 | AS33-A007

Diurnal Variation of Summer Precipitation Across the Central Tian Shan Mountains Jian LI^{1#+} ¹Chinese Academy of Meteorological Sciences

AS33-D5-AM2-303-003 | AS33-A012

Diurnal Variations of Winds and Rainfall Response to Large-scale Circulation During a Heavy Rainfall Event over East Asia Wenxin ZENG¹⁺, Guixing CHEN^{1#} ¹Sun Yat-sen University

AS33-D5-AM2-303-004 | AS33-A002

Spatiotemporal Variations of Hourly Rainfall in Warm Season of Central North China Weihua YUAN^{1#+} ¹Chinese Academy of Sciences

AS33-D5-AM2-303-005 | AS33-A014

Impact of Increasing Horizontal Resolution on the Simulated Diurnal Cycle of Rainfall in a Global Multiscale Modeling Framework

Yi ZHANG^{1#+}, Haoming CHEN¹, Dan WANG² ¹Chinese Academy of Meteorological Sciences, ²China Meteorological Administration

HS33 / Hydrometeorological Applications and Hydrologic Prediction: Severe Weather Precipitation Detection, Estimation, and Forecast Fri - 02 Aug | MR330

Time 11:00-12:30

Chair(s) Jie CAO, Chinese Academy of Sciences

HS33-D5-AM2-330-001 | HS33-A008 (Invited)

Estimating the Occurrence Time of Slope Failure Using Water Stage Data Yoshiyuki YOKOO^{1#+} ¹Fukushima University

HS33-D5-AM2-330-002 | HS33-A001 (Invited)

Evaluating Accuracy of Rainfall Forecast Data in Train Operation Control Yohei NAKABUCHI^{1s+}, Hiroto SUZUKI¹, Eiichi NAKAKITA² ¹East Japan Railway Company, ²Kyoto University

HS33-D5-AM2-330-003 | HS33-A004

Towards a Nowcasting System for Meteorological Services Singapore Erik BECKER^{1‡+}, Xiangming SUN¹ ¹Centre for Climate Research Singapore

HS33-D5-AM2-330-004 | HS33-A002

Classification of Persistent Summer Extreme Heavy Rainfall Events in North China During Recent 40 Years Jie CAO^{1,2*+}, Linna ZHANG³

¹Chinese Academy of Sciences, ²National Oceanic and Atmospheric Administration/ University of Oklahoma, ³Beijing Meteorological Bureau

HS10 / Hydrologic Extremes in a Changing Climate

Fri - 02 Aug | MR329

 Time
 11:00-12:30

 Chair(s)
 C. T. DHANYA, Indian Institute of Technology Delhi

HS10-D5-AM2-329-001 | HS10-A001

Hydro-economic Approaches to Develop Sustainable Agriculture Under Changing Climates: A Case Study from the Ganges Delta, Bangladesh Sonia MURSHED^{1‡}, Jagath KALUARACHCHI¹⁺ ¹Utah State University

HS10-D5-AM2-329-002 | HS10-A007

Ranking of CMIP5 GCMS for Historical Simulation on Regional Scale Using TOPSIS Young Hoon SONG¹⁺, Eun Sung CHUNG^{1‡} ¹Seoul National University of Science and Technology

HS10-D5-AM2-329-003 | HS10-A010

Climate Change Impacts on Water Resources of the Andong Watershed in South Korea Under CMIP-5 Scenarios Mohamed RASMY^{1,2#+}, Ye Seul CHO³, Akira HASEGAWA^{1,4}, Toshio KOIKE⁵

¹Public Works Research Institute, ²National Graduate Institute for Policy Studies, ³Yonsei University, ⁴The University of Tokyo, ⁵International Centre for Water Hazard and Risk Management

HS10-D5-AM2-329-004 | HS10-A015

Climate Change Impacts on River Water Quality Extremes Rehana SHAIK^{1#+}, C. T. DHANYA² ¹International Institute of Information Technology, ²Indian Institute of Technology Delhi

HS10-D5-AM2-329-005 | HS10-A016

Climate Change Signals on Regional Water Energy Variables over Krishna River Basin, India Rehana SHAIK^{1±+}, Sireesha NAIDU¹, Nellibilli TINKU MONISH¹ ¹International Institute of Information Technology

HS10-D5-AM2-329-006 | HS10-A018

Mid-long Term Streamflow Forecasting of the Yarlung Zangbo-Brahmaputra River Under Climate Change Xiaobo WANG¹, Huijuan CUI^{1±+}, Shaoqiang WANG¹ ¹Chinese Academy of Sciences

HS16 / Impacts and Consequences of Changing Climate and Landuse on Hydrology

Fri - 02 Aug | MR328

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

HS16-D5-AM2-328-001 | HS16-A003

Accuracy Assessment of Land Use-land Cover Change Analysis and Scenario Development for Flooding Risk Assessment Ryan CASTANETO^{1#+}, Decibel FAUSTINO-ESLAVA¹, Loucel CUI¹, Wilbur MANIBO², Beth Zaida UGAT¹, Joey Philip TORRES², Cristino Jr. TIBURAN², Nathaniel BANTAYAN², Jenielyn PADRONES², Carla DIMALANTA³ ¹University of the Philippines Los Baños, ²University of the Philippines, ³University of the Philippines Diliman

HS16-D5-AM2-328-002 | HS16-A004

Analysing the Regional Impact of Climate Variability on Runoff Regime in Kesinga Sub-catchment of Mahanadi Basin, India

Pooja AGARWAL^{1#+}, Pramod Kumar SHARMA¹ ¹Indian Institute of Technology Roorkee

HS16-D5-AM2-328-003 | HS16-A006

Hydroclimatic Prediction Using Machine Learning Approach Incorporating Time-varying Concept Kironmala CHANDA^{1#+}, Rajib MAITY²

¹Indian Institute of Technology (Indian School of Mines) Dhanbad, ²Indian Institute of Technology Kharagpur

HS16-D5-AM2-328-004 | HS16-A007

Hydro-geochemistry of the Spring Water Sources in the Southwestern Coast of India Maya K^{1#+} ¹National Centre for Earth Science Studies

HS16-D5-AM2-328-005 | HS16-A010

Spatial and Temporal Variations of Sediment Rating Curves in the Middle Yellow River Basin and Their Implications Pengcheng SUN¹⁵⁺, Yiping WU¹ ¹Xi'an Jiaotong University

HS16-D5-AM2-328-006 | HS16-A012

Acceleration of Hydrological Cycle: Evidences from the River Basins Draining Southern Western Ghats, India Merin Mariam MATHEW¹, Sreelash KRISHNAN KUTTY^{1‡+}, Micky MATHEW¹ ¹National Centre for Earth Science Studies

PS10 / Aeronomy and Plasma Physics of Planetary Environments

Fri - 02 Aug | MR310

 Time
 11:00-12:30

 Chair(s)
 Janet LUHMANN, University of California, Berkeley

PS10-D5-AM2-310-001 | PS10-A007

Modern Carbon Photochemical Escape Rates at Mars Based on MAVEN Observations

Daniel LO¹⁴⁺, Roger YELLE¹, Robert LILLIS², Justin DEIGHAN³, Sonal JAIN³, Nick SCHNEIDER³, Meredith ELROD⁴, Ed THIEMANN³, Frank EPARVIER³, Laila ANDERSSON³

¹The University of Arizona, ²University of California, Berkeley, ³University of Colorado Boulder, ⁴NASA Goddard Space Flight Center

PS10-D5-AM2-310-002 | PS10-A020

Sputtering at Mars and Venus: Models and Observations of Heavy Ion Precipitation

Shannon CURRY^{1#+}, Janet LUHMANN¹, Chaunfei DONG², Takuya HARA¹, Francois LEBLANC³, Ronan MODOLO⁴, Y.J. MA⁵

