

PRINT ONLY: COMETS, ASTEROIDS, AND PHOBOS

Asphaug E.

When Impact Cratering Goes Global on Asteroids [#1228]

This analysis considers the largest crater to form on an asteroid, thereby quantifies the gradational and disruptive aspects of impact-generated stress waves, in particular their manner of attenuation at global scales.

De Sanctis M. C. Lasue J. Magni G. Coradini A. Capria M. T. Turrini D. Levasseur-Regourd A. C.
Quasi 3-D Model of Thermal Evolution of Comet Nuclei [#1267]

We will present a new quasi-three-dimensional approach for non-spherically shaped cometary nuclei to interpret the current activity of comets in terms of initial characteristics and to predict shape and internal stratification evolution of the nucleus.

Filonenko V. S. Churyumov K. I. Chubko L. S.

New Peculiarity of Solar Activity Influence Upon the Brightness Variations of Comets [#1590]

Here we are studying the influence of solar activity upon the light curves of six new bright comets C/1999 S4 (LINEAR), C/2001 Q4 (NEAT), C/2002 T7 (LINEAR), C/2002 V1 (NEAT), C/2004 Q2 (Machholz), and 153P/2002 C1 (Ikeya-Zhang).

Marboeuf U. Petit J.-M. Mousis O. Orosei R.

Efficient Implementation of Finite Volume Method in Cometary Nuclei Modelling [#1275]

We present a one-dimensional nucleus model based on the finite volume method that reduces significantly the numerical error on the conservation of mass compared to others models using the finite differences method.

Shestopalov D. Golubeva L.

Why Vesta's Surface is Unweathered? [#1116]

To explain why Vesta has an unweathered surface, we suggest two hypotheses: "rheological" and "dynamical."

Shingareva T. V. Basilevsky A. T. Shashkina V. P. Neukum G. Werner S. Jaumann R.

Giese B. Gwinner K.

Morphological Characteristics of the Phobos Craters and Grooves [#2425]

Morphological analyses of new HRSC Phobos images obtained by Mars Express allowed determination of calculated characteristics of craters and grooves and comparison to lunar ones.

Slyuta E. N.

Physical and Mechanical Properties of Cometary Nuclei [#1015]

Effective tensile strength of cometary nuclei of >54 km in size is determined by body mass and shape parameters and increases under the square-law depending on body size and mass.

Tikhomirova E. N.

The Influence of Elementary Particles at Meteor Particles' Motion [#1050]

For meteor particles under the action of bosons and fermions the formulae describing their orbital evolution and determining the lifetime of meteor streams are presented. The derived formulae are used for considering the evolution of particles of the known comets.