

CURRICULUM VITAE OF SHO SASAKI

Sho Sasaki

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EDUCATION:

B.S. 3/1982 Graduated from Geophysical Institute of University of Tokyo

M.S. 3/1984 Graduate School of University of Tokyo

D.Sc. (Geophysics) 7/1987 Graduate School of University of Tokyo

PROFESSIONAL AND ACADEMIC EXPERIENCES:

1986-1988 Researcher of Japan Society for Promotion of Science (Univ. Tokyo)

1988-1990 Research Associate at Lunar Planetary Lab. of Univ. Arizona

1990-1992 Research Associate at Institute of Geology of Hiroshima Univ.

1992-2000 Associate Professor at Geological Institute of Univ. Tokyo

2000-2004 Associate Professor at Department of Earth and Planetary Science of Univ. Tokyo

2004-Present Professor of Radioastronomy and Planetary Science at National Astronomical Observatory of Japan

(2004-2005 Adjunct Professor at Department of Earth and Planetary Science of Univ. Tokyo)

(2008-present Adjunct Professor at Faculty of Science of Tohoku University)

(2010-present AOGS Planetary Science Section Secretary)

(2006-present COSPAR National Representative of Japan)

(2010-present COSPAR Bureau member)

About Dr. Sho Sasaki

Dr. Sho Sasaki is currently a professor at the National Astronomical Observatory of Japan. As the director of RISE project, he has taken leadership in the successful gravity/topography measurement of Japanese lunar mission SELENE (Kaguya).

Dr. Sasaki has participated in various Japanese planetary missions such as NOZOMI, Hayabusa, and SELENE conducted by ISAS/JAXA. He was Co-PI of MDC (Mars Dust Detector) on board Mars Mission NOZOMI in collaboration with Technical Univ. Munich and ESTEC. Although NOZOMI could not enter the circummartian orbit, MDC successfully conducted observation of interplanetary and interstellar dust particles as long as 4 years. He was a member of camera team of the successful Hayabusa Mission. Since 2004, he has been leading SELENE's gravity/topography team of National Astronomical Observatory of Japan. The first precise global maps of lunar gravity and topography were produced successfully by the group. He is Co-I of dust counter and laser altimeter on board BepiColombo (Mercury mission). Currently Dr. Sasaki is one of Japanese representatives for EJSM (Europa Jupiter System Mission) and has been participating in international discussion on the mission.

Since late 90s, Dr. Sasaki has been working on the space weathering process on the planetary surface. Through experimental works using pulse laser, he proved that formation of nanophase iron particles is responsible for the change of optical properties on the Moon and asteroids (Sasaki et al. (2001) *Nature*, 410, 555-557). A part of his study was confirmed at Hayabusa mission, which observed small asteroid Itokawa (Hiroi et al. (2006) *Nature*, 443, 56-58).

Dr. Sasaki also committed to various works on the planetary atmosphere and magma ocean during formation stage, atmospheric escape, noble gases in planetary atmosphere, planetary evolution, and planetary geology. At the University of Tokyo, Dr. Sasaki supervised more than 20 students (including 7 doctors) of various fields such as planetary geology/geophysics, geochemistry, radio remote sensing, interplanetary dust, and infrared astronomy.

Since 2000, he has been a member of COSPAR committee in JAPAN. Since 2006, he has been COSPAR National Representative of Japan. In 2010, he was elected as a bureau member of COSPAR. Since 2006, Dr. Sasaki is a member of National Research Council of Japan.

Dr. Sasaki has been a member of AOGS since 2005. From 2009, he is one of Planetary Science Section secretaries.

Sho Sasaki: Publications of reviewed articles

Sasaki, S. and Nakazawa, K. (1986)

Metal-silicate fractionation in the growing Earth: Energy source for the terrestrial magma ocean.
J. Geophys. Res., 91, 9231-9238.

Sasaki, S. and Nakazawa, K. (1988)

Origin of the isotopic fractionation of terrestrial Xe: Hydrodynamic fractionation during dissipation of the primordial H₂-He atmosphere.
Earth Planet. Sci. Lett., 89, 323-334.

Hiyagon, H. and Sasaki, S. (1988)

Noble gas constraints on the early history of the Earth.
Prog. Theor. Phys. Suppl., 96, 1-15.

Sasaki, S. (1989)

Minimum planetary size for forming outer Jovian-type planets: Stability of an isothermal atmosphere surrounding a protoplanet.
Astron. Astrophys., 215, 177-180.

Sasaki, S. (1989)

Penetration of the solar wind after dissipation of the solar nebula – Origin of Venusian Ar by off-disk implantation of the solar wind.
Proc. NIPR Symp. Antarct. Meteorites, 2, 328-336.

Sasaki, S. (1990)

The primary solar-type atmosphere surrounding the accreting Earth: H₂O -induced high surface temperature.
In "Origin of the Earth", Oxford Univ. Press, pp.195-209.

Sasaki, S. and Nakazawa, K. (1990)

Did a primary solar-type atmosphere exist around the protoearth?
Icarus, 85, 21 – 42.

Sasaki, S. and Nakazawa, K. (1990)

The character of isotope fractionation of terrestrial inert gases - Hydrodynamic fractionation during the dissipation of the primordial hydrogen-helium atmosphere.
In Isotopic geochemistry and cosmochemistry. Moscow, Izdatel'stvo Nauka, pp. 50-67

Sasaki, S. (1991)

Off-disk penetration of ancient solar wind.
Icarus, 91, 29-38.

Sasaki, S. (1991)

Off-disk implantation of early solar wind into a planetesimal-dust cloud.
In "Origin and Evolution of Interplanetary Dust", A. C. Levasseur-Regourd and H. Hasegawa eds., Kluwer Academic, pp425-428.

