The 11th Symposium on Planetary Science

Date： March 15-17, 2010

Location: 4th floor, Aoba Memorial Hall, School of Engineering, Tohoku University
(Poster: 1st floor, Aoba Memorial Hall)

Cosponsor
- Planetary Plasma & Atmospheric Research Center (PPARC), Graduate School of Science, Tohoku University
- Tohoku University Global COE Program "Global Education and Research Center for Earth and Planetary Dynamics"
- Solar-Terrestrial Environment Laboratory, Nagoya University

Information on presentation:

1. **Oral:** 15min : 12min talk + 3min discussion / 20min: 15min talk + 5min discussion / 25min: 20min talk +5min discussion
   #Please test connection of your PC to the projector beforehand.

2. **Poster:** session core time: 13:15–14:15 on March 16
   #Board size:112cm (width) X 168cm (height)
   #You can display your poster(s) during the symposium.

Information of meeting dinner:

A buffet-style dinner party is going to be held after the evening session of March 16 at the restaurant "Shiki-sai" in the Aoba Memorial Hall.
- Fee: 4,000 yen (regular) / 1,000 yen (student)

#If you plan to participate in the party, please let us know that by March 11 by sending an email to "psps@pparc.gp.tohoku.ac.jp".

Information on symposium proceedings:

Symposium proceedings (non-refereed) will be made in a booklet form.
- Format: 4 pages (A4 paper size)
- Submission deadline: May 7, 2010
- Addressee: Fuminori Tsuchiya (tsuchiya@pparc.gp.tohoku.ac.jp)
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  6-3 Aoba, Aramaki, Aoba-ku
  Sendai 980-8578, Japan

#The proceedings will be printed in a monochrome mode.
#Brief abstract + reduced-size edition of viewgraphs are acceptable.
#Electrical file (word, pdf etc.) is acceptable.

Program

Monday March 15

13:00－13:10 **Welcome:**
S. Okano (Tohoku Univ.)

Chairs: H. Senshu (PERC/Chitech), T. Imamura (ISAS/JAXA), and S. Sasaki(NAOJ)

13:10－13:30 **Mars Exploration Mission "MELOS": An Overview**
T. Satoh, T. Kubota, T. Okada, K. Fujita(JAXA), H. Miyamoto(Univ. of Tokyo), and MELOS WG

13:30－13:50 **Possible role of Meso- to synoptic-scale meteorology in Martian water cycle**
T. Imamura(JAXA)

13:50－14:05 **Small and medium scale disturbances observed in a high resolution Mars atmosphere general circulation model**
Y. O. Takahashi, Y. Hayashi(Kobe Univ.), M. Odaka(Hokkaido Univ.), and W. Ohfuchi(JAMSTEC)

14:05－14:25 **Regionality of dust storm development on Mars**
K. Ogohara (Kyoto Univ.)

14:25－14:40 **Investigations of the dynamics and material transport of Martian atmosphere using a general curculation model and recent observational data**
T. Kuroda(JAXA), A. Medvedev, P. Hartogh(MPI), and M. Takahashi(Univ. of Tokyo)

14:40－14:50 **Break**

14:50－15:05 **Considerations on the specifications of Mars atmosphere and surface observation in the VIS - NIR region: Current status of lossy image compression - how to overcome the JPEG2000**
J. Takada (NIS), Y. Senda (NEC), H. Hihara (NTSpace), M. Suzuki, S. Ichikawa, and T. Seki (JAXA)

15:05－15:20 **High-resolution spectroscopy from Mars orbiter for minor atmospheric components**
Y. Kasaba, H. Nakagawa, I. Murata, T. Sakanoi(Tohoku Univ.), M. Ueno, T. Sato (JAXA), O. Korablev(IKI), F. Montmessin(UVSQ/IPSL/CNRS), and E. Neefs (BIRA/IASB)