¹University of California, Berkeley, ²Princeton Plasma Physics Laboratory, ³French National Centre for Scientific Research, ⁴University of Versailles Saint Quentin, ⁵University of California, Los Angeles

PS10-D5-AM2-310-003 | PS10-A022

Explosive Foreshock Phenomena at Alien Planets: A Spotters Guide

Glyn COLLINSON^{1,*}, David SIBECK¹, N. OMIDI², Jasper HALEKAS³, Christopher FOWLER⁴

¹NASA Goddard Space Flight Center, ²Solana Scientific Inc., ³The University of Iowa, ⁴University of California, Berkeley

PS10-D5-AM2-310-004 | PS10-A003 (Invited)

Science and Exploration of Langmuir Probe Experiment in Venus Atmosphere: Future Planned Mission S.A. HAIDER^{1‡+}, K. DURGA PRASAD¹, Varun SHEEL¹, Chandan

KUMAR¹, Sanjeev MISHRA¹, P KALYAN REDDY¹, Janmejay KUMAR¹

¹Physical Research Laboratory

PS10-D5-AM2-310-005 | PS10-A023 (Invited)

Overview of the Structure and Dynamics of a Cometary Induced Magnetosphere After the Rosetta Mission Pierre HENRI^{1#+} ¹CNRS PS10-D5-AM2-310-006 | PS10-A005 (Invited)

The Generation of Up-going Whistler-mode Waves and Their Acceleration of Energetic Electrons in the Jovian Polar Cap Region: Observations by the Juno Spacecraft Sadie ELLIOTT¹⁵⁺, Donald GURNETT¹, William KURTH¹, Barry MAUK², George CLARK², Philip VALEK³, Frederic ALLEGRINI^{3,4}, Scott BOLTON³, Peter H. YOON⁵, J. Douglas MENIETTI¹

¹The University of Iowa, ²The Johns Hopkins University Applied Physics Laboratory, ³Southwest Research Institute, ⁴University of Texas at San Antonio, ⁵University of Maryland

AS04 / Madden-Julian Oscillation and Its Global Impacts

Fri - 02 Aug | MR311

Time 11:00-12:30

Chair(s) Jiangyu MAO, Institute of Atmospheric Physics, Chinese Academy of Sciences Jian LING, Chinese Academy of Sciences

AS04-D5-AM2-311-001 | AS04-A018

The Causes of the TC's Genesis and Track over Western North Pacific Ocean in 2018 Summer Lijuan CHEN^{1#+}, Zhensong GONG² ¹National Climate Center, China Meteorological Administration, ²China Meteorological Administration

AS04-D5-AM2-311-002 | AS04-A019

Modulation of Western North Pacific Tropical Cyclone Activities by the MJO Wen ZHOU^{1‡+}, Cheuk Yin LI¹ ¹City University of Hong Kong

AS04-D5-AM2-311-003 | AS04-A016

QBO Modulation of the MJO-related Precipitation Anomalies in East Asia Hera KIM¹⁺, Seok-Woo SON^{1‡}, Changhyun YOO²

¹Seoul National University, ²Ewha Womans University

AS04-D5-AM2-311-004 | AS04-A005

Modulation of Intraseasonal Variability of Pacific-Japan Pattern by ENSO Ying LI¹⁺, Fei LIU^{1#} ¹Nanjing University of Information Science & Technology

OS01 / The Southern Ocean and Polar Regions and Their Roles in Climate

Fri - 02 Aug | MR327

Time 11:00-12:30

Chair(s) Robin ROBERTSON, Xiamen University Malaysia Wenju CAI, Ocean University of China and Qingdao National Laboratory for Marine Science and Technology

OS01-D5-AM2-327-001 | OS01-A014

Decadal Variabilities of the Tropical SST Impact on the West Antarctic Atmospheric Circulation Changes Xichen LI^{1#+} ¹Chinese Academy of Sciences

OS01-D5-AM2-327-002 | OS01-A010

Characteristics of Near Surface Wind Field at Terra Nova Bay, Antarctica

Muhammad Yunus AHMAD MAZUKI¹, Sheeba Nettukandy CHENOLI^{1#+}, Azizan Abu SAMAH¹ ¹University of Malaya

OS01-D5-AM2-327-003 | OS01-A016

Does Extreme El Niño Have a Different Effect on the Stratosphere in Boreal Winter Than its Moderate Counterpart? Zhou XIN^{1#+}, Jianping LI², Fei XEI², Quan-Liang CHEN¹, Ruiqiang DING³, Wenxia ZHANG³, Yang LI¹ ¹Chengdu University of Information Technology, ²Beijing Normal University, ³Chinese Academy of Sciences

OS01-D5-AM2-327-004 | OS01-A013

Modification of the Wintertime PNA Pattern Related North American Climate Anomalies by the Extratropical ABNA Teleconnection Bin YU^{1#+}, Hai LIN¹ ¹Environment and Climate Change Canada

OS01-D5-AM2-327-005 | OS01-A011

Swell Wave Generation Characteristics over the Indian Ocean Domain Sreelakshmi S^{1#+}, Prasad BHASKARAN¹ ¹Indian Institute of Technology Kharagpur

AS40 / Precipitation Science and Application of Satellite Data

Fri - 02 Aug | MR302

Time 11:00-12:30

Chair(s) Yukari TAKAYABU, The University of Tokyo George HUFFMAN, NASA Goddard Space Flight Center

AS40-D5-AM2-302-001 | AS40-A011 (Invited)

Possibility of Active Lightning Detection by GPM DPR from a Cloud Microphysical Standpoint

Kenji SUZUKI^{1*+}, Rimpei KAMAMOTO¹, Aritoshi MASUDA², Tetsuya KAWANO³, Katsuhiro NAKAGAWA⁴, Yuki KANEKO⁵ ¹Yamaguchi University, ²Japan Weather Association, ³Kyushu University, ⁴National Institute of Information and Communications Technology, ⁵Japan Aerospace Exploration Agency

AS40-D5-AM2-302-002 | AS40-A015 (Invited)

Vertical Gradient of Stratiform Radar Reflectivity Below the Bright Band from the Tropics to the Extratropical Latitudes Seen by GPM

Shoichi SHIGE^{1#+}, Kazuki KOBAYASHI¹, Munehisa YAMAMOTO¹ ¹Kyoto University

AS40-D5-AM2-302-003 | AS40-A016 (Invited)

Large-scale Environmental Conditions Related to Midsummer Extreme Rainfall Events Around Japan in the TRMM Region Atsushi HAMADA¹⁸⁺, Yukari TAKAYABU²

¹Graduate School of Science and Engineering, University of Toyama, ²The University of Tokyo

AS40-D5-AM2-302-004 | AS40-A018

A Study on Effects of an Upper-tropospheric Trough on the Heavy Rainfall Event in July 2018 over Japan Chie YOKOYAMA^{1#+}, Hiroki TSUJI¹, Yukari TAKAYABU¹ ¹The University of Tokyo

AS40-D5-AM2-302-005 | AS40-A017

Heavy Rain Event of July 2018: Development of Precise Hourly Precipitation Data and Analysis of Moisture Flow Akiyo YATAGAI^{1#+}, Minami MASUDA¹, Naho SUETO¹, Kotaro

Akiyo YATAGAI^{1*+}, Minami MASUDA¹, Naho SUETO¹, Kotaro MINAMI¹

¹Hirosaki University

AS13 / Passive and Active Sensing of the Chemistry and Dynamics of the Middle and Upper Atmosphere

Fri - 02 Aug | MR301

Chair(s) Iain REID, ATRAD Pty Ltd Patrick ESPY, Norwegian University of Science and Technology

AS13-D5-AM2-301-001 | AS13-A001

The Daili (Daily Atmosphere and Ionosphere Limb Imager) Cubesat Mission

James HECHT^{1#+}, Lynette GELINAS¹, David HINKLEY¹, Richard WALTERSCHEID¹, Jeng-Hwa YEE², Andrew CHRISTENSEN¹, Stanley SOLOMON³, G. CROWLEY⁴

