DAY-1

Dec 4, Thu. Morning

09:00 - 18:00  Registration

09:30 - 09:35  Logistics from LOC, Greetings  Tatsuaki Okada

09:35 - 10:00  Brief introduction of this symposium: Purposes and Goals  Masaki Fujimoto

10:00 - 10:15  Development of Hayabusa2 sampler: Current status  Shogo Tachibana

10:15 - 10:30  OSIRIS-REx Mission Sample Science: Analysis of Asteroid Bennu Regolith  Harold C. Connolly Jr.

10:30 - 10:45  Coffee Break

10:45 - 11:00  First results by ESA’s Rosetta mission on comet 67P/Churyumov-Gerasimenko  Maria A. Barucci

11:00 - 11:15  Numerical Simulations of Granular Processes on Asteroid Surfaces: a Tool to Interpret Imaged Asteroid Surfaces and to Help in the Design of Asteroid Space Missions  Patrik Michel (Invited)

11:15 - 11:30  Human Exploration of Near-Earth Asteroids and Sample Collection Considerations  Paul A. Abell

11:30 - 11:45  Spectral Variation on Asteroid Itokawa Suggesting Regional Resurfacing  Sumire C. Koga

11:45 - 12:00  Miniature Lightweight X-ray Optics (MiXO) for Surface Elemental Composition Mapping  Jaesub Hong

12:00 - 13:00  Lunch

13:00 - 14:30  Poster Viewing

Dec 4, Thu. Afternoon

14:30 - 14:45  Collisional history of asteroid Itokawa recovered from EBSD and 40Ar/39Ar analyses of two particles  Fred Jourdan

14:45 - 15:00  Asteroid 25413 Itokawa chronology by Ar Analyses  Jisun Park (AO2)

15:00 - 15:15  Development of in-situ U-Pb dating of Itokawa particles  Kentaro Terada (AO2)

15:15 - 15:30  Studies of Itokawa’s surface exposure by measurements of cosmic-ray produced nuclides  Kunishiko Nishizumi (AO2)

15:30 - 15:45  Coffee Break

15:45 - 16:00  The Cosmic Ray Exposure Age Probability Density Distribution of Hayabusa Grains  Matthias M.M. Meier

16:00 - 16:15  Asteroid Itokawa’s history studied by correlated spectroscopy, X-ray tomography and noble gas mass spectrometry  Henner Busemann (AO2)

16:15 - 16:30  Lithium and Boron Isotopic Ratios of Olivine Grains from the Itokawa Asteroid  Wataru Fujiya (AO2)

16:30 - 16:45  A Combined Mineralogical and Noble Gas Study of Four Itokawas Particles: A progress Report  Takaaki Noguchi (AO2)

16:45 - 17:00  Visible and Near-Infrared Spectral Survey of NIPR Meteorite Chip Samples  Takahiro Hiroi (Invited)

17:00 - 17:15  Spectroscopic Measurements on Asteroid Analogues at the Planetary Emissivity Laboratory (PEL)  Sabrina Ferrari

17:15 - 17:30  Surface Material Investigations by Ground Based Observations and/or Spacecraft Data  Thomas H. Burbine (Invited)

17:30 - 18:00  Discussions for Day-1

18:30 - 20:30  Reception Party (at ISAS Cafeteria)

20:30  End of Day-1
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**DAY-2**

**Dec 5, Fri, Morning**  
Chairs: Takahiro Hiroi, Thomas H. Burbine

09:00 – 09:15  
**Space weathering and Regolith**  
Space weathering effects and the case of (16173) 1999JU3  
Maria A. Barucci

09:15 – 09:30  
Space-weathering Features on Two Hayabusa Particles Images by Helium Ion Microscopy  
Elena Dobrica  
(Ryan C. Ogiore, AO2)

09:30 – 09:45  
A Combined Cathodoluminescence and Micro-Raman Study of Plagioclase from Asteroid Itokawa: An Implication for Study of Space Weathering Processes  
Arnold Gucsik (AO2)

09:45 – 10:00  
Can We Distinguish Between Shock-Darkened and Space-Weathered Asteroids?  
Tomas Kohout

10:00 – 10:15  
Depth Profiling Analysis of Solar Wind Helium Implanted in a NASA GENESIS Sample and Implications to JAXA HAYABUSA Samples  
Hisayoshi Yurimoto (AO2)

10:15 – 10:30  
Coffee Break

10:30 – 10:45  
Solar Ion Processing of Itokawa Grains: Reconciling Model Predictions with Sample Observations  
Roy Christoffersen

10:45 – 11:00  
Insights into Regolith Dynamics from the Irradiation Record Preserved in Hayabusa Samples  
Lindsay Keller

11:00 – 11:15  
Influence of the Solar Wind Proton in Minerals Contained C-type Asteroids  
Yusuke Nakauchi

11:15 – 11:30  
Surface morphologies and their origins of Itokawa regolith particles  
Akira Tsuchiyama (AO2)

