

**PRINT-ONLY: ASTEROIDS AND SMALL BODIES**

Golubeva L. Shestopalov D. McFadden L. A.

*Searching for Faint Absorption Bands in Vestoid Reflectance Spectra by Means of Optimal Smoothing Algorithm* [#1206]

The faint absorption bands near 480–490, 505, 530, 550 nm were found in the spectra of some vestoids from SMASS1 by using the optimal smoothing algorithm. According to the spectral data for the terrestrial pyroxenes and the HED these bands are associated with Fe<sup>2+</sup> in asteroid surface pyroxenes.

Housen K. R.

*Nudging an Asteroid with Explosives or Impacts* [#2249]

Estimates and experimental results are summarized that describe the velocity increment that can be applied to an asteroid via impacts or near-surface explosions.

Busarev V. V. Dorofeeva V. A. Makalkin A. B.

*Possibility of Separating Silicates and Organics in Large Kuiper Belt Objects* [#1074]

We investigate a possibility of separating silicates and organics, phyllosilicate formation and layering matter in large Kuiper Belt Objects (from 200 km) on condition that water ocean forms in their interiors due to decay of <sup>26</sup>Al and/or collisions of the bodies.

Filonenko V. S. Churyumov K. I.

*Photometrical Peculiarities and Outburst Activity of Two Target Comets* [#1656]

The light curves of short-period comets 67P/Churyumov-Gerasimenko and 9P/Tempel 1 (which are targets for “ROSETTA” and “Deep Impact”) have been constructed. Their photometrical behavior was studied. Photometrical parameters have been determined.

Michikami T. Moriguchi K. Nakamura R.

*Application to Large Blocks on Asteroid 25143 Itokawa: Ejecta Mass Distribution with Low Velocity for Impact Cratering Experiment on Porous Target* [#1729]

The impact cratering experiment was carried out in order to estimate the ejecta mass distribution with low velocity (<1 m/s). Based on this result, the number of large blocks (>1 m) on asteroid 25143 Itokawa can be estimated to be about 340.

Nakamura R. Ishiguro M. Nakamura A. M. Hirata N. Terazono J. Yamamoto A. Abe M.

Hashimoto T. Saito J.

*Inflight Calibration of Asteroid Multiband Imaging Camera Onboard Hayabusa: Preliminary Results* [#1602]

Asteroid Multi-band Imaging CAMERA (AMICA) is an imaging instrument onboard Hayabusa spacecraft to examine the surface topography and composition of the target S-type asteroid Itokawa. We report preliminary results of the inflight observations.

Perov N. I.

*On Origin of Sedna* [#1049]

In the frame of the space model of the binary problem of two-body: the Sun–Sedna and Sedna and Planet X a transition of Sedna, moving originally along heliocentric parabolic orbit, into elliptic orbit is under consideration. The parameters of Planet X are set up.

Shestopalov D. Golubeva L. McFadden L. A.

*Optimal Smoothing of Asteroid Reflectance Spectra: The Search for Faint Absorption Bands* [#1165]

We suggest the optimal smoothing algorithm for noisy reflectance spectra of the asteroids, which is intended for separating faint absorption bands from the noise.

Ward Wm. R.

*Early Clearing of the Asteroid Belt* [#1491]

The ensemble of embryos destined to become the Jovian core may have excited the primordial asteroid belt and initiated a fragmentation cascade there. Thus, the majority of the belt mass may have drifted via gas drag into the terrestrial zone prior to the formation of Jupiter.