15:20－15:40 **Search of hydrogen peroxide in Martian atmosphere with Planetary Fourier Spectroscopy(PFS) onboard Mars Express (MEX)**
S. Aoki, H. Nakagawa, Y. Kasaba, I. Murata(Tohoku Univ.), V. Formisano, M. Giuranna, and A. Geminale(IFSI/INAF)

15:40－15:55 **Submilliemter-wave sounder for MELOS**
Y. Kasai, H. Sagawa, T. Kuroda, S. Ochiai, T. Nishibori, T. Manabe, M. Kinoshita, Y. Aoyama, H. Maezawa, H. Nakagawa, Y. Kasaba, P. Hartogh, D. Murtagh, and U. Frisk

15:55－16:10 **Current Status of Millimeter/Submillimeter Wave Band Radio Telescope for Observations of Planetary Atmospheres**
H. Maezawa(Nagoya Univ.)

16:10－16:25 **Break**

16:25－16:45 **Scientific goals for MASC (Mars Aeroflyby Sample Collection)**
S. Tachibana, T. Mikouchi, Y. Miura, K. Nagao(Univ. of Tokyo), R. Okazaki(Kyushu Univ.), H. Miyamoto, S. Sugita(Univ. of Tokyo), K. Fujita(JAXA), MASC WG, MELOS WG

16:45－17:00 **Conceptual Design of Dust Corrector for Mars Aerofly by Sample Correction**
K. Fujita(JAXA), S. Tachibana(Univ. of Tokyo), MASC Gr., Mars WG

17:00－17:15 **Conceptual Design of Mars Aircraft for magnetic field observation**
A. Oyama(JAXA)

17:15－17:30 **Mars exploration: recent study of nano-bacterial fossil**
Y.Miura, and K.Udagawa (Yamaguchi Univ.)

17:30－17:40 **Break**

Chair：S. Okano (Tohoku Univ.)

17:40－18:00 **An attempt for strategic planning of planetary exploration in next decade by the Japanese Society for Planetary Sciences**
N. Namiki(Chitech), K. Ohtuski (Kobe Univ.), N. Kobayashi (JAXA), H. Demura (Aizu Univ.), Future planetary mission study group

18:00－18:15 **Optical observation conducted by Planetary Plasma and Atmospheric Research Center: Past decade and Future Prospect**
S. Okano, Y. Kasaba, T. Sakanoi, and M. Kagitani(Tohoku Univ.)

18:15－18:30 **Serious Interference with the Radio Astronomy Observations in the HF Band Caused by the Power Line Telecommunications (PLT) Disturbance**
M. Ohishi(NAOJ), M. Kitagawa(Osaka Univ.), H. Misawa, and F. Tsuchiya (Tohoku Univ.)

Tuesday March 16

Chairs：I. Yoshikawa and H. Miyamoto (Univ. of Tokyo)

9:00－9:20 **Observation of Martian atmospheric escape by two orbiters**
A. Matsuoka(JAXA), N. Terada(Tohoku Univ.), K. Seki(Nagoya Univ.), A. Yamazaki, S. Yokota, Y. Saito(JAXA), and Y. Futaana(IRF/Sweden)

9:20－9:33 **Scientific objectives of the next Mars mission: Atmospheric escape processes**
N. Terada(Tohoku Univ.), K. Seki(Nagoya Univ.), A. Matsuoka, A. Yamazaki, S. Yokota, Y. Saito, H. Hayakawa(JAXA), Y. Futaana(IRF), and Mars plasma study group

9:33－9:45 **Atmospheric escape from unmagnetized planets: Simulation studies and future observation with EXCEED**
N. Terada(Tohoku Univ.), T. Tanaka(Kyushu Univ.), H. Shinagawa(NICT), F. Tsuchiya, M. Kagitani, Y. Kasaba(Tohoku Univ.), I. Yoshikawa and K. Yoshioka(Univ. of Tokyo), M. Ueno, and A. Yamazaki(JAXA)

