

Tuesday, March 18, 2014

[T617]

**POSTER SESSION: TERRESTRIAL CRATERS AND IMPACT PRODUCTS:
SAMPLE ANALYSES**

6:00 p.m. Town Center Exhibit Area

Mayne R. G. Jaret S. J. Herrmann B. C. **POSTER LOCATION #197**
[*When Classification Gets Complicated: The Ingalls "Impact-Like" Structure*](#) [#1035]

Classification is complex and rigor is necessary. The Ingalls Structure cannot officially be classified as an impact-crater, but what else could it be?

Beauford R. E. Evans K. R. **POSTER LOCATION #198**
[*Preliminary Reconnaissance of the Belton Structure, a Possible Impact Crater in Cass County, Missouri*](#) [#1217]

Evaluation of digital elevation models and rock samples justifies tentative consideration of Missouri's Belton Structure as a possible impact crater.

Chennaoui Aoudjehane H. Reimold W. U. Koeberl C.
Bouley S. Aoudjehane M. et al. **POSTER LOCATION #199**
[*Agoudal \(High Atlas Mountains\): Confirmation of Remnants of a Post Mid-Jurassic Impact Structure in Morocco*](#) [#2053]

Agoudal (High Atlas Mountains, Morocco) site is the first discovery of an impact structure in Morocco. In this area, was discovered Agoudal IIAB iron meteorite.

Xie W. X. Schimitt D. S. **POSTER LOCATION #200**
[*High Resolution Seismic Imaging of a Potential Eroded Impact Structure*](#) [#2299]

The geophysical seismic technique including reflection and refraction methods are being applied to characterize the detailed features of Bow City Structure.

Milam K. A. Trygstad P. **POSTER LOCATION #201**
[*Structural Expression of the Crater Rim at the Heavily-Eroded Serpent Mound Impact Structure*](#) [#1444]

This study highlights structural evidence suggesting that the Serpent Mound impact structure is much larger than the 7–8-km-diameter as originally proposed.

King D. T. Jr. Ormo J. Petruny L. W. Lepinette A. **POSTER LOCATION #202**
[*Wetumpka Impact Structure \(Alabama\): Tsunami Generation and Subsequent Resurge*](#) [#2139]

At Wetumpka's marine target impact crater, Upper Cretaceous target chalk has been eroded and redeposited as a post-impact resurge unit near and within the crater.

Lugo Centeno C. M. Cavosie A. J. **POSTER LOCATION #203**
[*First Report of Shocked Zircon at the Santa Fe Impact Structure \(USA\)*](#) [#1839]

This is the first report of shocked zircon at the Santa Fe impact structure. The presence of planar fractures in detrital zircon grains has been documented.

Colón Lugo D. Cavosie A. J. **POSTER LOCATION #204**
[*Detrital Shocked Muscovite from the Santa Fe Impact Structure \(USA\)*](#) [#2033]

A classification for kink bands was determined based on the geometry of the microstructures found in mica grains from the Santa Fe impact structure.

Cavosie A. J. Lugo Centeno C. **POSTER LOCATION #205**
[*Shocked Apatite from the Santa Fe Impact Structure \(USA\): A New Accessory Mineral for Studies of Shock Metamorphism*](#) [#1691]

We report the occurrence of detrital shocked apatite crystals with planar microstructures from colluvium at the Santa Fe impact structure in New Mexico, USA.

Kerrigan M. C. Clayton J. Nuhn A. M. Pickersgill A. E. Osinski G. R. **POSTER LOCATION #206**
[The Slate Islands Impact Structure, Lake Superior, Canada; Field and Petrographic Observations of Impact Breccias](#) [#1588]

The Slate Islands are the central uplift of a 30-km-diameter complex crater. We report on recent fieldwork focusing on the variety of impact breccias there.

Greenberger R. N. Mustard J. F. Osinski G. R. Tornabene L. L. Marion C. L. et al. **POSTER LOCATION #207**
[Spectral Mapping of Alteration Phases Within a Hydrothermal Vug at the Haughton Impact Structure](#) [#1923]

Mapping hydrothermal mineralization and later weathering products provides insights into impact-generated hydrothermal systems and their subsequent evolution.

Weirich J. R. Osinski G. R. Pentek A. Bailey J. **POSTER LOCATION #208**
[Sudbury Breccia of the East Range: Sudbury Impact Structure, Canada](#) [#1838]

Most work on Sudbury breccia has been on the north and south ranges. We present results from the east range, finding it to have an igneous origin.

Pilles E. Osinski G. R. Bailey J. Smith D. **POSTER LOCATION #209**
[Emplacement of the Foy Offset Dyke at the Sudbury Impact Structure, Canada](#) [#1044]

Field observations provide insight into the formation of impact-related dykes at the Sudbury impact structure.