Sasaki, S. (1994)

Dust blobs in the solar nebula - Primary distended atmosphere -
Astrophys. Space Sci., 212, 33-41.

Yabe, T., Xiao, F., Zhang, D., Sasaki, S., Abe, Y., Kobayashi, N., and Terasawa, T. (1994)

Effect of EOS on break-up of Shoemaker-Levy 9 entering Jovian atmosphere.
J. Geomag. Geoelectr., 46, 657-662.

Sasaki, S. (1994)

Radiogenic noble gas constraints on Mars' evolution
In Noble Gas Geochemistry and Cosmochemistry, J. Matsuda ed.,

Terra Scientific Publ. Comp., Tokyo, pp.55-66.

Sasaki, S., Yabe, T., Abe, Y., Watanabe, J., and Hasegawa, H. (1995)

Explanation of IR-Light curves of Shoemaker-Levy 9 Impacts: Comparison between Numerical Simulations and Observations

In Proceedings of the European Shoemaker Levy 9/ Jupiter Workshop,
(eds. R. West and H. Bohnhardt), pp.293-296.

Sasaki, S. and Tajika, E. (1995)

Degassing history and evolution of volcanic activities of terrestrial planets based on radiogenic noble gas degassing model

In Volatiles in the Earth and Solar System, AIP Conference Proceedings 341, (ed. K. A. Farley) pp.186-199, American Institute of Physics.

Yabe, T., Tajima, M., Xiao, F., Sasaki, S., Abe, Y., and Watanabe, J. (1995)

Possible explanation of the secondary flash and strong flare on luminosity upon impact of Shoemaker-Levy 9
Geophys. Res. Lett., 22, 2429-2432.

Tajika, E. and Sasaki, S. (1996)

Magma generation on Mars constrained from an ^{40}Ar degassing model

J. Geophys. Res., 101, 7543-7554.

Sasaki, S. (1996)

Martian Self-Sustaining Dust Torus

In Physics, Chemistry, and Dynamics of Interplanetary Dust, (ed. B. A. S. Gustafson and M. S. Hanner) ASP Conf. Series vol.104, pp.187-190.

Igenbergs, E., Sasaki, S., Faber, G., Fischer, F., Muenzenmayer, R., Fujiwara, A., Iglseider, H., Glasmachers, A., Gruen, E., Mukai, T., Ohashi, H., Schwehm, G., Svedhem, H., Yamakoshi, K. (1996)

Mars Dust Counter on Board ISAS PLANET-B

In Physics, Chemistry, and Dynamics of Interplanetary Dust, (ed. B. A. S. Gustafson and M. S. Hanner) ASP Conf. Series vol.104, pp.233-236.

Igenbergs, E., Muenzenmayer, R., Sasaki, S., Faber, G., Fischer, F., Fujiwara, A., Iglseider, H., Glasmachers, A., Gruen, E., Mukai, T., Ohashi, H., Schwehm, G., Svedhem, H. and Yamakoshi, K. (1996)

Mars Dust Counter on Board ISAS PLANET-B.

In Proceedings of 20th International Symposium on Space Technology and Space, 1222-1229, Gifu, Japan

Hashimoto, G. L., Abe Y., and Sasaki S. (1997)

CO_2 amount on Venus constrained by a criterion of topographic-greenhouse instability

Geophys. Res. Lett., 24, 289-292.

Miyamoto, H. and Sasaki, S. (1997)

Simulating lava flows by an improved cellular automata method

Computers and Geosciences, 23, 283-292.

Nishio, Y., Sasaki, S., Gamo, T., Hiyagon, H., and Sano, Y. (1998)

Carbon and helium isotope systematics in North Fiji Basin basalt glasses

Earth Planet. Sci. Lett., 154, 127-138.

Mukai, T., Akabane, T., Hashimoto, T., Ishimoto, H., Sasaki, S., Inada, A., Toigo, A., Nakamura, M., Abe, Y., Kurita, K., Imamura, T. (1998)

Observations of Mars and its satellites by the Mars Imaging Camera (MIC) on Planet-B

Earth Planets Space, 50, 183-188.

Igenbergs, E., Sasaki, S., Muenzenmayer, R., Ohashi, H., Faber, G., Fischer, F., Fujiwara, A., Hamabe, Y., Iglseider, H., Klinge, D., Miyamoto, H., Glasmachers, A., Gruen, E., Mukai, T., Naumann, W., Nogami, K., Schwehm, G., Svedhem, H. and Yamakoshi, K. (1998)

Mars Dust Counter

Earth Planets Space, 50, 241-245.

Miyamoto, H. and Sasaki, S. (1998)

Numerical simulations of flood basalt lava flows: roles of some parameters on lava flow morphologies,
J. Geophys. Res., 103, 27489-27502.

Sano, Y., Nishio, Y., Sasaki, S., Gamo, T. and Nagao, K. (1998)

Helium and carbon isotope systematics at Ontake volcano, Japan
J. Geophys. Res., 103, 23863-23873.

Nagasawa, C., Sasaki, S. and Koyama, M. (1998)

Change of stress field in Beta-Atla-Themis region on Venus, estimated from surface geometry of dike swarms,
stratigraphy of lavas, and crater density
Geophys. Res. Lett., 25, 4429-4432.

Nakamura, M., Yamashita, K., Yoshikawa, I., Shiomi, K., Yamazaki, A., Sasaki, S., Takizawa, Y., Hirahara, M., Miyake,
W., Saito Y., and Chakrabarti, S. (1999)

Helium observation in the Martian ionosphere by an X-ray ultraviolet scanner on Mars orbiter NOZOMI
Earth, Planets, and Space, 51, 61-70.