9:45－10:05 **Heavy ion flux enhancement in the vicinity of the Martian ionosphere during CIR passage: Mars Express ASPERA-3 Observations**
T. Hara, K. Seki, M. Yagi(Nagoya Univ.), Y. Futaana, M. Yamauchi, S. Barabash (IRF), ASPERA-3 team

10:05－10:25 **A Scientific Objectives of Future Rover Mission on Mars**
N. Namiki, T. Arai, M. Kobayashi, H. Senshu, K. Wada, S. Ohno, K. Ishibashi(Chitech), H. Miyamoto, S. Tachibana, S. Sugita, Y. Cho(Univ. of Tokyo), T. Okada, M. Ohtake, T. Kubota(JAXA), H. Demura, Y. Ogawa, T. Asada, N. Hirata, K. Kitazato, K. Okudaira, J. Terazono(Aizu Univ.), and Y. Takahashi(Hokkaido Univ.)

10:25－10:45 **Seismology in MELOS and future Mars missions**
Y. Ishihara(NAOJ), N. Kobayashi(JAXA), A. ARAYA(ERI), T.OKADA (JAXA), MELOSEIS-WG

10:45－11:00 **Measurements of Martian rotational variations by space geodetic techniques**
Y. Harada(NAOJ), T. Iwata(JAXA), Y. Ishihara, K. Asari, H. Araki, T. Ishikawa, F. Kikuchi, S. Sasaki, S. Tazawa, S. Tsuruta, H. Noda, H. Hanada, S. Goossens, K. Matsumoto(NAOJ), Y. Aoyama(NIPR) T. Imamura(JAXA), S. Okubo(Univ. of Tokyo), T. Otsubo(Hitotsubashi Univ.), Y. Kono(NAOJ), T. Takano(Nihon Univ.), H. Takeuchi(JAXA), M. Furuya, K. Heki, and K. Matsuo(Hokkaido Univ.)

11:00－11:10 **Break**

Chair：N. Iwagami (Univ. of Tokyo)

11:10－11:30 **Upcoming exploration of Venus meteorology by AKATSUKI**
T. Imamura(JAXA), AKATSUKI team

11:30－11:45 **Science purpose and performance evaluation of Longwave Infrared Camera onboard Akatsuki**
M. Taguchi, K. Sakata, M. Futaguchi(Rikkyo Univ.), T. Fukuhara, M. Sato (Hokkaido Univ.), T. Imamura, M. Nakamura, M. Ueno, M. Suzuki(ISAS/JAXA), N. Iwagami, K. Mitsuyama(Univ. of Tokyo), G. Hashimoto(Okayama Univ.)

11:45－12:00 **Periodic oscillations of zonal wind speeds at the cloud top of Venus**
T. Kouyama, M. Nakamura, T. Satoh, T. Imamura(JAXA), Y. Futaana(IRF)

12:00－12:15 **Plasma-neutral coupling and its dimensional dependence in the Earth's upper atmosphere**
Huixin Liu(Kyoto Univ.)

12:15－13:15 **Lunch**

13:15－14:15 **Poster session**: core time

Chairs：S. Sasaki (NAOJ) and Y. Kasaba (Tohoku Univ.)

14:15－14:35 **Science objectives of next mission to Jovian moons**
J. Kimura(Hokkaido Univ.)

14:35—14:50 **Satellite Formation: Supply of Solid Material to Circum-Planetary Disks**
T. Tanigawa (CPS / ILTS, Hokkaido Univ.), K. Ohtsuki (CPS / Kobe Univ.), M. Machida (NAOJ), H. Kobayashi (Jena Univ.)

14:50－15:05 **Formation of satellite systems in a circum-planetary disk around gas giant planet**
T. Sasaki, S. Ida (Tokyo Inst. Tech.), and Glen R. Stewart (LASP/U. Colorado)

15:05－15:30 **Cassini VIMS observations of Saturn's infrared aurora**
Sarah Badman(JAXA), Cassini MAG-VIMS collaboration team

15:30－15:45 **Electron acceleration in the terrestrial inner magnetosphere: prospect of Jovian inner magnetosphere investigation**
Y. Kato(Tohoku Univ.)

