

Sunday, July 22, 2018

WORKSHOP: NEOS HAZARD: MULTIDISCIPLINARY APPROACH

11:00 a.m. V. I. Vernadsky State Geological Museum

Chairs: Olga Popova
Boris Shustov

- 11:00 a.m. Shustov B. M. *
[*To Detect Hazardous NEOs: Progress in Russia*](#) [#6039]
Recent progress in Russia on ground based instruments for observation of NEOs and prospects of space born facilities are discussed.
- 11:30 a.m. Ipatov S. I. * Elenin L. V.
[*Suggested Models for Calculation of the Probabilities of Detection of Near-Earth Objects in Different Sky Regions*](#) [#6249]
Construction of models for calculation of the probabilities of appearance and detection of near-Earth objects in different sky regions, including sky brightness models, and for comparison of effectiveness of different telescopes is discussed.
- 11:45 a.m. Svetsov V. V. * Shuvalov V. V. Artemieva N. A. Khazins V. M. Popova O. P. Glazachev D. O. Podobnaya E. D.
[*Complex Assessment of Hazardous Effects of Impacts of Cosmic Objects*](#) [#6145]
For assessments of the hazardous effects of impacts, we developed a model and numerically simulated the impacts of stony and icy bodies ranging in size from 30 m to 3 km entering the atmosphere with various speeds at angles from 15 to 90 degrees.
- 12:15 a.m. DISCUSSION
- 12:30 a.m. Shuvalov V. V. * Khazins V. M. Svetsov V. V.
[*Estimation of Seismic Efficiency of Impacts of Cosmic Objects by Methods of Numerical Analysis*](#) [#6068]
The aim of this work is to evaluate the seismic efficiency of crater-forming impacts of asteroids by numerical simulation of impacts and underground explosions and subsequent comparison of the amplitudes of shock waves generated by them.
- 12:45 a.m. Jenniskens P. Popova O. * Glazachev D. Kartashova A. Podobnaya E.
[*Tunguska Eye Witness Accounts, Injuries and Casualties*](#) [#6234]
Tunguska eyewitness accounts are re-analysed and compared with the model for the rapid assessment of hazardous effects from cosmic body impacts.
- 1:00 a.m. McMullan S. * Collins G. S.
[*Uncertainty Quantification in Continuous Fragmentation Airburst Models*](#) [#6213]
We investigate three commonly used semi-analytical models and quantify the uncertainty in model predictions that originates from the choice of model; numerical model parameters and the physical properties of the meteoroid.
- 1:15 a.m. Egorova L. A. * Lokhin V. V.
[*Simulation of Instantaneous Meteoroid Fragmentation and Associated Energy Release*](#) [#6323]
We proposed model for the fragmentation of a fireball and a model for the transition of its kinetic energy to thermal energy of gas by the destruction of the body to many fragments. A comparison was made of the energy released for different models.
- 1:30 a.m. Glazachev D. O. * Podobnaya E. D. Popova O. P. Artemieva N. A. Shuvalov V. V.
[*Scaling Relations for Shock Wave Effects from Large Meteoroids Decelerated in the Earth's Atmosphere*](#) [#6032]
Scaling relations for shock wave effects from large meteoroids decelerated in the Earth's atmosphere are constructed based on numerical simulations.