

Thursday, March 10, 2011
SPECIAL SESSION:
RESULTS FROM HAYABUSA!
8:30 a.m. Waterway Ballroom 4

Chairs: Takahiro Hiroi
Tomoki Nakamura

- 8:30 a.m. Tsuchiyama A. * Ebihara M. Kimura M. Kitajima F. Kotsugi M. Ito S. Nagao K. Nakamura T. Naraoka H. Noguchi T. Okazaki R. Uesugi K. Uesugi M. Yurimoto H. Ireland T. R. Sandford S. A. Zolensky M. Fujimura A. Abe M. Yada T. Mukai T. Okada T. Ishibashi Y. Shirai K. Ueno M. Kawaguchi J. Yoshikawa M.
[*Preliminary Examination of Particles Recovered from the Surface of the Asteroid 25143 Itokawa by the Hayabusa Mission*](#) [#1788]
 Particles of <~100 μm were recovered from the surface of the asteroid Itokawa by the Hayabusa mission. Preliminary examination of these particles will start from January 2011. The outline of the examination and results will be presented.
- 8:45 a.m. Fujimura A. Abe M. Yada T. * Nakamura T. Noguchi T. Okazaki R. Ishibashi Y. Shirai K. Okada T. Yano H. Zolensky M. E. Sandford S. Ueno M. Mukai T. Yoshikawa M. Kawaguchi J.
[*Processes to Open the Container and the Sample Catcher of the Hayabusa Returned Capsule in the Planetary Material Sample Curation Facility of JAXA*](#) [#1829]
 Processes in the curation facility of the container and the sample catcher in the reentry capsule of the Japanese spacecraft Hayabusa, which returned from near-Earth asteroid Itokawa to the Earth on June 13, 2010, is presented here.
- 9:00 a.m. Nakamura T. * Noguchi T. Tanaka M. Zolensky M. E. Kimura M. Nakato A. Ogami T. Ishida H. Tsuchiyama A. Yada T. Shirai K. Okazaki R. Fujimura A. Ishibashi Y. Abe M. Okada T. Ueno M. Mukai T.
[*Mineralogy and Major Element Abundance of the Dust Particles Recovered from Muses-C Regio on the Asteroid Itokawa*](#) [#1766]
 Mineralogy, mineral chemistry, and micro-textures of the Itokawa particles are characterized using synchrotron radiation X-ray diffraction and transmission and field-emission electron microscopes.
- 9:15 a.m. Tsuchiyama A. * Uesugi M. Uesugi K. Nakano T. Nakamura T. Noguchi T. Noguchi R. Matsumoto T. Matsuno J. Nagano T. Takeuchi A. Suzuki Y. Ebihara M. Ireland T. R. Kitajima F. Nagao K. Naraoka H. Okazaki R. Sandford S. A. Yurimoto H. Zolensky M. E. Fujimura A. Abe M. Yada T. Mukai T. Kawaguchi J. Yoshikawa M.
[*Three-Dimensional Structures of Particles Recovered from the Asteroid Itokawa by the Hayabusa Mission and a Role of X-Ray Microtomography in the Preliminary Examination*](#) [#1777]
 Three-dimensional structures of particles of regolith on the asteroid Itokawa will be examined by microtomography as a part of the preliminary examination, which began in January 2011. A role of the tomography in the examination will be also presented.