¹The Aerospace Corporation, ²The Johns Hopkins University Applied Physics Laboratory, ³National Center for Atmospheric Research, ⁴Atmospheric & Space Technology Research Associates

AS13-D5-AM2-301-002 | AS13-A020

Whole Atmosphere Observation over Tibet with APSOS System – Recent Progress

Daren LYU^{1,2#+}, Weilin PAN³, Yinan WANG³, Yufang TIAN^{1,2} ¹Institute of Atmospheric Physics, Chinese Academy of Sciences, ²University of Chinese Academy of Sciences, ³Chinese Academy of Sciences

AS13-D5-AM2-301-003 | AS13-A022

Application of Zeeman Technique to Remotely Sense Auroral Electrojet Structure from Space Jeng-Hwa YEE¹⁸⁺, Jesper GJERLOEV¹ ¹The Johns Hopkins University Applied Physics Laboratory

AS13-D5-AM2-301-004 | AS13-A017

New Self-consistent Multi-channel Analysis of Saber/Timed OH(V) and CO2(V) Nighttime Emissions Peter PANKA^{1#+}, Alexander KUTEPOV¹, Artem FEOFILOV², Ladislav REZAC³, Diego JANCHES¹, Konstantinos KALOGERAKIS⁴, Dan MARSH⁵

¹NASA Goddard Space Flight Center, ²Ecole Polytechnique, ³Max Planck Institute for Solar System Research, ⁴SRI International, ⁵University Corporation for Atmospheric Research

SE14 / Active Tectonics, Faults and Large Fast & Slow Earthquakes

Fri - 02 Aug | Nicoll 1

Time11:00-12:30Chair(s)Sushil KUMAR, Wadia Institute of Himalayan Geology

SE14-D5-AM2-Nicoll 1-001 | SE14-A006 (Invited)

Active Faults Mapping in Afghanistan Using Stereo Images Based on SRTM Data

Zakeria SHNIZAI^{1#+}, Hiroyuki TSUTSUMI¹, Takashi NAKATA² ¹Doshisha University, ²Hiroshima University

SE14-D5-AM2-Nicoll 1-002 | SE14-A019 (Invited)

Can Metasomatism-related Viscous Shear Explain Slow Slip Events in Subduction Zones?

Kohtaro UJIIE^{1#+}, Kazuya NORO¹, Norio SHIGEMATSU², Ake FAGERENG³, Naoki NISHIYAMA¹, Christopher TULLEY³, Haruna MASUYAMA¹, Yasushi MORI⁴

¹University of Tsukuba, ²National Institute of Advanced Industrial Science and Technology, ³Cardiff University, ⁴Kitakyushu Museum of Natural History and Human History

SE14-D5-AM2-Nicoll 1-003 | SE14-A021 (Invited)

Machine Learning and Wireless Sensor Networks for Earthquake Data Analysis in Real Time

Rama SUSHIL¹⁺⁺, Sandip MANDAL², Ajay KUMAR², Moumita GHOSH², Rashmi RAMA SUSHIL³, Sushil KUMAR⁴, Rupak CHAKRABORTY², Tejpal SINGH⁵

¹DIT University, ²Assistant Professor, ³Pantnagar University, ⁴Wadia Institute of Himalayan Geology, ⁵CSIR-Central Scientific Instruments Organisation

SE14-D5-AM2-Nicoll 1-004 | SE14-A007

The Naga-Tripura-Arakan Subduction Zone and Intraslab Earthquakes in Myanmar Hla Hla AUNG^{1#+} ¹Myanmar Earthquake Committee

SE14-D5-AM2-Nicoll 1-005 | SE14-A012

The Impact of Neo-tectonic Activities on the River System in South Central Vietnam

Nam NGUYEN XUAN^{1‡+}, Hai Thanh TRAN², Do Tu Ngo HOANG³

¹Vietnam Institute of Geosciences and Mineral Resources, ²Hanoi University of Mining and Geology, ³Hue University of Sciences

SE14-D5-AM2-Nicoll 1-006 | SE14-A005

Source Parameters and Moment Tensors of the February 06 2017 Mw5.7 Garhwal Himalaya, Earthquake, India

Sushil KUMAR^{1#+}, Mahesh PARIJA², Shubhasmita BISWAL³, Arkoprovo BISWAS⁴, Narendra KUMAR¹, Parveen KUMAR¹, Chhavi Pant PANDEY¹, Harish C. PANDEY¹, Sandeep CHABAK¹, Ajay PAUL¹, Rama SUSHIL⁵, Chandra SHEKHAR⁶, Priyam Vada SINGH⁷

¹Wadia Institute of Himalayan Geology, ²CSIR-National Geophysical Research Institute, ³Indian Institute of Technology Kharagpur, ⁴Banaras Hindu University Varanasi, ⁵DIT University, ⁶Birla Institute of Technology & Science, Pilani, ⁷University of Allahabad

BG11 / Biogeosciences General Session

Fri - 02 Aug | MR300

Time 11:00-12:30

Chair(s) Punyasloke BHADURY, Indian Institute of Science Education and Research Kolkata Bhoopesh MISHRA, University of Leeds

BG11-D5-AM2-300-001 | BG11-A023 (Invited)

Understanding the Microplastic Pollution and Ingestion by Marine Zooplankton in the Arabian Sea Prasun GOSWAMI^{1*+}, Nambali Valsalan VINITHKUMAR¹, Gopal DHARANI¹

¹National Institute of Ocean Technology

BG11-D5-AM2-300-002 | BG11-A026 (Invited)

Virus Production and Viral Lysis in Tropical Coastal Waters of Peninsular Malaysia

Stanley Choon Yip CHAI¹, Choon Weng LEE^{1‡+}, Chui Wei BONG¹, Joon Hai LIM¹, Edmund Ui Hang SIM², Kumaran NARAYANAN³

¹University of Malaya, ²University Malaysia Sarawak, ³Monash University Malaysia

BG11-D5-AM2-300-003 | BG11-A017

Inter-annual Variability in Phytoplankton Community Structure in the Central Arabian Sea During Southwest Monsoon of 2017 and 2018

Mintu CHOWDHURY^{1#+}, Haimanti BISWAS¹, Diksha SHARMA¹, Saumya SILORI¹, Veronica FERNANDES¹, Jayu NARVEKAR¹, Debosmita BANDYOPADHYAY², Aziz ur Rahman SHAIK³

¹National Institute of Oceanography, ² Integrated Coastal and Marine Area Management Project Directorate, ³National Institute of Ocean Technology

BG11-D5-AM2-300-004 | BG11-A025

Assessment of Phosphorus Mass Balance in a Deep Hypertrophic Reservoir for Water Supply of Mexico City Metropolitan Area Arantxa SACRISTÁN-RAMÍREZ¹⁵⁺

¹National Autonomous University of Mexico

ST25 / Turbulence and Particle Energization in Space, Astrophysical and Laboratory Plasmas Fri - 02 Aug | MR309

Time 11:00-12:30

Chair(s) Jiansen HE, Peking University

ST25-D5-AM2-309-001 | ST25-A016 (Invited)

Signatures of Alfven-mode and Slow-mode Waves and Non-propagating Structures in 3D Compressive MHD Turbulence

Li-Ping YANG^{1*+}, Hui Ll², Shengtai Ll², Lei ZHANG³, Jiansen HE⁴, Xueshang FENG³ ¹National Space Science Center, ²Los Alamos National Laboratory, ³Chinese Academy of Sciences, ⁴Peking University

ST25-D5-AM2-309-002 | ST25-A012 Ion Scale Plasma Turbulence Upstream and Downstream of the

Earth's Bow Shock Liudmila RAKHMANOVA^{1#+}, Maria RIAZANTSEVA¹, Georgy ZASTENKER¹, Yuri YERMOLAEV¹ ¹Russian Academy of Sciences