Hasegawa, S., Fujiwara, A., Yano, H., Nisimura, T., Sasaki, S., Ohashi, H., Iwai, T., Kobayashi, K., and Shibata, H.
(1999)

Design of electrostatic accelerators for the development of microparticle detectors in Japan
Adv. Space Res. 23, 119-122.

Sasaki, S. (1999)

Dust ring/torus around Mars, waiting for detection by NOZOMI
Adv. Space Res., 23, 1907-1910.

Sasaki, S. (1999)

Presence of a primary solar-type atmosphere around the Earth: Evidence of dissolved noble gas
Planet. Space Sci., 47, 1423-1431

Yamada, M., Sasaki, S., Nagahara, H., Fujiwara, A., Hasegawa, S., Yano, H., Hiroi, T., Ohashi, H., and Otake, H. (1999)

Simulation of Space Weathering of Planet-Forming Materials: Nanosecond Pulse Laser Irradiation and Proton
Implantation on Olivine and Pyroxene Samples
Earth Planets Space, 51, 1255-1265.

Miyamoto, H. and Sasaki, S. (2000)

Two different supply styles of crater outflow materials on Venus inferred
from numerical simulations over DEMs
Icarus, 145, 533-545.

Sasaki, S., Igenbergs, E., Muenzenmayer, R., Ohashi, H., Hofschuster, G., Naumann, W., Faber, G., Fischer, F.,
Fujiwara, A., Glasmachers, A., Gruen, E., Hamabe, Y., Iglseider, H., Miyamoto, H., Mukai, T., Nogami, K., Schwehm, G.,
Svedhem, H., Born, M., Kawamura, T., Klinge, D., Morishige, K., Naoi, T., Peeks, R., Yano, H., and Yamakoshi, K.
(2000)

Mars dust counter on board NOZOMI: First year results,
Proceedings of 22nd International Symposium on Space Technology and Science, 00-j-21, 1664-1667.

Sasaki, S., Nakamura, K., Hamabe, Y., Kurahashi, E., and Hiroi, T. (2001),

Production of iron nanoparticles by laser irradiation in a simulation of Lunar-like space weathering,
Nature 410, 555-557.

Shitaba, H., Kobayashi, K., Iwai, T., Hamabe, Y., Sasaki, S., Hasegawa, S., Yano, H., Fujiwara, A., Ohashi, H.,
Kawamura, T., and Nogami, K. (2001)

Micro-particle acceleration by a Vande Graaff accelerator and application to space and material sciences

Radiation Physics and Chemistry 60, 277-282.

Nakamura, T., Nakamura, A. M., Saito, J., Sasaki, S., Nakamura, R., Demura, H., Akiyama, H., Tholen, D., and AMICA Team (2001)
Multi-band imaging camera and its sciences for the Japanese near-Earth asteroid mission MUSES-C,
Earth, Planets, Space, 53, 1047-1063.

Hiroi, T., Pieters, C. M., Vilas, F., Sasaki, S., Hamabe, Y., and Kurahashi, E. (2001)
The mystery of 506.5 nm feature of reflectance spectra of Vesta and Vestoids: Evidence for space weathering?
Earth, Planets, Space, 53, 1071-1075.

Hiroi, T. and Sasaki, S. (2001)
Importance of Space Weathering Simulation Products in Compositional Modeling of Asteroids: 349 Dembowska and 446 Aeternitas as Examples
Meteoritics and Planetary Science, 36, 1587-1596.

Sasaki, S., Igenbergs, E., Ohashi, H., Hofschuster, G., Muenzenmayer, R., Naumann, W., Senger, R., Fischer, F., Fujiwara, A., Gruen, E., Hamabe, Y., Kawamura, T., Mann, I., Miyamoto, H., Nogami, K., Svedhem, H. (2001)
Interplanetary dust observation in the Earth-Mars region by Mars Dust Counter (MDC) on board NOZOMI: Three-year results
Proceedings of the Meteoroids 2001 Conference, pp. 595-599, ESA SP-495.

Hamabe, Y., Sasaki, S., Ohashi, H., Kawamura, T., Nogami, K., Yano, H., Hasegawa, S., and Shibata, H. (2001)
Development of a new reflectron type TOF mass spectrometer for dust analysis in space
Proceedings of the Meteoroids 2001 Conference, pp. 621-624, ESA SP-495.

Hasegawa, S., Hamabe, Y., Fujiwara, A., Yano, H., Sasaki, S., Ohashi, H., Kawamura, T., Nogami, K., Kobayashi, K., Iwai, T., and Shibata, H. (2001)
Microparticle acceleration for hypervelocity experiments by a 3.75MV van de Graaff accelerator and a 100KV electrostatic accelerator in Japan
Intl. J. Impact Engineering 26, 299-308.

Chassefiere E., Forget F., Hourdin F., Vial F., Reme H., Mazelle C., Vignes D., Sauvaud J. A., Blelly P. L., Toubanc D., Berthelier J. J., Cerisier J. C., Chanteur G., Duvet L., Menvielle M., Lilensten J., Witasse O., Touboul P., Quemerais E., Bertaux J. L., Hulot G., Cohen Y., Lognonne P., Barriot J. P., Balmino G., Blanc M., Pinet P., Parrot M., Trotignon J. G., Moncuquet M., Bougeret J. L., Issautier K., Lellouch E., Meyer N., Sotin C., Grasset O., Barlier F., Berger C., Tarits P., Dymont J., Breuer D., Spohn T., Patzold M., Sperveslage K., Gough P., Buckley A., Szego K., Sasaki S., Smrekar S., Lyons D., Acuna M., Connerney J., Purucker M., Lin R., Luhmann J., Mitchell D., Leblanc F., Johnson R., Clarke J., Nagy A., Young D., Bougher S., Keating G., Haberle R., Jakosky B., Hodges R., Parmentier M., Waite H., Bass D. (2001)
Scientific objectives of the DYNAMO mission,
Adv. Space Res. 27, 1851-1860.

