SELENE Symposium 2013 Programme

**Date:** Jan. 23(Wed) – 25 (Fri), 2013  
**Place:** JAXA Sagamihara Campus, Sagamihara, Japan  
http://www.isas.jaxa.jp/e/about/center/sagami/access.shtml  
**Room:** Oral session/ ISAS, A-building-2F Conference Room  
Poster session/ ISAS, A-building-1F Meeting Room (Room No. 1134)

-------------------------------- Jan/23 (Wed) --------------------------------

Registration 9:00 - 9:30

AM 9:30 - 10:00 Chair T. Iwata (JAXA)  
**Welcome address:** M. Nakamura (JAXA) and H. Kuninaka (JAXA)  
**LOC announcement:** T. Iwata (JAXA) (LOC Chair)

10:00 - 10:30  
**Opening Address:** SELENE Achievements (Introductive Summary): J. Haruyama (SOC Chair)

AM1 10:30 – 12:00 Chair T. Iwata (JAXA)  
**Introduction of SELENE Data / 6 (x 15min)**  
Selene Data for Surface and Subsurface Structures (TC, LRS DATA): J. Haruyama (JAXA)  
Selene Data for Internal Structures (RSAT, VRAD, LALT DATA): Y. Ishihara (AIST) *(Invited)*  
Selene Data for Mineralogy and Geochemistry (MI, SP, GRS DATA): H. Nagaoka (Waseda Univ.) et al. *(Invited)*  
SELENE Data for Studies of Plasma and Electromagnetic Environment (LMAG, PACE, RS, LRS DATA): M. N. Nishino (JAXA)  
Selene Data for More Users – SELENE (KAGUYA) Data Archive and KAGUYA 3D Moon Navi (KAGUYA 3D GIS) system - : M. Hareyama (JAXA) et al. *(Invited)*  
WMS/WFS-Based Lunar Web-GIS with Reflectance Spectra Plotting Functions: N. Hirata (Aizu Univ.) et al.
PM1 13:00 - 15:00 Chair M. Ohtake (JAXA)

**Global data / 8 (x 15min)**

One Moon, Many Measurements: Cross Calibration/Validation of Optical Data from SELENE and Chandrayaan-1: C. M. Pieters (Brown Univ., US)

The Moon: Clementine, Kaguya, and Grail Gravity Surface Reveal its Wave Woven Tectonics: G. G. Kochemasov (IGEM RAS, Russia)

Significance of Kaguya GRS-Detected Si Abundance and Distribution: K. J. Kim (KIGAM, S. Korea) et al.

Hyperspectral Mapping of Major Minerals on the Moon by KAGUYA Spectral Profiler: R. Nakamura (AIST) et al.

Global Survey of Mg-spinel on the Moon by SELENE Spectral Profiler: S. Yamamoto (NIES) et al.


Improved Precision Orbit Determination Of Lunar Orbiters from the Grail-Derived Lunar Gravity Models: S. Goossens (NASA) et al.

Distribution of Radon Gas Emanation on the Lunar Surface observed by SELENE Alpha-Ray Detector (ARD): K. Kinoshita (Kobe Univ.) et al.

Coffee break 15:00 - 15:15

PM2 15:15 - 16:05 Chair M. Ohtake (JAXA)

**Plasma and Electromagnetic Environment I / 2 (x 25min)**

Lunar Science Addressed by Natural Wave Measurements around the Moon: Y. Kasahara (Kanazawa Univ.) et al.

Small-scale Magnetic Fields on the Lunar Surface Inferred from Plasma Sheet Electrons: Y. Harada (Kyoto Univ.) et al. *(Invited)*

16:05 – 16:10 LOC announcement

PM3 16:10 - 18:00

* Demonstrations (PACE, LMAG, LRS (LRS/WFC&NPW), RS, VRAD, RSAT)