15:45－16:00 **Energy transfer in the Jovian coupling system and infrared auroral observation**
C. Tao(Tohoku Univ., JST/CREST), H. Fujiwara, T. Kobuna, T. Uno, T. Sakanoi, Y. Kasaba(Tohoku Univ.)

16:00－16:10 **Break**

16:10－16:25 **Generation process of Jovian quasi-periodic radio bursts**
T. Kimura, H. Misawa, F. Tsuchiya, and A. Morioka (Tohoku Univ.)

16:25－16:40 **Monitoring observation of Io's volcanic activity at wavelengths of Mid-infrared**
M. Yoneda (Tohoku Univ.), T. Miyata (Univ. of Tokyo), T. Nakamura, K. Asano, T. Asano, M. Uchiyama, Y. Ita (NAOJ), M. Kagitani, and S. Okano (Tohoku Univ.)

16:40－16:55 **Super rotation in dawn region of Jovian magnetosphere**
Y. Yamamoto, T. Tanaka, and K. Fukazawa (Kyushu Univ.)

16:55－17:10 **Estimation of plasma transport rate due to interchange instability around Io torus**
Y. Hiraki (Nagoya Univ.), F. Tsuchiya, and Y. Kato (Tohoku Univ.)

17:10－17:25 **Thunderstorm and zone/belt structures investigated by spacecraft and ground-based observations**
Y. Takahashi, M. Sato, M. Watanabe, T. Fukuhara, K. Sugiyama (Hokkaido Univ.) , K. Nakajima (Kyushu Univ.), S. Takeuchi (Fukuoka Univ.)

17:25－17:35 **Break**

17:35－18:05 **The EXCEED mission**

- **Current status of the EXCEED mission**
  I. Yoshikawa(Univ. of Tokyo) et al.
- **Observations of plasmas in the inner magnetosphere of Jupiter: The EXCEED mission and future perspective**
  F. Tsuchiya, M. Kagitani(Tohoku Univ.), K. Yoshioka, I. Yoshikawa, G. Murakami(Univ. of Tokyo), N. Terada(Tohoku Univ.), A. Yamazaki, M. Ueno(JAXA), and Y. Kasaba(Tohoku Univ.)

18:05－18:35 **Exploration of Jupiter**

- **Present status of EJSM (Europa-Jupiter System Mission)**
  S. Sasaki (NAOJ), M. Fujimoto, K. Takashima, H. Yano (JAXA), Y. Kasaba (Tohoku Univ.), J. Kimura, Y. Takahashi (Hokkaido Univ.), Jupiter WG
- **Jovian Exploration: toward the largest and strongest plasma object in our solar system**
  Y. Kasaba(Tohoku Univ.) and Jovian Magnetospheric Orbiter Science Forum

19:00－20:30 **Meeting dinner**

Wednesday March 17

Chairs：T. –H. Watanabe (Nat'l Inst. Fusion Sci.) and H. Misawa (Tohoku Univ.)

9:00－9:15 **Prospects of future explorations of Jupiter's inner magnetosphere viewed from radio observations**
H. Misawa, and F. Tsuchiya (Tohoku Univ.)

9:15－9:30 **Observation System of LLFAST: Jovian Radio Wave Observation using Moon-Earth space VLBI**
T. Iwata (JAXA), K. Imai (Kochi N. C. Tech.), H. Misawa, F. Tsuchiya, A. Kumamoto (Tohoku Univ.), H. Takeuchi (JAXA), T. Kondo (NICT), T. Nakajo (Fukui Univ. Tech.), H. Noda, K. Asari (NAOJ), and Y. Nariyuki (Kochi N. C. Tech.)