ST25-D5-AM2-309-003 | ST25-A007

Observations of Turbulence in Magnetic Reconnection Region Kui JIANG¹^{#*}, Shiyong HUANG¹, Zhigang YUAN¹, Xiaohua DENG¹ ¹Wuhan University

ST25-D5-AM2-309-004 | ST25-A017

Chaos-induced Resistivity in Collisionless Magnetic Reconnection Zhen WANG^{1#+} ¹Chinese Academy of Sciences

IG15 / Data-driven Modeling in Geoscience

Fri - 02 Aug | MR323

 Time
 11:00-12:30

 Chair(s)
 Dmitri KONDRASHOV, University of California, Los Angeles

 Shin-ichi ITO, The University of Tokyo

IG15-D5-AM2-323-001 | IG15-A013

Bayesian Inference and Forecast for Recurrent Earthquakes with Uncertain Occurrence Dates Shunichi NOMURA¹⁺⁺, Yosihiko OGATA¹ ¹The Institute of Statistical Mathematics

IG15-D5-AM2-323-002 | IG15-A019

Radon Dynamic in Soil and a Series of Earthquakes in Chiba Prefecture, Japan: Is There an Association? Miroslaw JANIK^{1*+}, Peter BOSSEW², Giorgia CINELLI³ ¹National Institute of Radiological Sciences, ²German Federal Office for Radiatiion Protection (BfS), ³European Commission

IG15-D5-AM2-323-003 | IG15-A006

Bayesian Inference of Grain Growth Prediction via Multi-phase-field Models Shin-ichi ITO¹⁵⁺, Hiromichi NAGAO¹, Takashi KUROKAWA¹, Tadashi KASUYA¹, Junya INOUE¹ ¹The University of Tokyo

IG15-D5-AM2-323-004 | IG15-A012

An Adjoint-based Simultaneous Estimation Method of the Upper Mantle Viscosity and Afterslip Using Finite Element Modeling

Ryoichiro AGATA^{1#+}, Tsuyoshi ICHIMURA², Takane HORI¹, Kazuro HIRAHARA³, Chihiro HASHIMOTO⁴, Muneo HORI¹ ¹Japan Agency for Marine-Earth Science and Technology, ²The University of Tokyo, ³RIKEN, ⁴Nagoya University

IG15-D5-AM2-323-005 | IG15-A002

Estimation of Material Transfer from Compositional Dataset Using Sparse Modeling

Tatsu KUWATANI¹^{**}, Kenta YOSHIDA¹, Kenta UEKI¹, Ryosuke OYANAGI¹, Masaoki UNO², Shotaro AKAHO³

¹Japan Agency for Marine-Earth Science and Technology, ²Tohoku University, ³National Institute of Advanced Industrial Science and Technology

IG15-D5-AM2-323-006 | IG15-A003

Feature Selection of Magmatic Tectonic Settings Based on Sparse Multinomial Regression Kenta UEKI^{1‡+}, Hideitsu HINO², Tatsu KUWATANI¹

¹Japan Agency for Marine-Earth Science and Technology, ²The Institute of Statistical Mathematics

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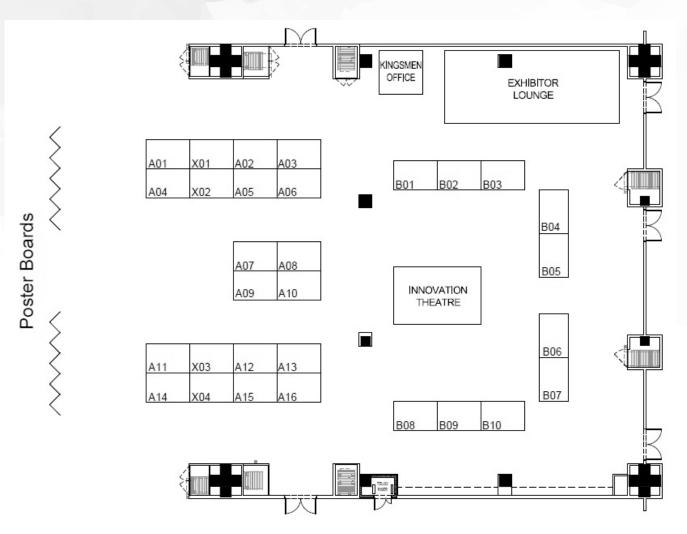
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ZOU, Bin OS19-D4-PM1-P-111, M172 OS19-D4-PM1-P-112, M172 OS19-D4-PM1-P-113, M173 OS19-D4-PM1-P-114, M173 ZOU, Haibo AS14-D3-PM1-P-068, M124 ZOU, Shan HS10-D5-AM1-329-006, M187 ZOU, Shasha ST08-D2-PM1-P-243, M84 ST30-D4-AM1-308-007, M138 ZOU, Xiaojuan HS07-D4-AM1-329-004, M140 ZU, Tingting OS11-D2-AM2-302-005, M58 ZUCCARRELO, Luciano SE28-D5-AM2-Nicoll 2-006, M192 ZULFAKRIZA, Zulfakriza SE02-D1-PM1-302-003, M24 SE02-D1-PM1-302-005, M24 SE12-D4-PM1-P-196, M177 ZULFIAH, Zulfiah IG13-D1-PM1-323-003, M26 SE09-D3-AM1-327-002, M99 ZUO, Pingbing ST27-D3-AM1-309-005, M102 ZUO, Xiaomin ST32-D2-PM1-P-371, M90 ZWIERS, Francis AS05-D2-AM1-308-001, M47

GEOMEET



General Information

Exhibition Location

SUNTEC Singapore, Level 3

Exhibitor Registration Sun - 28 Jul, from 14:00

Mon - 29 Jul to Fri - 02 Aug, from 08:00

Booth Dressing Mon - 29 Jul, 15:00 - 18:00

Exhibition Opens / Welcome Reception: Mon – 29 Jul, from 18:30

Exhibition Hours

Mon - 29 Jul, from 18:30 - 20:30 Tue - 30 Jul to Thu - 01 Aug, 10:00 - 18:00 Fri - 02 Aug, from 10:00 - 16:00

Innovation Theatre

Mon - 29 Jul, 18:45 - 19:15 / 19:30 - 20:00 Tue - 30 Jul to Thu - 01 Aug, 10:30 - 11:00 / 15:30 - 16:00

Tear Down/Ship-Out

Fri - 02 Aug, Latest by 19:00

Exhibitors

Organization	Booth
LI-COR Biosciences	A01
Royal Society Publishing	A02
National Institute of Information and Communications Technology	A03
European Geosciences Union	A04
Japan Geoscience Union	A05
Earth Observatory of Singapore	A06
NASA	A07 – A10
Earth Science Research Promotion Center & TAO Journal	A11
COSPAR 2020	A12
METER Group, Inc. USA	A13
Earthquake Disaster & Risk Evaluation and Management Center (E-DREaM) & Center for Astronautical Physics and Engineering (CAPE)	A14
36Th International Geological Congress 2020, New Delhi, India	A15, X04
Springer Nature	A16

Organization	Booth
Picarro, Inc	B01
AOGS Infinity	B02
Beta Analytic, Inc	B03
Belmont Forum	B04
Dynamic Technologies DTCC	B05
Nanometrics Inc	B06
Gangwon Convention & Visitors Bureau	B07
Kinemetrics, Inc	B08
Melbourne Convention Bureau	B09
Korean Meteorological Society	B10
Fukuoka Convention & Visitors Bureau	X02
Taiwan Earthquake Research Center	X03

Innovation Theatre

The **"Innovation Theatre"** is for AOGS attendees to watch some of our Exhibitors and Sponsors showcase their products and services. It is to share knowledge about crucial developments in their products.