Sasaki, S., Igenbergs, E., Ohashi, H., Muenzenmayer, R., Naumann, W., Hofschuster, G., Born, M., Faber, G., Fischer, F., Fujiwara, A., Glasmachers, A., Gruen, E., Hamabe, Y., Iglseider, H., Kawamura, T., Miyamoto, H., Morishige, K., Mukai, T., Naoi, T., Nogami, K., Schwehm, G., Svedhem, H. (2002)
Observation of interplanetary and interstellar dust particles by Mars Dust Counter (MDC) on board NOZOMI
Adv. Space Res. 29, 1145-1153.

Sasaki, S., Hiroi, T., Nakamura, K., Hamabe, Y., Kurahashi, E., and Yamada, M. (2002)
Simulation of space weathering by nanosecond pulse laser heating: dependence on mineral composition, weathering trend of asteroids and discovery of nanophase iron particles
Adv. Space Res. 29, 783-788.

Sasaki, S., Kubota, T., Okada, T., Saiki, K., Kuroda, Y., Kunii, Y., Shibamura, E., Akiyama, N., Ohtake, M., Ichikawa, M., Higa, M., Hirata, N., Sugihara, T., Haruyama, J., Otake, H., Yoshioka, N., Terazono, J., Yamada, M., Yamagushi, Y., Kodama, S., and Rover Group in Japan (2002)
Scientific exploration of Lunar surface using a rover in Japanese future Lunar mission

Adv. Space Res. 30, 1921-1926.

S. Sasaki, T. Hiroi, K. Nakamura, Y. Hamabe, E. Kurahashi, and M. Yamada (2002)

Space Weathering: Spectral Change and Formation of Nanophase Iron Due to Pulse Laser Irradiation Simulating Impact heating of Interplanetary Dust Flux

Proceedings of IAU Colloquium 181 "Dust in the Solar System and Other Planetary Systems", edited by S.F. Green, I. Williams, T. McDonnell & N. McBride, pp.320-323, Elsevier, Amsterdam.

S. Sasaki, E. Igenbergs, R. Muenzenmayer, H. Ohashi, G. Hofschuster, W. Naumann, G. Faber, F. Fischer, A. Fujiwara, A. Glasmachers, E. Gruen, Y. Hamabe, H. Iglseider, H. Miyamoto, T. Mukai, K. Nogami, G. Schwehm, H. Svedhem, M. Born, T. Kawamura, D. Klinge, K. Morishige, T. Naoi, R. Peeks, H. Yano, and K. Yamakoshi (2002)

Mars Dust Counter (MDC) on Board NOZOMI: Initial Results

Proceedings of IAU Colloquium 181 "Dust in the Solar System and Other Planetary Systems", edited by S.F. Green, I. Williams, T. McDonnell & N. McBride, pp.176-180, Elsevier, Amsterdam.

Hamabe, Y., Sasaki, S., Ohashi, H., Kawamura, T., Nogami, K., Yano, H., Hasegawa, S., and Shibata, H. (2002)

Analysis of micro-craters on metal targets formed by hyper velocity impacts,

Proceedings of IAU Colloquium 181 "Dust in the Solar System and Other Planetary Systems", edited by S.F. Green, I. Williams, T. McDonnell & N. McBride, pp.305-308, Elsevier, Amsterdam.

Sasaki, S., Igenbergs, E., Ohashi, H., Senger, R., Hofschuster, G., Muenzenmayer, R., Naumann, W., Gruen, E., Hamabe, Y., Kawamura, T., Mann, I., Miyamoto, H., Nogami, K., Shoji, S., and Svedhem, H. (2002)

Mars Dust Counter (MDC) on board NOZOMI: Three-year results.

Proceedings of 23rd International Symposium on Space Technology and Science, 2002-k-17.

Sasaki, S., Kubota, T., Akiyama, H., Hirata, N., Kanamori, H., Kato, M., Kunii, Y., Kuroda, Y., Matsumoto, K., Otake, M., Okada, T., Saiki, K., Sugihara, T., and Wakabayashi, S. (2002)

Geological exploration on the Lunar surface using rover-lander system: A scientific proposal for SELENE-B,

Proceedings of 23rd International Symposium on Space Technology and Science, 2002-k-07.

Kurahashi, E., Yamanaka, Y., Nakamura, K. and Sasaki, S. (2002)

Laboratory simulation of space weathering: ESR measurements of nanophase metallic iron in laser-irradiated materials. Earth, Planets and Space 54, e5-e8.

Sasaki, S., Kurahashi, E., Nakamura, K., Hiroi, T., and Yamanaka, C. (2002)

Laboratory simulation of space weathering: TEM and ESR confirmation of nanophase iron particles and change of optical properties of regolith.

Proceedings of Asteroids, Comets, Meteors (ACM2002), ESA-SP-500, 929-931.

Sasaki, S., Igenbergs, E., Ohashi, H., Senger, R., Hofschuster, G., Muenzenmayer, R., Naumann, W., Grün, E., Fujiwara, A., Hamabe, Y., Mann, I., Miyamoto, H., Mukai, T., Nogami, K., Shoji, S. and Svedhem, H. (2002)

Interplanetary and interstellar dust observation by Mars Dust Counter on board NOZOMI: Four-year operation

Proceedings of Asteroids, Comets, Meteors (ACM2002), ESA-SP-500, 79-82.

Miyachi, T., Hasebe, N., Ito, H., Masumura, T., Okada, H., Yoshioka, H., Nogami, K., Iwai, T., Shibata, H., Hamabe, Y., Sasaki, S., Sugita, S., Hasegawa, S., Yano, H., Ohashi, H., Muranaga, T., Sato, M., and Tou, T.