- 9:30 a.m. Ebihara M. * Sekimoto S. Hamajima Y. Yamamoto M. Kumagai K. Oura Y. Shirai N. Ireland T. R. Kitajima F. Nagao K. Nakamura T. Naraoka H. Noguchi T. Okazaki R. Tsuchiyama A. Uesugi M. Yurimoto H. Zolensky M. E. Abe M. Fujimura A. Mukai T. Yada T.
[Neutron Activation Analysis of Single Grains Recovered by the Hayabusa Spacecraft](#) [#1902]
Single grain samples returned by the Hayabusa spacecraft are analyzed by neutron activation for characterizing the material in terms of chemical composition. Gamma ray counting is performed by using a well-type Ge detector at the heavily shielded counting facility.
- 9:45 a.m. Yurimoto H. * Abe M. Ebihara M. Fujimura A. Hashizume K. Ireland T. R. Itoh S. Kawaguchi J. Kitajima F. Mukai T. Nagao K. Nakamura T. Naraoka H. Noguchi T. Okazaki R. Sakamoto N. Seto Y. Tsuchiyama A. Uesugi M. Yada T. Yoshikawa M. Zolensky M.
[Oxygen and Magnesium Isotopic Compositions of Asteroidal Materials Returned from Itokawa by the Hayabusa Mission](#) [#1755]
We will present the first results of the oxygen and magnesium isotopic compositions of asteroid Itokawa by the Hayabusa Mission.
- 10:00 a.m. Noguchi T. * Nakamura T. Kimura M. Zolensky M. E. Tanaka M. Hashimoto T. Konno M. Nakato A. Ogami T. Fujimura A. Abe M. Yada T. Mukai T. Ueno M. Okada T. Shirai K. Ishibashi Y. Okazaki R.
[SEM and TEM Observation of the Surfaces of the Fine-Grained Particles Retrieved from the MUSES-C Region on the Asteroid 25413 Itokawa](#) [#1596]
As a part of the initial analysis of the particles retrieved from the asteroid Itokawa by the Hayabusa spacecraft, we are performing SEM and TEM observation of the surfaces of the particles to identify the cause of the asteroidal space weathering.
- 10:15 a.m. Okazaki R. * Nagao K. Miura Y. N. Osawa T. Bajo K. Matsuda S. Nakamura T. Shirai K. Abe M. Yada T. Noguchi T. Ishibashi Y. Fujimura A. Mukai T. Ueno M. Okada T. Yoshikawa M. Kawaguchi J.
[Noble Gases Recovered from the Hayabusa Sample Container](#) [#1653]
The Hayabusa sample capsule was successfully recovered on the earth in 2010. The sample container was recovered from the capsule and opened in a clean chamber at the curation facility of JAXA. Noble gases collected from the container have been investigated.
- 10:30 a.m. Nagao K. * Okazaki R. Nakamura T. Miura Y. N. Osawa T. Bajo K. Matsuda S. Ebihara M. Ireland T. R. Kitajima F. Naraoka H. Noguchi T. Tsuchiyama A. Uesugi M. Yurimoto H. Zolensky M. Shirai K. Abe M. Yada T. Ishibashi Y. Fujimura A. Mukai T. Ueno M. Okada T. Yoshikawa M. Kawaguchi J.
[Noble Gases of the Itokawa Samples Returned by the Hayabusa Mission](#) [#2119]
Noble gas isotopic compositions of the Itokawa samples returned by the Hayabusa mission will be presented. The noble gases will be extracted from single particles by the laser heating method.

- 10:45 a.m. Kitajima F. * Kotsugi M. Ohkochi T. Naraoka H. Ishibashi Y. Abe M. Fujimura A. Okazaki R. Yada T. Nakamura T. Noguchi T. Nagao K. Tsuchiyama A. Mukai T. Sandford S. A. Okada T. Shirai K. Ueno M. Yoshikawa M. Kawaguchi J.
[*A Micro-Spectroscopic Approach to the Carbonaceous Matter in the Particles Recovered by the Hayabusa Mission*](#) [#1855]
We are planning to analyze the insoluble organic matter (IOM) in the particles recovered by the Hayabusa mission using micro-spectroscopic techniques. Their spectroscopic features can be a clue to the formation history of Itokawa.
- 11:00 a.m. Naraoka H. * Mita H. Hamase K. Mita M. Yabuta H. Saito K. Fukushima K. Kitajima F. Sandford S. A. Nakamura T. Noguchi T. Okazaki R. Tsuchiyama A. Yada T. Shirai K. Fujimura A. Ishibashi Y. Abe M. Okada T. Ueno M. Mukai T.
[*Preliminary Organic Compound Analysis of Particles Returned from Asteroid 25143 Itokawa by the Hayabusa Mission*](#) [#1672]
A preliminary organic compound analysis is performed for the particles returned from Itokawa by the Hayabusa mission.
- 11:15 a.m. Hiroi T. * Sasaki S. Noble S. K. Pieters C. M.
[*Space Weathering of Ordinary Chondrite Parent Bodies, its Impact on the Method of Distinguishing H, L, and LL Types, and Implications for Itokawa Samples Returned by the Hayabusa Mission*](#) [#1264]
A new space weathering index is found useful for ordinary chondrites. Three band strength ratio method using only the 1- μm band of reflectance spectrum is less subject to space weathering than the BAR method in distinguishing H, L, and LL types.
- 11:30 a.m. Hirata N. * Ishiguro M.
[*Properties and Possible Origin of Black Boulders on the Asteroid Itokawa*](#) [#1821]
A large and very black boulder is found on the head region of the asteroid Itokawa. Nature and possible origin of the boulder are discussed.