9:30－9:45 **Jupiter radio observation by the Japanese e-VLBI network**
K. Imai, H. Kuzuoka, J. Azuma, M. Imai (Kochi N. C. Tech.), T. Kondo, A. Ishii (NICT), H. Misawa, F. Tsuchiya (Tohoku Univ.), T. Nakajo (Fukui Univ. Tech.), and T. Ohno (Niyodogawa Cho)

9:45－10:00 **An approach to estimate the source location of Jovian decametric radio emissions based on VLBI observations**
T. Nakajo (Fukui Univ. Tech.), T. Iwata (JAXA), K. Imai (Kochi N. C. Tech.), H. Misawa, F. Tsuchiya (Tohoku Univ.), and T. Kondo(NICT)

10:00－10:15 **Comparison between Voyager and Cassini observations of Jovian decametric and hectometric radio emissions**
M. Imai, K. Imai (Kochi N. C. Tech.), A. Lecacheux (CNRS), C. A. Higgins (Middle Tennessee State Univ.), J. R. Thieman (NASA/GSFC)

10:15－10:30 **Simulation study on asymmetrical features of intensity and frequency in the Io-related decametric radio sources**
K. Matsuda, H. Misawa, N. Terada, Y. Katoh,and C. Tao (Tohoku Univ.)

10:30－10:40 Break

10:40－10:55 **Observations of Planets with the Suzaku X-ray Observatory**
Y.Ezoe, K. Ishikawa, T. Ohashi (Tokyo Metropolitan Univ.), N.Y. Yamasaki, K. Mitsuda (JAXA), R. Fujimoto (Kanazawa Univ.), Y. Miyoshi (Nagoya Univ.), N. Terada (Tohoku Univ.), Y. Futaana (IRF), and Y. Uchiyama (Stanford Univ.)

10:55－11:10 **From Planets to neutron stars and black holes --- Exploration of Electromagnetic Environments by Decameter and Decimeter Radio Waves**
H. Oya (Tohoku Univ.)

11:10－11:25 **MHD simulation of the planetary magnetospheres by using various scalar type supercomputer systems**
K. Fukazawa (Kyushu Univ.), T. Umeda, T. Ogino (Nagoya Univ.), T. TANAKA (Kyushu Univ.)

11:25－11:40 **Extended MHD effects in magnetosphere-ionosphere coupling**
T. –H. Watanabe (Nat'l Inst. Fusion Sci.)

11:40－11:55 **On the solar wind nonequilibrium plasmas in the inner Heliosphere**
Y. Nariyuki (Kochi N. C. Tech.)

11:55－12:10 **Observation of the spectrum fine structures of the solar radio burst ～First results of the new solar radio observation system of Tohoku University～**
K. Iwai, H. Misawa, F. Tsuchiya, A. Morioka (Tohoku Univ.)

12:10－13:15 **Lunch**

Chair：A. Kumamoto (Tohoku Univ.)

13:15－13:30 **Observations of the lunar surface and subsurface structures by Lunar Radar Sounder (LRS) onboard the Kaguya (SELENE)**
A. Kumamoto, T. Ono, H. Nakaagwa (Tohoku Univ.), Y. Yamaguchi, S. Oshigami (Nagoya Univ.), A. Yamaji (Kyoto Univ.), T. Kobayashi(KIGAM), Y. Kasahara (Kanazawa Univ), H. Oya(Tohoku Univ.)

13:30－13:45 **KAGUYA observation of the lunar exosphere**
S. Yokota, Y. Saito, K. Asamura, T. Tanaka, M. Nishino (JAXA), H. Tsunakawa (Tokyo Inst. Tech.), KAGUYA MAP Team

13:45－14:00 **Effect of the solar wind entry into the deepest lunar wake**
M. N. Nishino, M. Fujimoto, Y.Saito, S. Yokota(JAXA), Y. Kasahara (Kanazawa Univ), Y. Omura (Kyoto Univ.), Y. Goto (Kanazawa Univ.), K. Hashimoto (Kyoto Univ.), A. Kumamoto, T. Ono (Tohoku Univ.), H. Tsunakawa, M. Matsushima, F. Takahashi (Tokyo Inst. Tech.), H. Shibuya (Kumamoto Univ.), H. Shimizu, T. Terasawa (Univ. of Tokyo)