Development of a realtime detector for hypervelocity microparticles based on a low-Q PZT material

Proceedings of Asteroids, Comets, Meteors (ACM2002), ESA-SP-500, 847-849.

Rodriguez, J. A. P., Sasaki, S., and Miyamoto, H. (2003)

Nature and hydrological relevance of the Shalbatana complex underground cavernous system,

Geophys. Res. Lett., Vol. 30 No. 6, 1304, 10.1029/2002GL016547

Miyachi, T., Hasebe, N., Ito, H., Masumura, T., Okada, H., Yoshioka, H., Higushi, M., Nogami, K., Iwai, T., Shibata, H., Hamabe, Y., Sasaki, S., Sugita, S., Ohashi, H., Hasegawa, S., Yano, H., Sato, M., and Tou, T. (2003)

Response of piezoelectric lead-zirconate-titanate to hypervelocity silver particles,

Jpn. J. Appl. Phys., 42, 1496-1497.

- Sasaki, S., Kurahashi, E., Yamanaka, C., Nakamura, K. (2003)
Laboratory simulation of space weathering: changes of optical properties and TEM/ESR confirmation of nanophase metallic iron,
Adv. Space Res. 31, 2537-2542.
- Sasaki, S. and Kurahashi, E. (2004)
Space weathering on Mercury,
Adv. Space Res. 33, 2152-2155.
- Kawakita, H., Watanabe, J., Ootsubo, T., Nakamura, R., Fuse, T., Takato, N., Sasaki, S., and Sasaki, T. (2004)
The Evidence of Icy Grains in Comet C/2002 T7 (LINEAR) at 3.52 AU
Astrophys. J. Lett. 601, L191-L194.
- Sasaki, T., Sasaki, S., Watanabe, J., Sekiguchi, T., Kawakita, H., Fuse, T., Takato, N., Yoshida, F., Dermawan, B., and Ito, T. (2004)
Mature and fresh surfaces on the new-born asteroid Karin
Astrophys. J. Lett. 615, L161-L164
- Miyachi, T., Hasebe, N., Ito, H., Masumura, T., Okada, H., Yoshioka, H., Nogami, K., Iwai, T., Shibata, H., Hamabe, Y., Sasaki, S., Sugita, S., Hasegawa, S., Yano, H., Ohashi, H., Muranaga, K., Sato, M., and Tou, T. (2004)
Real-time detector for hypervelocity microparticles using piezoelectric material
Adv. Space Res. 34, 935-938
- Rodriguez, J. A. P., Sasaki, S., Kuzmin, R. O., Dohm, J. M., Tanaka, K. L., Miyamoto, H., Kurita, K., Komatsu, G., Fairén, A. G., Ferris, J. C. (2005)
Outflow channel sources, reactivation, and chaos formation, Xanthe Terra, Mars
Icarus, 175, 36-57.
- Miyachi, T., Fujii, M., Hasebe, N., Kobayashi, M. N., Kuraza, G., Nagashima, A., Nakamura, Y., Nogami, K., Iwai, T., Sasaki, S., Muranaga, K., Ohashi, H., Hasegawa, S., Yano, H., Shibata, H., Gruen, E., Srama, R., Okada, N. and Tou, T. (2005)
Velocity-dependent waveforms of piezoelectric elements undergoing collisions with iron particles having velocities ranging from 5 to 63 km/s,
Applied Phys. Lett 86 234102
- Miyachi, T., Fujii, M., Hasebe, N., Kobayashi, M., Kuraza, G., Nagashima, A., Nakamura, Y., Okudaira, O., Yamashita, N., Nogami, K., Iwai, T., Sasaki, S., Ohashi, H., Hasegawa, S., Yano, H., Shibata, H., Okada, N., Tou T., Response from piezoelectric elements appearing immediately after collisions with silver particles,
J. Applied Phys. 98 014110 (2005)
- Rodriguez, J. A. P., Sasaki, S., Dohm, J. M., Tanaka, K. L., Strom, R., Kargel, J., Kuzmin, R., Miyamoto, H., Spray, J. G., Fairén, A. G., Komatsu, G., Kurita, K., Baker, V. (2005)
Control of impact crater fracture systems on subsurface hydrology, ground subsidence and collapse, Mars
J. Geophys. Res. 110, E06003, doi:10.1029/2004JE002365
- Miyamoto, H., Itoh, K., Komatsu, G., Baker, V. R., Dohm, J. M., Tosaka, H., Sasaki, S. (2006)
Numerical simulations of large-scale cataclysmic floodwater: A simple depth-averaged model and an illustrative application,
Geomorphology 76, 179-192
- Rodriguez, J. A. P., Tanaka, K. L., Miyamoto, H., Sasaki, S., (2006)
Nature and characteristics of the flows that carved the Simud and Tiu outflow channels, Mars
Geophys. Res. Lett., 33, L08S04
- Rodriguez, J. A. P., Kargel, J., Crown, D. A., Bleamaster, L. F., Tanaka, K. L., Baker, V., Miyamoto, H., Dohm, J. M., Sasaki, S., and Komatsu, G. (2006)
Headward growth of chasmata by volatile outbursts, collapse, and drainage: Evidence from Ganges chaos, Mars,
Geophys. Res. Lett., 33, L18203

Saito, J., Miyamoto, H., Nakamura, R., Ishiguro, M., Michikami, T., Nakamura, A. M., Demura, H., Sasaki, S., Hirata, N., Honda, C., Yamamoto, A., Yokota, Y., Fuse, T., Yoshida, F., Tholen, D. J., Gaskell, R. W., Hashimoto, T., Kubota, T., Higuchi, Y., Nakamura, T., Smith, P., Hiraoka, K., Honda, T., Kobayashi, S., Furuya, M., Matsumoto, N., Nemoto, E., Yukishita, A., Kitazato, K., Dermawan, B., Sogame, A., Terazono, J., Shinohara, C., Akiyama, H. (2006)

