

Thursday, July 26, 2018
ASTEROIDS AND COMETS
1:30 p.m. Green Room

Chairs: Driss Takir

Tatyana Galushina

- 1:30 p.m. Matsumoto T. * Harries D. Miyake A. Langenhorst F.
[Space Weathering of Iron Sulfide Grains from Asteroid 25143 Itokawa](#) [#6096]
 Surface microstructures on iron sulfide of regolith particles from asteroid Itokawa were investigated in order to evaluate space weathering effects of iron sulfide. We found vesicular rims with iron whiskers on troilite surface.
- 1:45 p.m. Yada T. * Sakamoto K. Yoshitake M. Kumagai K. Nishimura M. Nakano Y. Furuya S. Abe M. Okada T. Tachibana S. Yurimoto H. Fujimoto M.
[From Hayabusa to Hayabusa2: Present Status and Plans for Sample Curations of Asteroidal Sample Return Missions by JAXA](#) [#6117]
 Hayabusa-returned samples have been curated by the ASRG of JAXA since its return in 2010. We have been also preparing for the curation facility for samples returned by the Hayabusa2, which will send them back from C-type asteroid Ryugu in 2020.
- 2:00 p.m. Takir D. * Nakauchi Y. Kitazato K. Le Corre L. Hibbitts C. A. Emery J. P.
[Characterizing Volatiles and Organics on Asteroid \(162173\) Ryugu](#) [#6364]
 Here we present our Near Infrared Spectrometer (NIRS3)-related plan to help the science team to characterize and select sampling and landing sites to collect carbonaceous samples from Ryugu and bring them back to Earth in 2020.
- 2:15 p.m. Lin Y. *
[Mission Concepts of Sample Return from Small Bodies — Addressing Key Questions of the 1st 10 Ma Year Evolution of the Solar System](#) [#6083]
 Sample return missions from small bodies are planned, to draw a big picture of the 1st 10 Ma history of the solar nebula. Three types of small bodies will be sampled to reveal spatial evolution of the nebula, and the first target is E-type asteroids.
- 2:30 p.m. Clark B. C. *
[CHON-Na and Evidence for Large Scale Compositional Heterogeneity in the Cometary Nucleus](#) [#6167]
 Evidence indicates the composition of comets is variable with location. Data from the PIA instrument on Giotto are re-analyzed with respect to Stardust and Rosetta missions, to reveal associations between Na, O and C in cometary CHON particles.
- 2:45 p.m. Istiqomah I. * Quirico E. Theulé P. Faure A. Poch O. Beck P. Bonal L. Schmitt B. Ciarniello M. Filacchione G. Capaccioni F. Leyrat C. Arnold G. Moroz L.
[Spectral Characterization of Carboxylic Acids, Amino Acids and Ammonium Salt as the Carriers of 3.2 \$\mu\text{m}\$ Band of Comet 67p/Churyumov-Gerasimenko](#) [#6214]
 We report transmission and reflectance measurements of analogs of comet 67P in the range 0.4–4.2 μm . Ammonium ions might contribute to the 3.2 μm band revealed by the VIRTIS/Rosetta instrument.
- 3:00 p.m. Engrand C. * Dartois E. Duprat J. Charon E. Leroux H. Le Guillou C. Bernard S. Benzerara K. Swaraj S. Belkhou R. Delauche L. Godard M. Augé B.
[Composition of Ultracarbonaceous Antarctic Micrometeorites \(UCAMMs\). Comparison with Rosetta/COSIMA Analyses](#) [#6223]
 We compare the composition of UCAMMs and that of dust particles measured by Rosetta/COSIMA, in terms of elemental ratios.

- 3:15 p.m. Merouane S. * Günther S. Chitarra O. Stenzel O. Hilchenbach M. Engrand C. Tarcea N.
[Investigation of Antarctic Micrometeorites and Selected Carbonaceous Chondrites by Raman Spectroscopy, Electron Microscopy and Mass Spectrometry](#) [#6251]
Three Antarctic micrometeorites have been studied by Raman spectroscopy, electron microscopy and mass spectrometry and compared with carbonaceous chondrites and with cometary dust analyzed in situ by the Rosetta/COSIMA instrument.
- 3:30 p.m. Kuznetsov E. D. * Glamazda D. V. Kaiser G. T. Krushinsky V. V. Popov A. A. Safronova V. S. Shagabutdinov A. A. Ustinov D. S. Vibe Yu. S.
[Pairs of Asteroids in Close Orbits](#) [#6014]
The Yarkovsky effect is required to take into account accurately to carry out precise simulation of dynamical evolution of the asteroid pairs. Determination of physical and rotational parameters of asteroids is needed to solve this problem.
- 3:45 p.m. Zamozdra S. N. * Gorkavyi N. N.
[Collisions of Components of a Binary Asteroid During Long-Term Evolution](#) [#6357]
Our numerical model shows that collisions of asteroids in a binary system lead to formation of contact system or, more probably, to disruption of binary system. The cases when binary system survives after component collisions are not found.
- 4:00 p.m. Efremova E. *
[On the Statistics of NEAs](#) [#6283]
An analysis of the statistics of near-Earth asteroids is carried out. The statistic of the small NEAs is of a great importance for the problem of asteroid hazards and for fundamental issues of the Solar system researches.
- 4:15 p.m. Galushina T. Yu. * Sambarov G. E.
[Updated Analysis of the Dynamical Evolution for Parent Body of the Quadrantids Core](#) [#6224]
This work is devoted to study of chaotic motion of asteroid (196256) 2003 EH1. We suppose that the reasons of chaos are the frequent close approaches with Jupiter and the overlap of stable apsidal-nodal and unstable mean motions resonances.