Mar. 20 Inl 2010	18:45 to 19:15	Earth Science Research Promotion Center & TAO Journal	See also page B3
Mon-29 Jul 2019	19:30 to 20:00	Taiwan Earthquake Research Center	See also page B4
Tue-30 Jul 2019	10:30 to 11:00	METER Group, Inc. USA	See also page B5
106-20 301 2019	15:30 to 16:00	Nanometrics Inc	See also page B6
Wed 21 Ivi 2010	10:30 to 11:00	Springer Nature	See also page B6
Wed-31 Jul 2019	15:30 to 16:00	Dynamics Technologies DTCC	See also page B7
Thus 01 Aver 0010	10:30 to 11:00	LI-COR Biosciences	See also page B7
Thu-01 Aug 2019	15:30 to 16:00	National Institute of Information and Communications Technology	See also page B8
Fri-02 Aug 2019	10:30 to 11:00	Gangwon Convention & Visitors Bureau	See also page B9

EXHIBITORS

Booth A06 Earth Observatory of Singapore

50 Nanyang Avenue, N2-01a-14, Nayang Technological University, Singapore



Tel: +65 6514 8977 Email: jantoinette@ntu.edu.sg Web: https://www.earthobservatory.sg

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 at 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.

Booth A11

Earth Science Research Promotion Center & TAO Journal

No. 300, Zhongda Rd., Zhongli District, Taoyuan City 32001, Taiwan (R.O.C.)





Tel: +886 3 4276264 Fax: +886 3 4227443 Email: esrpc@ncu.edu.tw Web: 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.

Innovation Theatre

Mon - 29 Jul, 18:45 - 19:15

"Integrating Geophysical Data for Building the Apparent Geological Models"

Ping-Yu CHANG, Dept. of Earth Sciences/ EDREaM Center, National Central University

We used the resistivity measurements to establish threedimensional (3D) hydrogeological apparent models. Core records from the monitoring wells in the area were used for the training data to help determining the resistivity ranges of the gavel, sand, and muddy sediments in the fan-delta. The resistivity measurements were inverted and converted into 1-D data form and interpolated for rendering a three dimensional resistivity volume that represents the general resistivity distribution in the fan-delta systems. Water resistiviy data from the observation wells were used for calculating the formation factors (FI) within the models. We compared the FIs with indexed core records near some of the resistivity surveys sites and concluded the range of the FIs for different materials in a statistical sense. Lastly we transfer the resistivity models into the gravel-sand-clay geological models with the computed formation factors. Since the spatial distribution of non-invasive resistivity measurements is more dense than the locations of geological cores. These "apparent" models are better to represent the detailed sedimentary structures than the traditional over-simplified conceptual models built from only the correlations of core records. Hence we are able to quickly construct the 3D discretized apparent models with three geologic materials for further modeling purposes.

"Reconstructing the Tsunami Sources of 2018 Palu Tsunami Event"

Tso-Ren WU, Graduate Institute of Hydrological and Oceanic Sciences, National Central University

The tsunami in the event of 2018 Sulawesi earthquake and tsunami (SET) occurred after an earthquake of magnitude 7.5. However, it is very difficult for such an earthquake to trigger a tsunami with 10-m flood depth. The causes of this tsunami event remain unknown. A submarine landslide, an additional seabed vertical displacement, and seiche effect may play roles. To gain a deeper understanding of this tsunami event, finding the location of the tsunami source is especially important. We developed two new tsunami analysis methods, impact intensity analysis method (IIA) to analyze the tsunami source in the SET event. The IIA method can quickly filter out the areas with low impacts of the tsunami sources and effectively reduce the number of tsunami scenarios. In this study, we perform different scenarios by simulating the tsunamis generated by the earthquake, seiche, and in-the-bay landslides. The earthquake scenario results show that the wave height contributed by the earthquake is less than 0.3 m, which is far away from the field survey. The IIA is then used to reduce the number of the scenarios. From both of the IIA results of Palu and Pantoloan, the possible tsunami sources are located either inside the Palu Bay or around the bay mouth. Based on the tidal gauge data at Pantoloan and the tsunami arrival time from BMGK, the precise location of the tsunami source is spotted. We further created several scenarios which satisfied most of the data we collected, such as the Pantoloan gauge record, Palu inundation area, and flooding depth from the field survey along the Palu Bay. The detailed results will be presented in the full paper.

Booth A07 – A10 NASA

NASA Goddard Space Flight Center, Building 33, Room E112Greenbell, MD 20771.



Tel: +1 301 614 5560 Fax: +1 301 614 6530 Email: winnie.h.humberson@nasa.gov Web: <u>https://www.nasa.gov/</u>

Come to the NASA booth at AOGS and meet the scientists using NASA's latest science data sets to help address natural hazards in Asia, Oceania, and around the world! NASA's Hyperwall will showcase a range of captivating, ultra-high resolution data visualizations to highlight some of NASA's most recent science discoveries.

NASA Hyperwall Science Stories

NASA Hyperwall will showcase the most exciting and latest science discoveries with subject experts here to story tell the science.

Visit the NASA booth or announcement boards for details on the science stories and their presenters.

Booth X03

Taiwan Earthquake Research Center

128, Sec.2, Academia Road, Nangang, Taipei 11529, Taiwan



Tel: +886 2 27839910 Fax: +886 2 27839871 Email: tec@earth.sinica.edu.tw Web: 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

Mon - 29 Jul, 19:30 - 20:00

"Innovative Earthquake Science and Technologies Developed in Taiwan: Taiwan Earthquake Research Center (TEC) and Earthquake- Disaster & Risk Evaluation and Management (E-DREaM) Center"

Wen-Tzong LIANG, Taiwan Earthquake Research Center, Institute of Earth Sciences, Academia Sinica

Chung-Han CHAN, Earthquake- Disaster & Risk Evaluation and Management (E-DREaM) Center, National Central University Earth Observatory of Singapore, Nanyang Technological University

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). 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. The P-Alert, a MEMS accelerometer 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 a threshold. 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 improves our understanding of Taiwan earthquake mechanisms and therefore provide new insight into seismic hazard and risk assessments for Taiwan. We continued the effort to publish the state of the art science-based hazard model of Taiwan on the basis of the Probability of Seismic Hazard Assessment (PSHA) approach. The establishment of Earthquake- Disaster & Risk Evaluation and Management (E-DREaM) Center in National Central University, Taiwan, in 2018, built in the accessible seismic hazard information through developing App, and provided deep in sight to industrial partners for seismic hazard and risk management.

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. Through the inter-collaborated work among, TEC, TEM and E-DREaM, we built the bridges from science to community and to industrial partners for earthquake prone region of Taiwan.

Booth A13 METER Group, Inc. USA 2365 NE Hopkins Ct. Pullman, WA 99163



Tel: +1 509 332 2756 Fax: +1 509 332 5158 Email: sandra@metergroup.com Web: www.metergroup.com

METER

METER specializes in advanced IoT measurement systems where all data are connected and delivered to the cloud in near-real time. Discover innovative research solutions like ultra-robust soil moisture sensing, all-in-one weather monitoring, simplified data logging, intuitive data visualization software, automated particle size analysis, and more at our booth #A-13.

Innovation Theatre Tue - 30 Jul, 10:30 - 11:00

"Cloud-Based Automatic Weather Stations for Geospatial Climate Mapping." Matt GALLOWAY, METER Group

As human populations grow and with the advent of climate change, there is an increasing need to have more localized and accurate weather and climate data. Traditional municipal and regional weather stations are often sparsely located and therefore don't provide enough useful data for localized accurate climate modelling or irrigation scheduling. METER's low-cost ATMOS 41 automated weather station allows researchers to accurately monitor the climate in more areas, including remote locations that don't have mains power. Paired with METER's cloud-connected, solar-powered ZL6 data logger, the ATMOS 41 gives you near real-time climate data, and it has no moving parts, which means fewer maintenance problems.