Detailed images of Asteroid 25143 Itokawa from Hayabusa

Science, 312, 1341-1344

Fujiwara, A., Kawaguchi, J., Yeomans, D. K., Abe, M., Mukai, T., Okada, T., Saito, J., Yano, H., Yoshikawa, M., Scheeres, D. J., Barnouin-Jha, O., Cheng, A. F., Demura, H., Gaskell, R. W., Hirata, N., Ikeda, H., Kominato, T., Miyamoto, H., Nakamura, A. M., Nakamura, R., Sasaki, S., and Uesugi, K. (2006)

The Rubble-Pile Asteroid Itokawa as Observed by Hayabusa

Science, 312, 1330-1334

Demura, H., Kobayashi, S., Nemoto, E., Matsumoto, N., Furuya, M., Yukishita, A., Muranaka, N., Morita, H., Shirakawa, K., Maruya, M., Ohyama, H., Uo, M., Kubota, T., Hashimoto, T., Kawaguchi, J., Fujiwara, A., Saito, J., Sasaki, S., Miyamoto, H., and Hirata, N. (2006)

Pole and Global Shape of 25143 Itokawa

Science, 312, 1347-1349

Yano, H., Kubota, T., Miyamoto, H., Okada, T., Scheeres, D., Takagi, Y., Yoshida, K., Abe, M., Abe, S., Barnouin-Jha, O., Fujiwara, A., Hasegawa, S., Hashimoto, T., Ishiguro, M., Kato, M., Kawaguchi, J., Mukai, T., Saito, J., Sasaki, S., and Yoshikawa, M. (2006)

Touchdown of the Hayabusa Spacecraft at the Muses Sea on Itokawa

Science, 312, 1350-1353

Okada, T., Sasaki, S., Sugihara, T., Saiki, K., Akiyama, H., Ohtake, M., Takeda, H., Hasebe, N., Kobayashi, M., Haruyama, J., Shirai, K., Kato, M., Kubota, T., Kunii, Y., Kuroda, Y. and the SELENE-B Rover Science Group (2006)

Lander and rover exploration on the Lunar surface: A study for SELENE-B mission

Adv. Space Res. 37, 88-92

Sasaki, S., Sasaki, T., Watanabe, J., Yoshida, F., Kawakita, H., Takato, N., Dermawan, B., Fuse, T., Ito, T., and Sekiguchi, T., (2006)

A newborn asteroid 832 Karin with old and new surfaces – SUBARU spectroscopy

Adv. Space Res., 38, 1995-1999.

Hiroi, T., Abe, M., Kitazato, K., Abe, S., Clark, B. E., Sasaki, S., Ishiguro, M., Barnouin-Jha, O. S.,

Discovery of developing space weathering on an S-type asteroid of LL-chondrite composition

Nature, 443, 56-58 (2006)

Sasaki, S., Igenbergs, E., Ohashi, H., Senger, R., Münzenmayer, R., Naumann, W., Grün, E., Nogami, K., Mann, I, and Svedhem, H. (2007)

Summary of interplanetary and interstellar dust observation by Mars Dust Counter on board NOZOMI

Adv. Space Res., 39, 485-488.

Miyamoto, H., Yano, H., Scheeres, D. J., Abe, S., Barnouin-Jha, O., Cheng, A. F., Demura, H., Gaskell, R. W., Hirata, N., Ishiguro, M., Michikami, T., Nakamura, R., Nakamura, A. M., Saito, J., and Sasaki, S. (2008)

Regolith Migration and Sorting on Asteroid Itokawa

Science, 316, 1011-1014

Miyamoto, H., Rodriguez, J. A. and S. Sasaki (2007)

Significance of the gravitational relaxation on a plume-driven surface uplift: Dynamic calculations using the Boundary Element Method,

Environ. Model. Soft., 22, 1482-1487

Naoi, T., Tamura, M., Nagata, T., Nakajima, Y., Suto, Y., Murakawa, K., Kandori, Y., Sasaki, S., Nishiyama, S., Oasa, Y., Sugitani, K. (2007)

Near-Infrared Extinction in the Coalsack Globule 2

Astrophys. J., 658, 1114-1118.

Rodriguez, J. A. P., Tanaka, K. L., Kargel, J. S., Dohm, J. M., Kuzmin, R., Fairen, A. G., Sasaki, S., Komatsu, G., Schulze-Makuch, D., Jianguo, Y. (2007)
Formation and disruption of aquifers in southwestern Chryse Planitia, Mars
Icarus, 191, 545-567.

Rodriguez, J. A. P., Tanaka, K. L., Langevin, Y., Bourke, M., Kargel, J., Christensen, P., Sasaki, S. (2007)
Recent cycles of aeolian erosion and deposition in the north polar plateau of Mars
Mars, 3, 29-41.

Ishiguro, M., Hiroi, T., Tholen, D., Sasaki, S., Ueda, Y., Nimura, T., Abe, M., Clark, B. E., Yamamoto, A., Yoshida, F., Nakamura, R., Hirata, N., Miyamoto, H., Yokota, Y., Hashimoto, T., Kubota, T., Nakamura, A. M., Gaskell, R. W., and Saito, J. (2007)
Global mapping of the degree of space weathering on asteroid 25143 Itokawa by Hayabusa/AMICA observations
Meteor. Planet. Sci., 42, 1791-1800.

