Abdulmyanov T. R.
Formation and Growth of the Solar System Bodies in the Early Stages of its Evolution

It is shown that the libration centers could appear before the formation of large bodies and planetesimals in protoplanetary rings.

Docobo J. A.  Campo P. P.  Madiedo J. M.  Trigo-Rodriguez J. M.
Observation of Three Twilight Bolides in August, 2013 from Galicia, NW of Spain

We present a report of the observation of three twilight bolides from Galicia, NW Spain, in August 2013. Preliminary results for one of them are included.

Espartero F.  Madiedo J. M.  Castro-Tirado A. J.
A Deep-Penetrating Fireball Produced by an Asteroidal Meteoroid

This work focuses on the preliminary analysis of a deep-penetrating sporadic fireball event recorded over the south of Spain on December 5, 2013.

Glazovskaya L. I.  Zinovieva N. G.  Plechov P. Y.
Compositional Traits and Thermobarometry of the Chelyabinsk Meteorite

The temperature (890°–915°C) and pressure (6.1–6.8 kbar) ranges suggest equilibrium crystallization of minerals in chondritic melts.

Golubeva L. F.  Shestopalov D. I.
Polarized Light Scattered from Asteroid Surfaces. IV. Tentative Explanation of Polarization Wavelength Dependences

The wavelength dependences of negative polarization observed for asteroids occur due to geometrically complex microstructure of asteroid surfaces.

Phobos Geoportal as Geodesy and Cartography Node of Mexlab Planetary Data Storage

Using data from the small body Phobos provided by Mars Express we have created the prototype of a planetary data geoportal.

Madiedo J. M.
Recent Developments in Meteor Spectroscopy in the Framework of the S.M.A.R.T. Project

A description of the main developments performed during 2013 in the framework of the S.M.A.R.T. project, which focus on meteor spectroscopy, is given.

Morozhenko A. V.  Ovsak A. S.
About the Possibility of Appearance of a False Circular Polarization in the Light of Solar System Bodies

A false circular polarization may arise during the observations of the solar system bodies.

Shestopalov D. I.  Golubeva L. F.
Polarized Light Scattered from Asteroid Surfaces. V. Can We Estimate Polarization Maximum for Main Belt Asteroids?

Polarization maximum for main-belt asteroids can be derived from their negative polarization branches.

Infrared Observations of Comet C/2012 S1 (ISON)

We present near- and mid-infrared spectroscopy of the dust of Comet ISON using the SpeX and BASS spectrographs on NASA’s Infrared Telescope Facility.
Sonter M. J.  Covey S. D.  Lewis J. S.  Rao A.

*Mineral Resource Estimation for Asteroid Mining Projects* [#1457]

This abstract reviews and seeks to apply concepts from terrestrial mineral exploration to NEA target identification and quantification of resource potential.

Trigo-Rodriguez J. M.  Moyano-Cambero C. E.  Mestres N.  Bischoff A.

*A Raman Study of Chelyabinsk LL5-6 Chondrite Breccia: Investigating the Signatures of Shock-Induced Melting in Near Earth Asteroids* [#1729]

We have performed a Raman and SEM + EDS study of Chelyabinsk LL-6 chondrite breccia in order to characterize the minerals originated as consequence of shock.

Voropaev S. A.

*Vesta Structure and some Petrological Constrains from the Study of Gravitational Potential by the Dawn Mission* [#1100]

The Dawn mission discovered that the evolution of Vesta was a complex process and in the initial stage its rocks were more mobile than currently.

Zinovieva N. G.  Glazovskaya L. I.  Plechov P. Y.

*Find of Ureyite- and Jadeite-Bearing Pyroxenes in Chondrules and Matrix of Chelyabinsk LL5 Ordinary Chondrite* [#1059]

The occurrence of Na-Cr-Al-bearing pyroxenes in chondrules and matrix of Chelyabinsk LL5 chondrite testifies to significant pressures in its parent body.