The ZENTRA Cloud data visualization platform lets you view all your weather stations on a map at any place you have an internet connection. ZENTRA Cloud also processes and graphs the data for you, saving valuable time. This presentation will highlight some existing weather networks in both the USA and Africa who use the ATMOS 41 automated systems, as well as the ZENTRA Cloud platform that enables researchers to visualize and collaborate in near-real time with the data collected from these stations.

AOGS Partner Societies Booth A05 Japan Geoscience Union (JpGU)

Email: shirai@jpgu.org Web: http://www.jpgu.org/en/index.html



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. The JpGU also

publishes a peer-reviewed open access e-journal, Progress in Earth and Planetary Science (PEPS) in partnership with SpringerOpen.

Booth A04 European Geosciences Union (EGU) Email: executive-secretary@egu.eu

Web: https://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.

Booth B01 Picarro, Inc

3105 Patrick Henry Drive Santa Clara CA 95054 USA

PICARRO

Tel: +1 408 4600688 Email: gabhun2015@gmail.com Web: <u>www.picarro.com</u>

Picarro gas analyzers and systems enables scientists around the world to measure GHGs, trace gases and stable isotopes found in the air we breathe, water we drink and land we harvest. The ultra-precise and easy-to-use instruments are deployed across the globe offering unmatched performance in a variety of field conditions.

Booth B08

Kinemetrics, Inc.

222 Vista Avenue Pasadena, CA 91107 USA



Tel: +1 626 795 2220 Fax: +1 626 795 0868 Email: lani@kmi.com Web: www.kinemetrics.com

Kinemetrics is the world leader in the innovative design, quality manufacturing and timely supply of earthquake monitoring equipment, systems and solutions, where reliability, flexibility and cost effectiveness are important. Kinemetrics has 48 years of experience in providing seismologists and structural engineers with the highest standard instrumentation www.kinemetrics.com "Advancement Through Innovation"

Booth A14

Earthquake-Disaster & Risk Evaluation and Management Center (E-DREaM) & Center for Astronautical Physics and Engineering (CAPE) Room 409, Kwoh-Ting Library and Archives , No. 300, Zhongda Rd., Zhongli District, Taoyuan 32001



Tel: +886 921016544 Email: lastkie@gmail,com Web: <u>https://e-dream.tw</u>

E-DREaM center transforms the techniques acquired from the research on seismic hazards and earthquake-induced compound disasters to the practices of risk assessment and management extracted from industries. CAPE is an all-inone university space center designing and operating small satellites and science payloads. The center is actively researching and developing spacecraft systems, components, and sensors, as well as operations and flight control capacity.

Booth B03 Beta Analytic, Inc 4985 SW 74th Court Miami, Florida 33155



Beta Analytic

Tel: +1 305 667 5167 Email: advertising@betalabservices.com Web: https://www.radiocarbon.com/

ISO 17025-accredited Beta Analytic is a dedicated radiocarbon dating laboratory with standard turnaround time of 14 business days for its AMS Dating service. Expedited services are available (2-6 business days). All analyses are performed in-house. Respected worldwide for accuracy, quality, and customer care. Results are accessible 24/7 via web access.

Booth A16 Springer Nature

Rm 408-409, Beijing Ideal Plaza, 58 Northwest 4th Ring Road, Haidian District 100080

SPRINGER NATURE

Tel: +86 10 83415000 Email: bo.niu@springernature.com Web: http://www.springernature.com/

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.

Innovation Theatre

Wed - 31 Jul, 10:30 - 11:00

"Topical Collections – How To?"

Jan MARGULIES, Springer Nature

Topical collections are very important for journals to attract readers but also authors that can cite the articles published in collections. They summarize the current research or give a deeper insight on a specific topic. The visibility of the topic, the journal and the authors of the collection are getting increased. But what are the differences between topical collections, special issues and article collections? How can an idea for a topical collection become a published collection? Where can I find help to found an open access topical collection? That will be topics included in the presentation. Booth B06 Nanometrics, Inc 250 Herzberg City, Kanata K2K 2A1, Canada



Tel: +1 613 592 6776 Email: alyssaparks@nanometrics.ca Web: <u>http://www.nanometrics.com/</u>

For over 30 years, Nanometrics has provided awardwinning 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.

Innovation Theatre

Tue – 30 Jul, 15:30 – 16:00

"Pegasus Data Acquisition"

Alastair FENWICK, Nanometrics

Pegasus Data Acquisition System - a Revolutionary New Ecosystem for Portable Monitoring Campaigns

This presentation will demonstrate how the new Pegasus is an intuitive and versatile data acquisition system covering the full spectrum of portable applications from long term broadband to full waveform, full wavefield imaging. Deliberately designed with every modular component thoughtfully integrated to provide the most intuitive experience, every aspect of the Pegasus ecosystem is optimized for simplicity and ease-of-use ensuring the highest possible data quality and availability from even the most demanding project environment.

Class-leading power consumption allows everything about the Pegasus platform to be small, lightweight and modular. The exceptionally low power consumption significantly reduces battery requirements, overall station size and weight allowing for the efficient deployment of more stations for a longer period of time. The modular nature opens up broad choices in battery chemistry and sensor technologies, facilitating transport logistics and matching station design to the needs of the science. Flexible and modular, the Pegasus digital recorder supports single, dual or 3-component analog sensors including: meteorological sensors, broadband seismometers, microbarometers, geophone sensors and strong motion accelerometers.

The presentation will also show how the Pegasus ecosystem is simple to deploy, service and data are easy to recover, whether you are working with a handful of units or many hundreds. Data recovery is via lightning-fast USB 3.0, where one month of ready-to-process MiniSEED data, StationXML metadata and comprehensive project audit information, including merging ancillary data, can be seamlessly downloaded in under 10 seconds. Pegasus is the only system that can scale to meet the Large-N challenge.

Booth B05 Dynamic Technologies DTCC

403, Building D, No.15 South of Ronghua Road, BDA, Beijing, 100176, China



Tel: +86 10 60844158 Fax: +86 10 87220112 Email: anne_li@dtcc.asia Web: <u>www.dtcc.biz</u>

The DTCC Group was formed in 1999, with its headquarters located in Calgary, Canada. It is a manufacturer of vibration sensing and measuring equipment. DTCC has developed the SmartSolo intelligent seismic sensor to provide the industry with a solution to balance the requirement to keep project costs under control.

Innovation Theatre

Wed - 31 Jul, 15:30 - 16:00

"High Reliability, High Uniformity Seismic Nodes" Dongning ZHAO, Dynamic Technologies (DTCC)

Super reliable SmartSolo sensor features low frequency performance, smaller crew size, less man power, and simpler equipment.

High-quality seismic data are derived from high-quality seismic sensors. DT-SOLO's high-sensitivity geophone is specially designed for single point receiver applications. It is well known to the seismic industry as the top-quality high-sensitivity geophone and is widely used by major contractors and equipment manufacturers.

Booth B10

Korean Meteorological Society

1510 Renaissance Tower Bldg., 14, Mallijae-ro, Mapo-gu, Seoul 04195



Tel: +82 2 835 1619 Fax: +82 2 849 1541 Email: komes@komes.or.kr Web: http://www.komes.or.kr/

The Korean Meteorological Society (KMS) has been devoted to improve our understanding of earth's environment with a particular focus on atmospheric sciences, climate, and events caused by severe weather, climate change, and air pollution. The KMS publishes both international and domestic peer-reviewed journals, 'Asia-Pacific Journal of Atmospheric Sciences' and 'Atmosphere'.

Booth A01 LI-COR Biosciences 4647 Superior Street Lincoln, NE 68504 USA



Tel: +1 402 467 0742 Fax: +1 402 467 0805 Email: gloria.lekai@licor.com Web: https://www.licor.com/env/

Visit LI-COR's booth (A01) to see the latest instrumentation for environmental research. LI-COR instruments include high-precision laser-based trace gas analyzers, light and radiation sensors, eddy covariance gas exchange measurement systems, soil gas flux measurement systems, and photosynthesis measurement systems based on gas exchange and chlorophyll fluorescence.