Miyachi, T., Fujii, M., Hasebe, N., Kuraza, G., Mori, K., Okudaira, O., Yamashita, N., Sasaki, S., Iwai, T., Nogami, K., Matsumoto, H., Ohashi, H., Shibata, H., Minami, S., Takechi, S., Onishi, T., Gruen, E., Srama, R., Okada, N. (2008)
Response of a pentagonal PZT element as a component of a 4π -real-time detector
Adv. Space Res. 41, 1147-1151.

Araki, H., Tazawa, S., Noda, H., Tsubokawa, T., Kawano, N., and Sasaki, S. (2008)
Observation of the lunar topography by the laser altimeter LALT on board Japanese lunar explorer SELENE
Adv. Space Res. 42, 317-322.

Miyachi, T., Fujii, M., Hasebe, N., Miyajima, M., Okudaira, O., Takechi, S., Onishi, T., Minami, S., Shibata, H., Ohashi, H., Iwai, T., Nogami, K., Sasaki, S., Grün, E., Srama, R., Okada, N. (2008)
Measurement of temperature after hypervelocity collision of microparticles in the range from 10 to 40 km/s
Applied Phys. Lett., 93, id 174107

Takechi, S., Onishi, T., Minami, S., Miyachi, T., Fujii, M., Hasebe, N., Nogami, K., Ohashi, H., Sasaki, S., Shibata, H., Iwai, T., Grün, E., Srama, R., Okada, N. (2008)
Measurement of incident position of hypervelocity particles on piezoelectric lead zirconate titanate detector
Rev. Sci. Instrum., 79, 043303

Takechi, S., Onishi, T., Minami, S., Miyachi, T., Fujii, M., Hasebe, N., Mori, K., Nogami, K., Ohashi, H., Sasaki, S., Shibata, H., Iwai, T., Grün, E., Srama, R., Okada, N. (2008)
Investigation on piezoelectric lead zirconate titanate detector bombarded obliquely with hypervelocity iron particles
Planet. Space Sci., 56, 1309-1313

Takechi, S., Onishi, T., Minami, S., Miyachi, T., Fujii, M., Hasebe, N., Mori, K., Nogami, K., Ohashi, H., Sasaki, S., Shibata, H., Iwai, T., Grün, E., Srama, R., Okada, N. (2008)
Response of piezoelectric lead zirconate titanate detector to oblique impact with hypervelocity iron particles
Earth Planets Space, 60, 1187-1190

Noda, H., H. Araki, S. Goossens, Y. Ishihara, K. Matsumoto, S. Tazawa, N. Kawano, and S. Sasaki (2008),
Illumination conditions at the lunar polar regions by KAGUYA(SELENE) laser altimeter,
Geophys. Res. Lett., doi:10.1029/2008GL035692, 35, L24203.

Araki, H., Tazawa, S., Noda, H., Ishihara, Y., Goossens, S., Sasaki, S., Kawano, N., Kamiya, I., Otake, H., Oberst, J., and Shum, C. K. (2009)
Lunar Global Shape and Polar Topography Derived from Kaguya-LALT Laser Altimetry
Science 323, 897-900

Namiki, N., Iwata, T., Matsumoto, K., Hanada, H., Noda, H., Goossens, S., Ogawa, M., Kawano, N., Asari, K., Tsuruta, S., Ishihara, Y., Liu, Q., Kikuchi, F., Ishikawa, T., Sasaki, S., Aoshima, C., Kurosawa, K., Sugita, S., and Takano, T. (2009)

Far side gravity field of the Moon from four-way Doppler measurements of SELENE (Kaguya)
Science 323, 900-905

Haruyama, J., Ohtake, M., Matsunaga, T., Morota, T., Honda, C., Yokota, Y., Abe, M., Ogawa, Y., Miyamoto, H., Iwasaki, A., Pieters, C. M., Asada, N., Demura, H., Hirata, N., Terazono, J., Sasaki, S., Saiki, K., Yamaji, A., Torii, M., Josset, J.-L. (2009)

Long-Lived Volcanism on the Lunar Farside Revealed by SELENE Terrain Camera
Science 323, 905-908

Ohtake, M., Matsunaga, T., Haruyama, J., Yokota, Y., Morota, T., Honda, C., Ogawa, Y., Torii, M., Miyamoto, H., Arai, T., Hirata, N., Iwasaki, A., Nakamura, R., Hiroi, T., Sugihara, T., Takeda, H., Otake, H., Pieters, C.M., Saiki, K., Kitazato, K., Abe, M., Asada, N., Demura, H., Yamaguchi, Y., Sasaki, S., Kodama, S., Terazono, J., Shirao, M., Yamaji, A., Minami, S., Akiyama, H. and Josset, J.-L. (2009)

The global distribution of pure anorthosite on the Moon
Nature, 461, 236-241.

Kikuchi, F., Liu, Q., Hanada, H., Kawano, N., Matsumoto, K., Iwata, T., Goossens, S., Asari, K., Ishihara, Y., Tsuruta, S., Ishikawa, T., Noda, H., Namiki, N., Petrova, N., Harada, Y., Ping, J., and Sasaki, S. (2009)

Pico-second Accuracy VLBI of the Two Sub-satellites of SELENE (KAGUYA) using Multi-Frequency and Same Beam Methods

Radio Science 44, 1-7

Hirata, N., Barnouin-Jha, O. S., Honda, C., Nakamura, R., Miyamoto, H., Sasaki, S., Demura, H., Nakamura, A. M., Michikami, T., Gaskell, R. W., Saito, J. (2009)

A survey of possible impact structures on 25143 Itokawa
Icarus 200, 486-502

Michel, B. et al. (2009)

LAPLACE: A mission to Europa and the Jupiter System for ESA's Cosmic Vision Programme
Experimental Astronomy 23, 849-892