11:30 – 11:45  
Distribution of space weathered rim on Itokawa regolith particles and implication to space weathering of Asteroid Itokawa  
Toru Matsumoto

11:45 – 12:00  
Three Dimensional Structures of Aggregate-type Itokawa Particles Analyzed by Two Energy Synchrotron Computed Tomography  
Toru Yada

12:15 – 13:15  
Lunch

**Dec 5, Fri, Afternoon**  
Chairs: Daniel J. Scheeres, Hideyasu Kojima

13:15 – 13:30  
Precise Determination of Ca Isotopic Compositions in Bulk Meteorites by Thermo Ionization Mass Spectrometry (TIMS)  
Hsin-Wei Chen

13:30 – 13:45  
Abundant amorphous silicates in primitive chondrites: Implications for asteroid Bennu  
Devin L. Shrader

13:45 – 14:00  
Inhomogeneity of the Pultusk H Chondrite Regolith Breccia as a Record of Dynamic Evolution of Parent Body  
Agata Krzesinska (travel grant)

14:00 – 14:15  
Magnetite as Possible Template for the Synthesis of Chiral Organics in Carbonaceous Chondrites  
Queenie H. S. Chan

14:15 – 14:30  
Mineralogical, isotopic, and structural changes of organic materials in experimentally heated Murchison  
Aiko Nakato

14:30 – 14:45  
H, C and N isotopic compositions of NaCl bearing organic sample in Hayabusa category 3 returned samples  
Motoo Ito

14:45 – 15:00  
X-ray absorption spectroscopic study of carbonaceous materials from Hayabusa-returned samples  
Hikaru Yabuta

15:00 – 15:30  
Coffee Break

15:30 – 15:45  
Mineralogy of Itokawa Dust Particles with Possible Shock-Induced Melting  
Tomoki Nakamura (AO2)

15:45 – 16:00  
Petrography and TEM study of two Itokawa particles  
Mutsumi Komatsu (AO2)

16:00 – 16:15  
Consortium study of the largest Itokawa particle  
Masayuki Uesugi

16:15 – 16:30  
Probing Meteorite Matrix using Non-Destructive Techniques  
Epifanio Vaccaro (travel grant)

**Dynamics of asteroids**

16:30 – 16:45  
The Strength of Rubble Pile Asteroids  
Daniel J. Scheeres (Invited)

16:45 – 17:00  
Crater efficiency on an asteroid surface covered with a block layer  
Eri Tatsumi

17:00– 18:00  
Summary and Wrap-Up of this symposium  
Masanao Abe

Adjourn

18:00–19:00  
Tour of Curation Center and Sagamihara Campus  
Guided by Toru Yada, Tatsuaki Okada

**POSTERS**
Breaking asteroid produces big fragments and huge gas-dust cloud – a possible
environment for mechanical gravitational separation of primordial mineral grains by
density

Gennady G. Kochemasov

Impact melt on asteroids: New insights from one-dimensional simulations
Stephanie N. Quintana (travel grant)

Abiotic formation of amorphous carbonaceous particles by a HMX
(cyclotetramethylenetetranitramine) explosion experiment; implication from organic
matter and the quench effect
Yoshinori Takano

TEM observation of carbonaceous particles in Hayabusa-returned samples
Masayuki Uesugi

Policy and rules for JAXA Extraterrestrial Curation Center Activity
Tatsuaki Okada

Evaluation of Contamination Control in Hayabusa Mission Based on Initial Description
Toru Yada

Recent Activities on the Curation of Antarctic Meteorites in National Institute of Polar
Research
Naoya Imae

The contamination control for Hayabusa-returned sample in Extraterrestrial Sample
Curation Center of JAXA
Yuzuru Karouji

Comparison of the mineral ratios of Itokawa particles recovered from sample catcher
room A and B based on additional data
Kazuya Kumagai

Progresses of consortium studies for Hayabusa returned samples: troilite and
phosphate-bearing particles
Yuzuru Karouji

Shock state of Itokawa regolith grains
Michael Zolensky

Combined Chemical/Elemental Analysis and Charging Properties Measurements of
in situ analyses of returned particles from the asteroid Itokawa
Fabrice Cipriani (AO2)

Almahata Sitta meteorite fall – the view of magnetism
Viktor H. Hoffmann

Databases of Meteorite Bulk Compositions and Their Cluster Analyses
Hideaki Miyamoto

Developing in-situ micro-XRD of hydrated meteorites and their components
Ashley J. King

Laboratory Simulation of the Effect of FeS on Space Weathering
Mizuki Okazaki

Photometry of Silicate-Organics Mixtures as C-type Asteroid Surface Analogs
Ayaka Fujiwara

Carbon-bearing textures for terrestrial age data of the collected meteorites
Yasunori Miura

Various carbon-bearing grains and textures of the Chelyabinsk and Nio meteorites
Yasunori Miura