

PRINT ONLY: SMALL BODIES

Abdulmyanov T. R.

[*The Problem of the Gravitational Accretion of Particles*](#) [#1015]

In this paper we attempt to detail the process of accretion using the more general equations of the motion with the law of equal areas for revolving orbits.

Alexeev V. A.

[*Extraterrestrial and Terrestrial Chromite Grains in Middle Ordovician Limestones of Sweden and China: Some Peculiarities of Distributions*](#) [#1001]

The flux of extraterrestrial micrometeorites on all Earth after disruption of the L-chondrite parent body has increased approximately 2–3 times, but not in two orders of magnitude.

Busarev V. V.

[*An Oceanic Source of Icy, Hydrosilicate and Organic Grinded Materials as One of the Main Factors Sculptured the Early Asteroid Belt*](#) [#1453]

Intensive fluxes of grinded materials from neighboring formation zones of giant planets might have considerably influenced chemical and mineralogical content of asteroid parent bodies at the time of their accretion and shortly thereafter.

Giuppi S. Coradini A. Capaccioni F. Capria M. T. De Sanctis M. C. Erard S. Filacchione G. Tosi F.
[*Virtis/Rosetta: Temperature Analysis During Lutetia Dynamic Rehearsal as an Input in Lutetia Fly-By Planning*](#) [#1053]

In this paper we show how, taking into account the different spacecraft/Sun distances during the Lutetia dynamic rehearsal and Lutetia fly-by, it was possible to predict within one degree the temperature trend on VIRTIS during the Lutetia fly-by.

Iwasa K. Ohtsuki K.

[*On the Orbital Evolution of Planetary Embryos Under the Influence of Giant Planet Scattering*](#) [#1903]

We investigated orbital behavior of small bodies under the influence of three giant planets that undergo dynamical instability, focusing on orbital evolution of small bodies whose perihelion distances become rather small.

Konovalova N. A. Madiedo J. M. Trigo-Rodriguez J. M.

[*Meteorite-Dropping Bodies from Cometary Meteoroid Streams and Their Physical Properties*](#) [#1205]

Some meteoroids with orbits clearly associated with two cometary meteoroid streams o-Draconid and June Bootid and its physical properties.

Kuzmin R. O. Zabalueva E. V.

[*Daily Temperature Regime of the Surficial Regolith of Phobos in the Landing Site Region for the Phobos-Grunt Mission Lander in Different Seasons: The Model Predictions*](#) [#1769]

We present the results of the numerical modeling of the thermal regime of the Phobos surface regolith layer (on daily and seasonal timescale) within the selected landing site for the Phobos-Grunt mission in the Lagado Planitia.

Madiedo J. M. Trigo-Rodriguez J. M. Konovalova N. Castro-Tirado A. J.

[*A 13 kg Meteoroid from Comet 21p/Giacobini-Zinner Recorded as a Bolide During the 2011 Draconid Outburst*](#) [#1298]

We present here the analysis of an extraordinarily bright Draconid event (mag. –10.5) recorded together with its spectrum during the 2011 Draconid outburst. The mass of the meteoroid was about 13 kg.

Mouis O. Guilbert-Lepoutre A. Lunine J. I. Cochran A. L. Petit J.-M.

[*Radiogenic Heating as the Cause of the Nitrogen Deficiency in Comets*](#) [#1891]

We find that radiogenic heating provides a viable mechanism to account for the origin of the nitrogen deficiency observed in comets. This mechanism is also found consistent with the presence of nitrogen-rich atmospheres around Pluto and Triton.

Narziev M. Konovalova N. A.

[*Bulk Density of Meteoroids on Combined Radar-Optical Observations*](#) [#1373]

Fragmentation and physical properties of the meteoroids from combined radar-optical observations.

Okamoto T. Nakamura A. M. Hasegawa S. Kurosawa K. Ikezaki K. Tsuchiyama A.

[*Capture of Hypervelocity Dusts by Highly Porous Small Bodies*](#) [#1782]

We conducted dust impact experiments into highly porous brittle targets using a flash X-ray system and showed that the deceleration process of projectiles and the cavity morphology is similar to those reported for aerogel targets.

Petit J.-M. Mousis O. Kavelaars J. J.

[*Formation Location of Enceladus and Comets from D/H Measurements*](#) [#1937]

The nearly-isotropic comets and Enceladus have similar D/H ratios. Thus they were formed in the same region as Uranus and Neptune, at less than ~15 AU. As 103P/Hartley 2 is D-poor compared to these bodies, the current models are called into question.

Rodriguez A. Madiedo J. M. Konovalova N.

[*Analysis of Large Meteoroids Produced by Comet 7P/Pons-Winnecke*](#) [#1301]

Two of the meteor observing stations operated by the Spanish Meteor Network (SPMN) simultaneously imaged a June Bootid fireball with an absolute magnitude of about -9 on July 5, 2009. The analysis of this event is presented here.

Slyusarev I. G. Shevchenko V. G. Belskaya I. N. Krugly Yu. N. Chiorny V. G.

[*Magnitude Phase Angle Dependences of Jupiter Trojans and Hilda Asteroids*](#) [#1885]

Results of photometric observations of 6 Jupiter Trojans and 11 Hilda asteroids are presented. The detailed magnitude phase dependences were obtained for the Hilda asteroid (1748) Mauderli and the Trojans (2207) Antenor and (2357) Phereclos.

Slyuta E. N.

[*Shape Distribution of Ordinary Chondrite, Iron Meteorites and Metallic Asteroids*](#) [#1088]

The shape of metal asteroids strongly differs from the shape of fragments of iron meteorites. Such distinction may be caused by different mechanics of formation of these bodies' shape.

Szurgot M.

[*On the Heat Capacity of Asteroids, Satellites and Terrestrial Planets*](#) [#2626]

Specific heat capacity and heat capacity of selected asteroids, natural satellites and terrestrial planets have been estimated.

Tielieusova I. M. Lupishko D. F.

[*The YORP-Effect and Axis Rotation of Near-Earth Asteroids*](#) [#1491]

Using statistical approach it is shown that the available observational data indicate the noticeable influence of the YORP-effect on the rotation rates distribution of the whole population of near-Earth asteroids.

Trigo-Rodriguez J. M. Llorca J. Madiedo J. M. Alonso-Azcárate J. Rivkin A. S. Fornasier S.

Belskaya I. Binzel R. P. Moyano-Camero C. E. Dergham J. Cortés J.

[*IR Reflectance Spectra of Antarctic Carbonaceous Chondrites to Better Characterize the Surfaces of Asteroids Targeted by Sample Return Missions*](#) [#1443]

IR reflectance spectra for NASA Antarctic carbonaceous chondrites from the CM, CO, CH, and CK groups are presented. The location and relative depth of OH bands could be used to identify pristine regions of NEOs selected for future spacecraft missions.

Zamorano J. Madiedo J. M. Trigo-Rodriguez J. M. Izquierdo J. Ocaña F.

Sánchez de Miguel A. Toscano F. M.

[*Large Meteoroids Belonging to the \$\alpha\$ -Capricornid Meteoroid Stream*](#) [#1181]

We present here the analysis of a very bright α -Capricornid fireball simultaneously registered from three meteor observing stations on July 31, 2011, with an absolute magnitude of -9.