14:00－14:15 **Formation of the Sodium Ring in Mercury's magnetosphere**
M. Yagi, K. Seki, Y. Matsumoto(Nagoya Univ.), D. C. Delcourt, and F .Leblanc(CNRS)

14:15－14:30 **A numerical study of global water group neutral cloud distribution in Saturn's inner magnetosphere**
H. Tadokoro, H. Misawa, F. Tsuchiya, Y. Kato, A. Morioka, and M. Yoneda(Tohoku Univ.)

Posters

Session core time: 13:15-14:15 on Tuesday, March 16 (@1st floor, Aoba Memorial Hall)

1. Study of dynamic circulation of planetary materials: carbon and chlorine and their sources
Y.Miura and K.Udagawa (Yamaguchi Univ.)

2. Lunar exploration: Impact origin of lunar highland & possible Remnants of terrestrial fossil
Y.Miura and K.Udagawa (Yamaguchi Univ.)

3. Investigating the surface of earth-like exoplanets via scattered light
Y. Fujii, H. Kawahara, Y. Suto, A. Taruya, S. Fukuda, T. Nakajima(Univ. of Tokyo), and E. L. Turner (Princeton Univ.)

4. Electric and magnetic filed measurement by Mars lande
Y. Takahashi (Hokkaido Univ.), H. Shimizu (Univ. of Tokyo), K. Ishizaka (Toyama Pref. Univ.)

5. The tail formation and ion escape processes for the Martian ionosphere: The comparison between no IMF and finite IMF cases
Y. Kubota, K. Maezawa(JAXA), H. Jin(NICT)

6. Investigation of Martian atmosphere by High-resolution infrared - submillimeter spectroscopy
H. Nakagawa, Y. Kasaba, S. Aoki, I. Murata, S. Okano (Tohoku Univ.), H. Maezawa (Nagoya Univ.), H. Sagawa(MPI), Y. Kasai(NICT)

7. Investigation of X-ray emission from Mars at solar minimum with Suzaku
K. Ishikawa, Y. Ezoe, T. Ohashi (TMU), Y. Futaana (IRF), N. Terada (Tohoku Univ.) et al.

8. Climatic variation on Mars as seen from the polar region layered deposits
K. Akisato, and S. Okano (Tohoku Univ.)

9. A feasibility study for cameras on board AKATSUKI
S. Takagi, N. Iwagami (Univ. of Tokyo)

10. Synchronous observations of Venus with Akatsuki using optical reflecting telescope
T. Fukuhara, Y. Takahashi, M. Watanabe, M. Sato, S. Watanabe, S. Sato (Hokkaido Univ.)

11. Analyzing the Venus' atmospheric waves by ground-based infrared spectroscopy
M. Hosouchi (Univ. of Tokyo), S. Ohtsuki (JAXA), N. Iwagami (Univ. of Tokyo)

12. Plasma environment of Venus controlled by IMF directions
K. Masunaga(Tohoku Univ.), Y. Futaana, M. Yamauchi(IRF), M. Kagitani, Y. Kasaba, S. Okano(Tohoku Univ.)

13. Estimation of energy transport by atmospheric turbulence in Venus based on the VEX/VMC UV images
T. Teraguchi, Y. Kasaba, N. Hoshino (Tohoku Univ.), Y. Takahashi, S. Watanabe (Hokkaido Univ.), M. Yamada (JAXA)

14. Effects of atmospheric waves on the temporal variation of the O2-1.27 um nightglow distribution
N. Hoshino, H. Fujiwara (Tohoku Univ.), M. Takagi (Univ. of Tokyo), Y. Kasaba (Tohoku Univ.), Y. Takahashi (Hokkaido Univ.)

