

**PRINT ONLY: ASTEROIDS AND METEOROIDS**

Busarev V. V. Prokof'eva V. V. Bochkov V. V.

*21 Lutetia as a Possible Binary System* [#1016]

We have analyzed spectra (0.4–0.9  $\mu\text{m}$ ) of 21 Lutetia and discovered periodic splitting of them on three nights (4/5, 5/6 and 7/8) in November 2004 at extremely small aspect angle ( $\sim 43^\circ$ ). We suggested that Lutetia is a binary asteroid.

Golubeva L. F. McFadden L. A. Shestopalov D. I. Khomenko V. M. Gasanova L. M.

*Olivines on Vesta-like Asteroids* [#1223]

We attribute the faint absorption band near 630 nm in the spectra of some vestoids to olivine on their surface.

Holsapple K. A.

*Formation of Binary Asteroids by Spin Fission* [#2440]

An analysis of spin fission of asteroids suggest that large asteroids and rubble-pile asteroids of any size are unlikely to form binary pairs by spin fission. Instead, only those with some but small cohesion will do so, and roughly equal-sized pieces are indicated.

Kawakami K. Nakamura A. M.

*Near Infrared Opposition Surge of Carbonaceous Chondrite Meteorites* [#1531]

We measured the opposition surge of carbonaceous chondrite meteorites with changing particle size and degree of surface compaction, and we compared these data with reflectance phase curve of C-type asteroid, Mathilde.

Shestopalov D. Golubeva L. McFadden L. Lazzaro D. Khomenko V. Gasanova L.

*Systematics of Vestoid Reflectance Spectra by 600- and 650-nm Bands* [#1224]

The spectra of the vestoids, which we examined, can be sorted into five groups in accordance with properties of the faint absorptions near 600 and 650 nm.

Shilova K. G. Perov N. I.

*A Method of Space — Time Localizing of Undiscovered Hazardous Bodies with Hyperbolic Orbits* [#1273]

A non-traditional celestial-mechanical analytical model based on the hypothesis of interaction of minor bodies, initial orbits of which are parabolic, and the giant planets of the solar system is used for the construction of a method of determination of ephemerides of undiscovered hazardous bodies.

Tikhomirova E. N.

*A Method of Discovery of Meteor Streams' Parent Bodies* [#1042]

The new integrals of motion of the averaged perturbed two-body problem are used for identification of parent bodies of meteor streams. The Poynting-Robertson effect is taken into account. The model shows the comet 177P is the parent body of meteor stream k-Cygnids.

Trigo-Rodríguez J. M. Madiedo J. M. Castro-Tirado A. J. Ortiz J. L. Gural P. S. Llorca J. Fabregat J. Vitek S. Pujols P. Troughton B.

*Spanish Meteor Network: 2006 All-Sky and Video Monitoring Highlights* [#1584]

First results of the Spanish Meteor Network (SPMN) 2006 all-sky meteor and fireball monitoring are presented. Earth's encounters with 7 P/Pons-Winnecke, 1P/Halley and 55P/Tempel-Tuttle meteoroid streams were remarkable. We also include the heliocentric orbit of a bright  $\alpha$ . Capricornid bolide.