Takechi, S., Onishi, T., Minami, S., Miyachi, T., Fujii, M., Hasebe, N., Mori, K., Nogami, K., Ohashi, H., Sasaki, S., Shibata, H., Iwai, T., Grün, E., Srama, R., Okada, N. (2009)

Characteristics of piezoelectric lead zirconate titanate multilayered detector bombarded with hypervelocity iron particles

Advance Space Res. 43, 455-459

Takechi, S., Nogami, K., Miyachi, T., Fujii, M., Hasebe, N., Iwai, T., Sasaki, S., Ohashi, H., Shibata, H., Grün, E., Srama, R., Okada, N. (2009)

Laboratory calibration measurements of a piezoelectric lead zirconate titanate cosmic dust detector at low velocities
Advance Space Res. 43, 905-909

Ishihara, Y., S. Goossens, K. Matsumoto, H. Noda, H. Araki, N. Namiki, H. Hanada, T. Iwata, S. Tazawa, and S. Sasaki (2009), Crustal thickness of the Moon: Implications for farside basin structures, *Geophys. Res. Lett.*, 36, L19202, doi:10.1029/2009GL039708

Morota, T., Haruyama J., Honda, C., Ohtake, M., Yokota, Y., Kimura, J., Matsunaga, T., Ogawa, Y., Hirata, N., Demura, H., Iwasaki, A., Miyamoto, H., Nakamura, R., Takeda, H., Ishihara, Y., Sasaki, S. (2009)

Mare volcanism in the lunar farside Moscoviense region: Implication for lateral variation in magma production of the Moon

Geophys. Res. Lett. 36, L21202, doi:10.1029/2009GL040472

Liu, Q, Kikuchi, F., Goossens, S., Matsumoto, K., Hanada, H., Ping, J., Shi, X., Tamura, Y., Harada, Y., Asari, K., Tsuruta, S., Ishikawa, T., Kawano, N., Ishihara, Y. Noda, H., Sasaki, S., Iwata, T., Namiki, N. (2009)

S-band Same-Beam VLBI Observations in SELENE (Kaguya) and Correction of Atmospheric and Ionospheric Delay, *J. Geodetic Soc. Japan* 55, 243-254.

Araki, H., Tazawa, S., Noda, H., Migita, E., Kamiya, I., Kawano, N., and Sasaki, S. (2009)

Preliminary Results of the Lunar Topography by KAGUYA-LALT Mission
Transaction of Japan Society for Aeronautical and Space Sciences, Aerospace Technology Japan, 7, ists26,
Tk_23-Tk_25

Nogami, K., Fujii, M., Ohashi, H., Miyachi, T., Sasaki, S., Hasegawa, S., Yano, H., Shibata, H., Iwai, T., Minami, S.,
Takechi, S., Gruen, E., Srama, R. (2010)
Development of the Mercury dust monitor (MDM) onboard the BepiColombo mission
Planet. Space Sci., 58, 108-115.

Chassefière, E., J.-L. Maria, J.-P. Goutail, E. Quémerais, F. Leblanc, S. Okano, I. Yoshikawa, O. Korablev, V. Gnedych,
G. Naletto, P. Nicolosi, M.-G. Pelizzo, J.-J. Correia, S. Gallet, C. Hourtoule, P.-O. Mine, C. Montaron, N. Rouanet, J.-B.
Rigal, G. Muramaki, K. Yoshioka, O. Kozlov, V. Kottsov, P. Moisseev, N. Semena, J.-L. Bertaux, M.-Th. Capria, J.
Clarke, G. Cremonese, D. Delcourt, A. Doressoundiram, S. Erard, R. Gladstone, M. Grande, D. Hunten, W. Ip, V.
Izmodenov, A. Jambon, R. Johnson, E. Kallio, R. Killen, R. Lallement, J. Luhmann, M. Mendillo, A. Milillo, H.
Palme, A. Potter, S. Sasaki, D. Slater, A. Sprague, A. Stern, N. Yan (2010)
PHEBUS: A double ultraviolet spectrometer to observe Mercury's exosphere
Planet. Space Sci., 58, 201–223

Liu, Q., F. Kikuchi, K. Matsumoto, S. Goossens, H. Hanada, Y. Harada, X. Shi, Q. Huang, T. Ishikawa, S. Tsuruta, K.
Asari, Y. Ishihara, N. Kawano, S. Kamata, T. Iwata, H. Noda, N. Namiki, S. Sasaki, S. Ellingsen, K. Sato, K. Shibata,
Y. Tamura, T. Jike, K. Iwadate, O. Kameya, J. Ping, B. Xia, T. An, Q. Fan, X. Hong, W. Yang, H. Zhang, Y. Aili, B.
Reid, W. Hankey, J. McCallum, G. Kronschnabl, and W. Schluter (2010),
Same-beam VLBI Observations of Selene for Improving Lunar Gravity Field Model
Radio Sci. 45, doi:10.1029/2009RS004203, RS2004.

Noguchi, T., Tsuchiyama, A., Hirata, N., Demura, H., Nakamura, R., Miyamoto, H., Yano, H., Nakamura, T., Saito, J.,
Sasaki, S., Hashimoto, T., Kubota, T., Ishiguro, M., Zolensky, M. E. (2010)
Surface morphological features of boulders on Asteroid 25143 Itokawa
Icarus, 206, 319-326.

Ishihara, Y., Morota, T., Nakamura, R., Goossens, S. and Sasaki, S. (2011)
Anomalous Moscoviense basin: Single oblique impact or double impact origin?
Geophys. Res. Lett., 38, L03201, doi:10.1029/2010GL045887

Sasaki, S., Yoshimitsu, T., Kubota, T., and Yanagisawa, M. (2010)
Surface Exploration of Itokawa by MINERVA Rover on Board HAYABUSA – The First Asteroid Rover in the World
ASP Conf. Series, in press.