Hoffman N.  
*Origin of the Northern Lowlands of Mars in a Single String-of-Pearls Impact* [#1237]  
A String-of-Pearls impact on early Mars is a novel way to form the complex northern lowlands in essentially a single event, over a few days of real time. The impact fragments create overlapping basins which merge to form the northern plains.

Kashkarov L. L.  Badjukov D. D.  Ivliev A. I.  Kalinina G. V.  Nazarov M. A.  
*The Smerdyacheye Lake: New Evidence for Impact Origin and Formation Age* [#1822]  
Fission track and thermoluminescence studies of a glass beard found near the Smerdyacheye Lake crater support the possible impact origin of the structure.

Krivosheya K. V.  Badyukov G. D.  Badjukov D. D.  Raitala J.  
*The Gagarin Ring Structure, Russia: A Possible Meteorite Crater* [#1688]  
Morphological, geophysical and mineralogical data strongly support the idea of impact origin of the 1.4 km Gagarin ring structure, the Smolensk district, Russia.

Marusek J. A.  
*The Cosmic Clock, the Cycle of Terrestrial Mass Extinctions* [#1009]  
Oort cloud comet impacts and nearby supernova events are believed to be the root cause for the greatest terrestrial mass extinctions during the past 500 million years. A dual cycle of extinctions is observed and well ordered in geological time.

Sazonova L. V.  Fel’dman V. I.  Miljavskij V. V.  Borodina T. I.  Sokolov S. N.  
*Some Peculiarities of Quartz, Biotite and Garnet Transformation in Conditions of Step-like Shock Compression of Crystal Slate* [#1037]  
A character investigated of changes of the crystal slate, which consists of a garnet, biotite, quartz and plagioclase has been studied using of recovery assemblies of planar geometry.

Svetsov V. V.  
*Impact Erosion of Atmosphere: Some Results of Numerical Simulations for Vertical Impacts* [#1675]  
Numerical simulations of vertical impacts have been made for impactor diameters from 75 m to 10 km and velocities from 15 to 70 km/s. The losses of air and retained masses of impactors were calculated for a 1 bar atmosphere on the Earth and Mars.

Vishnevsky S. A.  Gibsher N. A.  Raitala J.  Öhman T.  Palchik N. A.  
*The Popigai Fluidizites: Dense Water Inclusions in Lechatelierite; Evidence for Shock-generated Carbonate and Hydrous Silicate Melts* [#1145]  
New data (dense water inclusions in lechatelierite; evidences for carbonate and hydrous silicate melts) are presented for the Popigai impact fluidizites which are the first impactites of so kind described in terrestrial astroblemes.