Innovation Theatre

Thu - 01 Aug, 10:30 - 11:00

"New High-Precision CO2 and CH4 Analyzers For Multiple Applications"

Richard GARCIA, LI-COR Inc.

LI-COR Biosciences manufactures instrumentation for environmental research, including systems that measure greenhouse gas emissions from soils. In 2018, LI-COR released two new laser-based, high precision analyzers for greenhouse gas measurements - the LI-7810 CH₄/CO₂/H₂O Gas Analyzer and LI-7815 CO₂/H₂O Gas Analyzer. The analyzers incorporate Optical Feedback – Cavity Enhanced Absorption Spectroscopy (OF-CEAS), in a design and implementation allowing them to be used in a multitude of methods and approaches including the following:

- Long-term and survey soil flux chamber measurements, including both CH4 and CO2 from the same CH4/CO2/H2O gas analyzer.
- Approaches relying on very high precision CH₄ concentrations, encompassing those often employed by WMO-GAW and EPA communities.
- Micrometeorological tower methods relying on relatively slow but well-resolved CH4 concentrations.
- Distributed Sensors techniques.
- Mobile monitoring, including measurements from various moving platforms.

The technology aims to provide WMO-quality measurements of CH_4 , CO_2 and other gases with a time response of 1 Hz, the power consumption of 25 W, and with high precision and stability over time. They can integrate into long-term monitoring stations, or be used in chamber-based soil flux applications.

This presentation will describe key instrument principles and elements of the design, and show laboratory and field results on CH₄ and on CO₂ from the new LI-7810 CH₄/CO₂/H₂O Gas Analyzer and LI-7815 CO₂/H₂O Gas Analyzer. This includes an introduction to the technology behind the instruments, as well as data including mean

atmospheric concentrations tests, long-term soil flux measurements and survey soil flux measurements.

Booth A03 National Institute of Information and Communications Technology

4-2-1, Nukui-kita, Koganei, Tokyo, 184-8795, Japan



National Institute of Information and Communications Technology

Tel: +81 42 327 7429 Email: nakayama-kenji@nict.go.jp Web: <u>http://www.nict.go.jp/en/</u>

As Japan's sole National Research and Development Agency specializing in the field of information and communications technology, the National Institute of Information and Communications Technology (NICT) is charged with promoting ICT sector as well as research and development in ICT, which drives economic growth and creates an affluent, safe and secure society.

Innovation Theatre

Thu - 01 Aug, 15:30 - 16:00

"The Activity of Asia-Oceania Space Weather Alliance (AOSWA)"

Mamoru ISHII, Space Environment Laboratory, NICT

AOSWA has established on 2010 for information exchange among space weather organizations in Asia Oceania region. Now 27 organizations from 13 countries and regions are participated in AOSWA. We have five face-to-face meeting in Thailand, China, Japan, Korea and Indonesia since 2012 for discussing data sharing, research to operation for improving space weather research activities.

The purpose of this group is to share the information of space weather Research and Development and build cooperative project for improving research and operation for space weather forecast. We already have some fruitful result under the umbrella of AOSWA; Japan, Korea and Taiwan discuss oblique sounding observation network for ionosphere in East Asia.

In this presentation, we would like to introduce the AOSWA and its members' activities, and some examples of cooperation for encouraging to join us.

Booth B09 Melbourne Convention Bureau

727 Collins Street, Melbourne VIC, 3008



Tel: +61 3 9002 2331 Email: olivia.buck@melbournecb.com.au Web: www.aogs2022melbourne.com

Melbourne, Australia is bidding to host the Annual Meeting of the Asia Oceania Geosciences Society in 2022. We are confident that a meeting in our city will be very successful and offer great outcomes for scientists globally.

Booth B02 AOGS Infinity

#06-23, ONE COMMONWEALTH, 1 Commonwealth Lane, Singapore 149544



Tel: +65 6472 3108 Email: admin@asiaoceania.org Web: http://www.asiaoceania.org/ society/public.asp?view= office_bearer_rac#RAC

Not long ago, a prominent Indian scientist said: "Science is global while technology is local". This is definitely true as shown by the expansion of AOGS among the Asian-Pacific scientific community. This is because geoscience must be conducted in the spirit of interdisciplinary and intraboundary partnership. To learn more and to exchange information on how to strengthen the regional cooperation among different research groups and institutions, whether east and west or south and north, please stop by the "AOGS Infinity" Exhibition Booth anytime. Your participation will allow AOGS to promote further the advances of geoscience and technology in our region.

Booth X02

Fukuoka Convention & Visitors Bureau

2-5-31, Daimyo, Chuo-ku, Fukuoka, 810-0041



Tel: +81 92 733 0101 Fax: +81 92 733 3100 Email: nagasawa@welcome-fukuoka.or.jp Web: https://www.welcome-fukuoka.or.jp/english/

Fukuoka offers a wonderful balance of modern city life and traditional Japanese culture. It is a flourishing, thriving city with outstanding local hospitality, conference facilities and infrastructure. Fukuoka Convention & Visitors Bureau offers a 'One-stop service' for event organizers. Enjoy warm hospitality and have unique experiences in Fukuoka, Japan.

Booth B07

Gangwon Convention & Visitors Bureau 24239 11, Subyeongongwon-gil, Chuncheon-si, Gangwon-do



Tel: +82 33 249 4455 Fax: +82 33 251 5495 Email: chlee@visitgangwon.or.kr Web: <u>visitgangwon.or.kr</u>

AOGS 2020 HOST CITY GANGWON! Gangwon Province is poised to be the number one tourist attraction in Korea, as it is blessed with a magnificent natural environment and world-class resorts.

Innovation Theatre

Fri – 02 Aug, 10:30 – 11:00

Booth B04 Belmont Forum

Av. Italia 6201, Ed. Los Tilos 102, Montevideo, Uruguay 11500

Tel: +886 2 3366 3488 Fax: +886 2 3366 1702 Email: erica.key@belmontforum.org Web: http://www.belmontforum.org/

Established in 2009, the Belmont Forum (BF) is a global partnership platform that brings together funding and providers support transdisciplinary, resource to transnational approaches to global environmental change. The primary instrument of support is through Collaborative Research Actions (CRAs), which are international requests for proposal. Examples of CRA themes include freshwater security, coastal vulnerability, biodiversity and ecosystem services, climate-environmenthealth, food-water-energy nexus, and food security. In total, the Belmont Forum has launched 17 international funding opportunities that have supported over 100 projects, bringing together more than 1000 natural scientists, social scientists and humanities experts, working collaboratively with a diversity of stakeholders. Working across knowledge systems and international borders, these projects have transformed policy and practice to help meet the Belmont Forum Challenge: understanding, mitigating, and adapting to global environmental change. In this, our 10th anniversary year, we reflect on these accomplishments and lessons learned and seek input on how to evolve and meet the needs of the next 10 years.

Booth A15, X04 36Th International Geological Congress 2020, New Delhi, India MadanGir Road, New Delhi 110062



Tel: +91 9968213437 Email: himangshu1970@gmail.com Web: <u>http://36igc.org</u>

The 36th International Geological Congress 36 IGC), Themed "Geosciences: The Basic Science for a Sustainable Future" will be held during 2-8 March, 2020 at the India Expo Mart Ltd., Greater Noida. Delhi NCR, INDIA. It is funded by the Ministry of Mines and Ministry of Earth Sciences, Government of India. with the active scientific support from the Indian National Science Academy, and the Science Academies of Bangladesh, Nepal, pakistan and Sri Lanka

Booth A12 COSPAR 2020

Level 9, 234 George Street Sydney NSW, 2000



Tel: +61 29254 5000 Email: emmab@icmsaust.com.au Web: <u>www.cospar2020.org</u>

COSPAR 2020 is the largest gathering of space scientists in the world. The mission of the Scientific Assembly is to promote research in space on an international level, whilst providing an open forum for discussion with an emphasis on results, information and opinions. Come and see us at booth A12 today!

