

Friday, March 23, 2018

[F703]

COMETS AND ASTEROIDS: PROPERTIES, PROCESSES, 67P, AND STARDUST
8:30 a.m. Waterway Ballroom 5

Chairs: Adrienne Dove
Michael DiSanti

- 8:30 a.m. Sarid G. *
[*Thermal Cycling on Surfaces of Small Asteroids: A Layer-to-Grain Approach*](#) [#3009]
 Thermal cycling timescales and gradients are not the same on layer and grain levels. Why? Stay tuned.
- 8:45 a.m. Hamm M. * Grott M. Senshu H.
[*Latitudinal Dependence of Asteroid Regolith Formation by Thermal Fatigue*](#) [#1853]
 Thermal fatigue drives the regolith formation on asteroids. We study the latitudinal dependence of this process for the Hayabusa2 mission target asteroid Ryugu.
- 9:00 a.m. Dove A. * Anderson S. Gomer G. Fraser M. John K. et al.
[*Regolith Stratification and Migration in an Asteroid-Like Environment*](#) [#2993]
 We analyze Strata-1 data to understand regolith sorting and mixing in an asteroid-like environment on the ISS.
- 9:15 a.m. Vincent J.-B. * OSIRIS Team
[*Evolution of Cometary Surfaces*](#) [#1280]
 Comets are changing / Thousands new features per orbit / Big data problem.
- 9:30 a.m. Kossacki K. J. * Jasiak A.
[*Evolution of Scarps on the Nucleus of Comet 67P/Churyumov-Gerasimenko*](#) [#1977]
 We investigate evolution of scarps of low inclinations in the region Ash.
- 9:45 a.m. Bardyn A. * Baklouti D. Briois C. Cottin H. Engrand C. et al.
[*Global Composition of Cometary Dust Particles from 67P/Churyumov-Gerasimenko as Deduced from the COSIMA/Rosetta Instrument*](#) [#1531]
 We will present the global composition of comet 67P/Churyumov-Gerasimenko's dust, as deduced from the mass spectrometer COSIMA/Rosetta *in situ* measurements.
- 10:00 a.m. Paquette J. A. * Fray N. Cottin H. Engrand C. Bardyn A. et al.
[*The D/H Ratio in Cometary Dust Measured by Rosetta/COSIMA*](#) [#1982]
 The D/H ratio has been measured in comets, but apart from Stardust, only in the gas phase. We present the D/H ratio in cometary dust measured with COSIMA.
- 10:15 a.m. Oklay N. * OSIRIS Team
[*Large Sub-Surface Volatile Reservoirs of Comet 67P*](#) [#1282]
 The investigation of the large sub-surface volatile reservoir we detected on comet 67P will allow us to put constraints on understanding the cometary activity.
- 10:30 a.m. Hery C. * Mousis O. Marshall R. Thomas N. Rubin M. et al.
[*New Constraints on the Chemical Composition and Outgassing of 67P/Churyumov-Gerasimenko*](#) [#2197]
 We compare data provided by the ROSINA instrument and a thermochemical numerical model to bring some constraints on the composition of the nucleus of Comet 67P.

- 10:45 a.m. Haas B. A. * Ogliore R. C. Westphal A. J. Croat T. K. Floss C.
[Study of Fine-Grained Material Recovered from a Stardust Aerogel Track Using Plasma Asher Preparation](#) [#2245]
We present on fine-grained material from the Stardust aerogels. The material was separated from the insulating aerogels using the novel plasma ashing technique.
- 11:00 a.m. Chaumard N. * Defouilloy C. Joswiak D. J. Brownlee D. E. Westphal A. J. et al.
[Oxygen Three-Isotope Ratios of Particles from the Comet 81P/Wild 2: Systematics Within Individual Tracks](#) [#2163]
O-isotope ratios of new Wild 2 particles highlight two populations of crystalline silicates, with $\Delta^{17}\text{O}$ values $\sim -2\text{‰}$ for Mg#’s 85–99, and $\geq 0\text{‰}$ for Mg#’s < 85 .
- 11:15 a.m. Bauer J. M. * Mainzer A. K. Kramer E. A. Grav T. Masiero J. R. et al.
[Comet Science with the Reactivated NEOWISE Mission](#) [#2687]
We will provide an overview of the NEOWISE reactivated mission’s comet data, including the status of the CO+CO₂ production rate analyses.
- 11:30 a.m. DiSanti M. A. * Dello Russo N. Bonev B. P. Gibb E. L. Roth N. X. et al.
[Opportunities for In-Depth Compositional Studies of Short-Period Comets: Summary from Semester 2017A Observations and Prospects for a 2018 Observing Campaign](#) [#2289]
2017–2019 presents good apparitions for five ecliptic comets. We summarize observational results for three comets from 2017, and plans for two comets in 2018–2019.