

Tuesday, March 20, 2012

POSTER SESSION I: TERRESTRIAL IMPACTS: OLD AND NEW

6:00 p.m. Town Center Exhibit Area

Wittmann A. Goderis S. Claeys P. Elburg M. Vanhaecke F. Zaiss J. Ravizza G. Deutsch A.  
[\*Depositional Record of Pristine Impactites and Traces of the Projectile in El'gygytyn Crater\*](#) [#1999]

Formation and emplacement constraints for a continuous section of impactites and traces of the impacting projectile from trace-element data (platinum-group elements and Os-isotopes) in drill core samples from El'gygytyn crater.

Chen M.

[\*Xiuyan Impact Crater, China\*](#) [#1003]

Xiuyan crater is the first confirmed impact structure in China. It is a simple crater 1.8 km in diameter and formed before 50 kyr ago. The evidence for shock metamorphism includes PDFs in quartz, coesite, and diaplectic feldspar glass.

Ferrière L. Kaseti P. K. Lubala F. R. T. Koeberl C.

[\*The Omeonga Structure, Democratic Republic of Congo: Geological and Petrographical Results, and Implications for its Origin\*](#) [#2054]

For the first time, the origin of the ~38-km-diameter Omeonga structure, located in the Democratic Republic of Congo, is discussed using geological field observations and petrographic investigations on samples from our July 2011 field campaign.

Belhai D. Sahoui R. Devouard B.

[\*New Studies about the Maadna Impact Crater \(Talemzane, Algeria\)\*](#) [#1111]

The geological investigation reveals that the Maadna (Algeria) presents a set of criteria that demonstrate it is a true impact crater. Based on erosion, the age of the crater is estimated in the range from 203,000 years to 2 million years.

Glass B. Domville S. Sanjanwala R. Lee P.

[\*Constrained Model Interpretations from Haughton Crater Geophysical Datasets\*](#) [#2910]

Existing geophysical datasets have been updated and are used as constraints to create a model of the substructure of the Haughton Crater impact structure.

Tabares Rodenas P. King D. T. Jr. Ormo J. Petruny L. W. Marzen L. J.

[\*New LiDAR Digital Elevation Model and Geological Map — Wetumpka Impact Structure, Alabama\*](#) [#2522]

New geological mapping at Wetumpka impact crater (Alabama) has been aided by the use of recently obtained lidar data to make a base-map DEM and to construct new and more accurate geological cross sections, which are presented here.

Petruny L. W. King D. T. Jr. Tabares Rodenas P.

[\*A Shallow Excavation Transect Across the Wetumpka Impact Structure, Alabama — The El Paso Gas Company Pipeline Cut\*](#) [#2546]

We report here on the geology observed when the El Paso Gas Company reopened its existing natural gas pipeline cut going west-east across the whole of the Wetumpka impact structure, Alabama.

Misra S. Androli M. A. G.

[\*Post-Impact Dolerite Dykes in the ~145 Ma Morokweng Crater, South Africa: Impact Related?\*](#) [#1078]

In the present abstract we studied geochemistry of some mafic dykes emplaced along radial fractures within the Morokweng crater, South Africa, and we discuss their possible relationship with impact.

Beauford R. E.

[\*Ferrous Minerals and Impactite Mineralization at Missouri's Crooked Creek and Decaturville Impact Craters\*](#) [#1710]

Epigenetic hydrothermal mineralization, subsequent to the Crooked Creek and Decaturville impacts, accompanied Paleozoic dolomitization of carbonates at a regional scale in the Ozarks and produced quantities of ferrous minerals at both locations.

Azad A. S. Dypvik H. Kalleson E. Riis F.

[\*Sedimentation in the Ritland Impact Structure, Western Norway\*](#) [#1281]

Ritland is the most recently confirmed Norwegian impact structure. Different gravity controlled sedimentation processes; rock avalanches, and debris flows initially operated to fill the crater. Suspension deposition and turbidity currents dominated lately.

Wood C. A.

[\*Recognition of Degraded Impact Craters on Earth, Moon and Titan\*](#) [#1637]

Impact craters occur everywhere, but the identification of degraded ones is very difficult or even impossible on worlds like Titan with an uncertain inventory of geologic processes and an active surface.

Maziviero M. V. Vasconcelos M. A. R. Góes A. M. Crósta A. P. Reimold W. U.

[\*The Riachão Ring Impact Structure, Northeastern Brazil: Re-Evaluation of Its Stratigraphy and Evidence for Impact\*](#) [#1511]

Results of a field mapping and petrographic studies are discussed. We propose changes in the stratigraphy of the Riachão impact structure and present new shock deformation evidences found in the structure.

Brown P. Ens T. Edwards W. N. Silber E. A.

[\*Global Detection of Airbursts: A Combined Satellite-Infrasound Study\*](#) [#1581]

A total of 71 satellite detected airbursts were detected by one or more infrasound arrays. Airbursts larger than 20 kT are detectable by infrasound globally, while more than 50% of all 1 kT airbursts are detected by the current infrasound network.

Kuzmicheva M. Yu. Losseva T. V.

[\*Simulations of the Geomagnetic Field Disturbances Caused by the Tunguska Event 1908\*](#) [#2319]

The phenomena explaining the main features of geomagnetic perturbations caused by the Tunguska explosion: location, start time, and signs of disturbances of the geomagnetic field have been simulated. Azimuth of trajectory of the bolide has been defined.

Steiner M. B.

[\*Newly Discovered Iron Meteorites Within the City Limits, Laramie, WY\*](#) [#2924]

Abundant iron meteorites in southeast Wyoming indicate a meteorite shower, with similarities to the Shikote Alin fall, i.e., breakup in the atmosphere. Evidence indicates flight very close to the land surface and a flight direction of ~N 30 E.

Shumilova T. G. Isaenko S. I. Makeev B. A. Ernstson K. Neumair A. Rappenglück M. A.

[\*Enigmatic Poorly Structured Carbon Substances from the Alpine Foreland, Southeast Germany: Evidence of a Cosmic Relation\*](#) [#1430]

We studied exotic carbon matter from the field composed of amorphous carbon and the monocrystalline carbyne allotrope ("chaoite"). The required PT conditions (4–6 GPa, 2500–4000 K) are evidence of a formation in a so-far unsettled shock event.