Booth A02 Royal Society Publishing

6-9 Carlton House Terrace, London SW1Y 5AG



Tel: +44 207 451 2500 Email: bailey.fallon@royalsociety.org Web: https://royalsociety.org/journals/

The Royal Society publishes ten journals, including three covering all areas of the physical, mathematical and engineering sciences.

IMPORTANT CONTACTS

Information and Assistance

AOGS Secretariat at Meeting Matters International

Tel: +65 6472 3108 Fax: +65 6472 3208 Address: 1 Commonwealth Lane, #06-23 ONE COMMONWEALTH, Singapore 149544

Email Enquiries to:

Exhibtion & Sponsorship Alex ANG HP: +65 9189 0822 Email: geomeet@asiaoceania.org

Registration & Help Desk

Si Ying HO HP: +65 9025 0552 Email: info@asiaoceania.org

Society Business, Feedback & Complaints Cheng Hoon KHOO HP: +65 9819 9462 Email: admin@asiaoceania.org

Emergency Services

I	Emergency Road Service (24h) About Singapore	+65 6748 9911
	⁻ ire & Ambulance Services Ambulance Service (Non- emergency)	995 1777
	Police Hotline	1800 225 000
	Police	999
		000

1800 736 8900

1900 777 7777

+65 6523 0233

1800 542 4422

Tourist Information Hotline City Search Singapore Hotel Association **Flight Information**

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Premier Taxis	+65 6214 8880
Prime Taxi	+65 6778 0808
SMRT Taxis	+65 6555 8888
TransCab	+65 6555 3333
MRT Information Centre	1800 336 8900

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Visa Club	1800 345 1345
Citibank	+65 6225 5225
MasterCard	+65 6533 2888

Conference Hotels

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Conrad Centennial	+65 6334 8888
Goodwood Park Hotel	+65 6730 1881
Grand Park City Hall	+65 6336 3456
Holiday Inn Express Clarke Quay	+65 6589 8000
Holiday Inn Singapore Atrium	+65 6733 0188
Hotel G	+65 6809 7988
Hotel Royal @ Queens	+65 6725 9933
Ibis Singapore Bencoolen	+65 6593 2888
Intercontinental Singapore	+65 6338 7600
JW Marriott	+65 6818 1888
M Social Hotel	+65 6206 1888
Mandarin Oriental	+65 6338 0066
Marina Mandarin Singapore	+65 6845 1000
Novotel Clarke Quay	+65 6338 3333
Oasis Hotel Downtown	+65 6812 6900
Orchard Hotel	+65 6734 7766
Pan Pacific	+65 6336 8111
Peninsula Excelsior	+65 6337 2200
Rendezvous Hotel	+65 6845 1000

Santa Grand East Coast	+65 6344 6866
Santa Grand Hotel Bugis	+65 6298 8889
Studio M Hotel	+65 6808 8888
Summer View Hotel	+65 6338 1122
Swissotel The Stamford	+ 65 6338 8585
The Outpost Hotel	+65 6722 0801
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Village Hotel Albert Court	+65 6339 3939
Village Hotel Bugis	+65 6297 2828
Village Hotel Sentosa	+65 6722 0800

Suntec Singapore Convention & Exhibition Centre Address: 1 Raffles Boulevard, Suntec City, Singapore 039593

Getting to Suntec

By Buses

Bus Services: 36, 97, 106, 111, 133, 501, 502, 518, 857, 700 MRT Stands for "Mass Rapid Transit", and is Singapore's train and subway system. Suntec Singapore is connected to the MRT network through several MRT Stations.

By MRT

The nearest MRT Stations are Esplanade Station (CC3) and Promenade Station (CC4/DT15) via the Circle Line which will bring you directly to Suntec Singapore.

Alternatively, take the MRT to City Hall Station (NS25/EW13), followed by a five to ten minutes walk via an underpass to Suntec Singapore

Walking from MRT Station

- 1 min from Promenade and Esplanade Station
- 5 10 mins from City Hall MRT

Singapore has one of the most extensive & efficient public transportation systems in the world. With the Mass Rapid Transit (MRT) trains, buses & taxis, travelling in the city and suburbs can be a quick and affordable affair. For a comprehensive guide that includes offline maps, estimated prices & time, download free smart phone app Singapore Map by Street Directory Pte Ltd from Google Play or Apple App Store. If you are using a Blackberry, you can still visit www.streetdirectory.com for the same services.

Getting around Singapore

Train (MRT)

The MRT is a fast and cost-effective way of getting around Singapore. You can take the MRT from Changi Airport Terminal 3 to the city for a just couple of dollars. (If you are arriving at Terminal 1 or 2, you can take the Skytrain to Terminal 3.) If your hotel is not walking distance from any MRT station & you wish to save some dollars from transport, you can consider taking the MRT to the nearest MRT station before taking a taxi. Services operate from about 5:30am and usually end before 1am daily.

Bus

There are currently more than 300 bus services which run daily from 5.30am to midnight. The suggested app above will direct you to the exact bus-stop and the number to take.

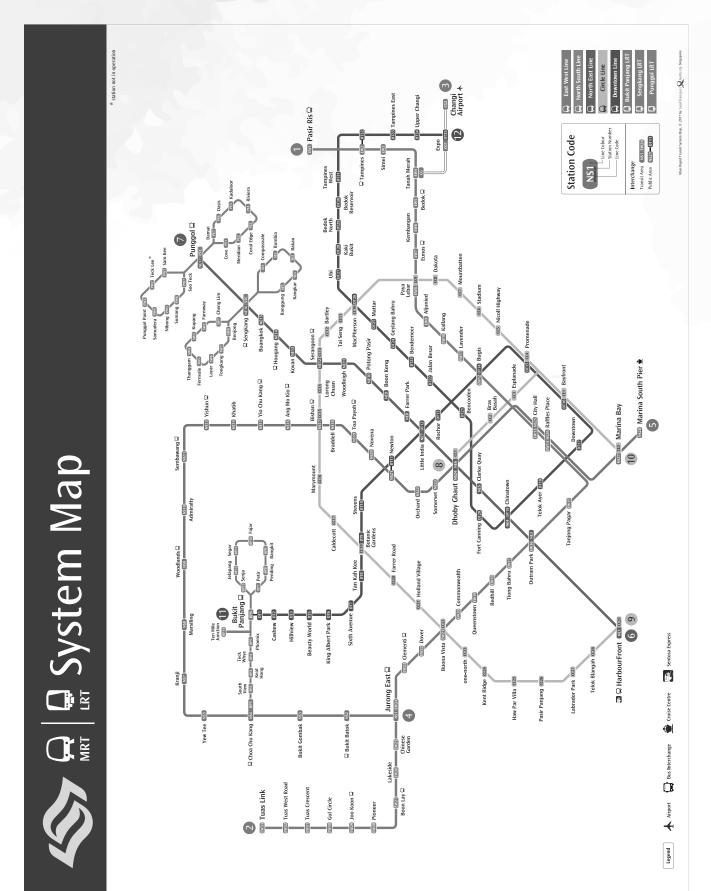
Taxi

Taxis ply the island round the clock, bringing you wherever you want, anytime you want. However, do note that airport, peak-hour, city area & Electronic Road Pricing (ERP) gantry surcharges apply.

Maps, Apps & City Guides

Have ready-access information on everything about Singapore in the palm of your hands! From places of interests, upcoming events, food guides to booking of transportation services, this mobile app (Singapore Travel Guide) will ensure that you will not miss any highlights and happenings during your stay in Singapore.

SINGAPORE MASS RAPID TRANSIT MAP







The Second AOGS-EGU Joint Conference on: New Dimensions for Natural Hazards in Asia

Yogyakarta, Indonesia Four days during September or October 2020

Email enquiries to nathazards@meetmatt.net

Picture by Kanenori

Organizer:



Supported By:



Secretariat:



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