* Posters

<Welcome Party> 18:00 - @ ISAS Cafeteria
20:30 Adjourn

-------------------------------- Jan/24 (Thr) --------------------------------

Registration 9:00 - 9:30

AM1 9:30 - 11:35 Chair: J. Haruyama (JAXA)
  Plasma and Electromagnetic Environment II / 5 (x 25min)
  Multi-Scale Solar Wind Plasma Interaction with the Moon: Y. Saito (JAXA) et al.
  Control of Lunar External Magnetic Enhancements by IMF Polarity: A case Study: M. N. Nishino (JAXA) et al.
  Backscattering of Solar Wind Particles from the Moon Regolith: Discovery, Properties, Influences, and Applications: Y. Futaana (Swedish Institute of Space Physics, Sweden) et al. (Invited)
  Electrostatic Solitary Waves and Plasma Distributions near the Moon: K. Hashimoto (Kyoto Univ.) et al.

- Lunch - 11:35 - 12:35

Group photo 12:35 - 12:45

PM1 12:45 - 14:25 Chair: J. Haruyama (JAXA)
  Mare formation I / 4 (x 25 min)
  Formation History of Oceanus Procellarum - Mare Volcanism in Oceanus Procellarum and Mare Imbrium: Timing and Characteristics of the Latest Mare Eruption of the Moon: T. Morota (Nagoya Univ.) et al.
  Formation History of Sinus Iridium - Geological Features Diversity and Geologic Investigation of Sinus Iridium - : Le Qiao (PSI, China University of Geosciences, China) et al. (Invited)
  Formation History of Lunar Marius Hills Plateau - exhibiting Early Imbrian Model Age -: R. Imaeda (Univ. of Tokyo) et al. (Invited)
  The Basalts of Mare Frigoris: G. Kramer (LPI, US)
Coffee break 14:25 - 14:40

PM2 14:40 - 15:55 Chair: J. Haruyama (JAXA)
  Mare formation II / 3 (x 25 min)
  Formation History of Mare Orientale - Young Volcanism Contemporary with ∼2Ga PKT Volcanic Peak Period - Y. Cho (Univ. of Tokyo) et al. (Invited)
  Formation History of Mare Moscoviense - Anomalous Moscoviense Basin: Double Impact makes Basin Anomalous - Y. Ishihara (AIST) (Invited)
  Formation History of South Pole Aitken - from Selenodesy and Other Kaguya data - S. Sasaki (NAOJ) et al.

Coffee break 15:55- 16:10

PM3 16:10 - 17:25 Chair: J. Haruyama (JAXA)
  Mare formation III / 3 (x 25 min)
  Formation Histories of Multi-Layered Maria: S. Oshigami (NAOJ) et al. (Invited)
  Monte-Carlo Inversion of LRS-LALT Simulaneous Observation Data for Estimate of Mare Regolith Thickness: T. Kobayashi (KIGAM, S. Korea) et al.

17:25 – 17:30 LOC announcement

17:30 Adjourn

-------------------------------- Jan/25 (Fri) --------------------------------

Registration 9:00 - 9:30

AM1 9:30 - 11:35 Chair: N. Kobayashi (JAXA)
  Crust Stratigraphy / 5 (x 25min)
  Compositional Estimation of the Lunar Highland Crust: M. Ohtake (JAXA) et al.
  Components and Character of the Lunar Crust: Constraints on Magma Ocean Formation and Evolution: C. M. Pieters (Brown Univ., US)

The Mafic Component of the Lunar Crust from Selene Spectral Profiler Data: S. T. Crites (HIGP, US) et al.

A Region extended from The Earliest Anorthositic Crust of the Farside Moon. And Ejecta from Possible Procellarum Basin as revealed by the Kaguya Remote Sensing Data and Lunar Meteorites: H. Takeda (Chiba Institute of Technology) et al.

Lunch 11:35 - 12:45

PM1 12:45 - 13:30 Chair: N. Kobayashi (JAXA)

Internal Structure / 3 (x 15min)

The Depth of Magnetic Source Body beneath Reiner Gamma on the Moon and the Limitation of the Lunar Radar Sounder: N. Nakamura (Tohoku Univ.) et al.

Seismic Tomography of Lunar Crust and Mantle: Insight into PKT and Deep Moonquakes: D. Zhao (Tohoku Univ.)