15. Development of the detector for ultraviolet spectroscopy in the BepiColombo mission
G. Murakami, K. Yoshioka, K. Sakai, T. Honma, I. Yoshikawa (Univ. of Tokyo)

16. Prototype Model of Mercury Sodium Atmosphere Spectral Imager
S. Kameda(JAXA), G. Murakami, I. Yoshikawa(Univ. of Tokyo)

17. Latitudinal Distributions of Haze in Jovian Stratospheres from IRTF/SpeX
T. M. Sato, Y. Kasaba (Tohoku Univ.), T. Satoh(JAXA)

18. Io's volcanic effect in Jupiter's inner magnetosphere

M. Yoneda (Tohoku univ.), H. Nozawa (Kagoshima N. C. Tech.), H. Misawa, M. Kagitani, and S. Okano (Tohoku Univ.)

19. Ground-based observation of Jupiter plasma torus

M. Kagitani, M. Yoneda, and S. Okano (Tohoku Univ.)

20. Variation characteristics of Jupiter's radio emission in the solar quiet period

H. Misawa (Tohoku Univ.)

21. Development of the near infrared echelle spectrometer for the studies of Jovian thermospheric ion and neutral winds

T. Uno, Y. Kasaba, and T. Sakanoi (Tohoku Univ.)

22. EUV spectroscopic observation of Jupiter's inner magnetosphere

K. Yoshioka, I. Yoshikawa, G. Murakami (Univ. of Tokyo), F. Tsuchiya, and M. Kagitani (Tohoku Univ.)

23. Multi-layer coating mirror for an X-ray observation of Jupiter aurorae

A. Yamazaki (JAXA)

24. Study on the low-energy electron instrument for Jovian missions

S. Kasahara, K. Asamura, and Y. Saito (JAXA)

25. Detection of the OI 630nm emission from Enceladus torus by groundbased observation

K. Kodama, M. Kagitani, and S. Okano (Tohoku Univ.)

26. A numerical study of energetic ion distribution in Saturn's inner magnetosphere

H. Tadokoro, H. Misawa, F. Tsuchiya, Y. Kato, and A. Morioka (Tohoku Univ.)

27. Development of the high power-efficient sounder system for the planetary exploration

A. Kumamoto, T. Ono, Y. Kasaba (Tohoku Univ.), K. Higuchi(JAXA), T. Kobayashi(KIGAM)

28. New multilayer coating for ISS

K. Sakai, T. Honma, G. Murakami, K. Yoshioka, I. Yoshikawa (Univ. of Tokyo)

29. Formation Process of Gas Giant Planet and Circumplanetary Disk: High Resolution Nested-Grid simulation

M. Machida, E. Kokubo (NAOJ), and M. Matsumoto (Hosei Univ.)

30. Tohoku University collaborative study on planetary surface and interior

N. Nakamura, T. Ono, A. Kumamoto, T. Kuritani, H. Fujimaki, and H. Terasaki (Tohoku Univ.)

31. Planetary Plasma Studies in Tohoku University in 2008-2010

S. Okano, T. Ono, N. Terada, Y. Kato, Y. Kasaba, T. Sakanoi, M. Kagitani, H. Misawa, A. Kumamoto, and F. Tsuchiya (Tohoku Univ.)

32. Planetary Atmospheric Studies in Tohoku University in 2008-2010

Y. Kasaba, I. Murata, H. Fujiwara, N. Terada, S. Okano, T. Sakanoi, H. Nakagawa, K. Terada, and C. Tao (Tohoku Univ.)

33. Toward the Next Generation: Projects and Instruments for Plasma and Atmospheric Studies in Tohoku University in 2008-2010

Y. Kasaba, S. Okano, T. Ono, I. Murata, H. Misawa, T. Sakanoi, A. Kumamoto, H. Fujiwara, N. Terada, F. Tsuchiya, Y. Kato, M. Kagitani, H. Nakagawa, K. Terada, and C. Tao (Tohoku Univ.)