Dependence of the Tidal Response on the Internal Structure of the Moon: Geodetic Implication to the Partial Melt Layer at the Lowermost Part of the Lunar Mantle: Y. Harada (Univ. of Tokyo) et al.

Coffee break 13:30 - 13:45

13:45 - 15:45

* Demonstrations (TC, MI, SP, LRS (sounder), ARD)
* Posters

PM2 15:45 - 17:15 Chair T. Iwata (JAXA)

Polar region / 2 (x15min)


Bright Inside Shackleton Crater at Lunar South Pole: J. Haruyama (JAXA)

Future missions / 4 (x15min)

The Present-Day Lunar Meteoroid Flux – A Review of Observational Techniques, Results, and Future Prospects: J. Oberst (DLR, Germany)

Contribution of SELENE-2 Geodetic Measurements to Constrain the Lunar Internal
Structure: K. Matsumoto (NAOJ) et al.

Applications of Differential VLBI for Short-Arc Docking in a Lunar Human Mission: Q. Liu (Shanghai Astronomical Observatory, China)

To advance future lunar missions with supports from the public - from SELENE (Kaguya) experience: J. Haruyama (JAXA)

17:15 – 17:30 Chair T. Iwata (JAXA)

Closing of the Symposium

Conveners: M. Nakamura (JAXA) and H. Kuninaka (JAXA)

LOC chair: T. Iwata (JAXA)

<Panel discussion with the public> 18:30 - @ Sagamihara City Museum (next to ISAS)

(Japanese - English translators will be prepared.)
P2 T. Arimoto (Univ. of Tokyo) et al.: Composition and Crystallinity of Dark Mantle Deposits on the Moon
P3 Y. Dake (Kyoto Univ.) et al.: The Mid Eratosthenian Formation of A Mare Ridge in Northern Imbrium
P4 Y. Hayashi (Aizu Univ.) et al.: Detection and Visualization of the Absorption Features of the Moon Based On the Data from Spectral Profiler (SP) Onboard SELENE/ Kaguya
P5 Y. Hirai (Waseda Univ.) et al.: The Relationship between the Abundance of Radioactive Elements and Eruption Ages of Lunar Mare Basalts in the Procellarum KREEP Terrane
P6 K. Ishiyama (Tohoku Univ.) et al.: Estimation of the Permittivity and Porosity of the Lunar Uppermost Basalt Layer Based On SELENE Observation Data
P7 M. Kawamura (Univ. of Tokyo) et al.: The Effect of Magnetic Anomalies on the Detection of Moon Originating Ions
P9 Y. Kumamoto (Tohoku Univ.) et al.: Determination of the Permittivity of the Lunar Surface Based on the Radar Echo Intensity observed by the KAGUYA
P10 Kuriyama (Univ. of Tokyo) et al.: Impact Melts on the Central Peaks of Lunar Craters
P11 R. Moriuchi (Kanazawa Univ.) et al.: Feasibility Study on the Estimation of Lunar Surface Permittivity using the Interference of the AKR
P12 T. Nakashima (Tohoku Institute of Technology) et al.: Magnetic Fluctuations detected by Kaguya Nightside of the Moon
P13 Y. Ogawa (Aizu Univ.) et al.: VIS-NIR Spectral Features around the Lunar Swirls observed by Spectral Profiler and Implications for the Origin of the Albedo Structure
P14 J. Ping (NAOC, Chinese Academy of Sciences, China) et al.: Igneous and Impacting Structure of the Schrödinger Crater
P15 C.K. Shum (Ohio State Univ., US.) et al.: Feasibility Studies on the 2nd Degree Lunar Potential Love Number Estimation Using Satellite Altimetry
P16 Y. Takahashi (Kanazawa Univ.) et al.: Analysis of Wave Phenomena around the Lunar Magnetic Anomaly observed by WFC onboard KAGUYA
P17 K. Uda (Kanazawa Univ.) et al.: Calibration of the KAGUYA/ WFC Data for AKR Polarization Analysis
P18 Y. Yamamoto (JAXA) et al.: Data Publication System of Kaguya High Definition Television