Ghosh S. Ray D. **POSTER LOCATION #210**
[Microtextures and Geochemistry of Glass and Clast Lithologies of Impact-Melt from Lonar Crater, India](#) [#1197]

Aerodynamic shape of the impact glass bomb has flow structures within shock glass. Clasts within Lonar shock glass include both mineral and lithic fragments.

Jaret S. J. Woerner W. R. Phillips B. P. Wright S. P. Glotch T. D. **POSTER LOCATION #211**
[Maskelynite: How Isotropic Is It?](#) [#2151]

Although maskelynite is optically isotropic and X-ray and NMR amorphous, infrared spectroscopy of rotated grains reveals preserved orientation effects.

Fernandes V. A. S. M. Hopp J. Schwarz W. Trieloff M. Reimold W. U. et al. **POSTER LOCATION #212**
[Progress Report on the Re-Evaluation of the Chesapeake Bay and Popigai Crater Impact Ages: New ⁴⁰Ar-³⁹Ar Step Heating Results from Popigai Impactites](#) [#1274]

Preliminary Ar-Ar data for Popigai impactites. Careful SEM and EMP inspection of ~2-mm thick sections permitted identification of areas mostly of impact melt.

Chanou A. Grieve R. A. F. Osinski G. R. **POSTER LOCATION #213**
[Textural Comparison Between Popigai and Ries Impact Structures](#) [#2606]

Textural similarities between surficial impact melt-bearing breccias from the Popigai and Ries impact structures reveal similar formation processes.

Poelchau M. H. Schleip L. Wöhrle J. P. Kenkmann T. **POSTER LOCATION #214**
[Planar Fractures and Feather Features as Indicators for the Orientation of the Deviatoric Stress Field in the Shock Wave](#) [#1824]

Feather features are microstructural indicators of differential stress in the shock wave. Planar fractures and possibly PDFs are aligned to this stress field.

Chang Y. Goto K. Sekine Y. Tajika E. **POSTER LOCATION #215**
[Vertical Profile of PDF Orientations and Grain Size Distribution of Shocked Quartz in the Yaxcopoil-1 Core, Chicxulub Impact Structure, Mexico: Constraints on the Ejecta Deposition Process](#) [#1990]

In this study, we report the vertical profile of shocked quartz grains and discuss the depositional processes of the Yaxcopoil-1 core in Chicxulub Crater.

Simpson S. L. Lee M. R. Lindgren P. **POSTER LOCATION #216**
[Impact-Generated Hydrothermal Circulation and Metasomatism of the Rochechouart Astrobleme: Mineralogy and Major and Trace Element Distribution](#) [#1039]

Mineralogical evidence of impact produced hydrothermal alteration and metasomatism within the Rochechouart structure in south-central France.

Arana Morales A. Cavosie A. J. **POSTER LOCATION #217**
[A Study of Shocked Quartz in Breccia from the Rock Elm Impact Structure](#) [#2185]

With the presence of shocked quartz in the unusual breccia found in the Rock Elm impact structure it is possible to confirm the impact origin of the sample.

Montalvo Jimenez P. E. Cavosie A. J. Valley J. W. **POSTER LOCATION #218**
[A Constraint on Shocked Mineral Abundance in the Jack Hills Zircon Suite](#) [#2338]

A constraint on shocked mineral abundance in the Jack Hills zircon suite.

Craig M. A. Osinski G. R. Flemming R. L. Cloutis E. A. Horgan B. et al. **POSTER LOCATION #219**
[Near-Infrared Spectra of Glassy Impactites from Terrestrial Impact Structures](#) [#2417]

Glasses produced by hypervelocity impact may be responsible for some spectral properties heretofore attributed to space weathering or acidic leaching processes.

Neil L. A. Howard K. T. **POSTER LOCATION #220**
[Rare Inclusions in Darwin Glass: Partial Melts](#) [#1932]

We are reporting the discovery of partially molten rock fragments in Darwin glass that may help to confirm the impact origin of Darwin Crater.

Tagle R. Goderis S. Fritz J. Bartoschewitz R. Artemieva N. et al. **POSTER LOCATION #221**
[An Extraterrestrial Component in Australasian Tektites](#) [#2222]

Target-projectile mixing processes were identified in Ni-rich Australasian tektites and studied by high-resolution numerical models.

Povemire H. **POSTER LOCATION #222**
[A Spectacular New Georgia Tektite from Dooly County, Georgia](#) [#1144]

A synopsis on the field research of the Georgia Tektite Strewn Field; additional specimens found have expanded the strewn field.

Giuli G. Cicconi M. R. Stabile P. Trapananti A. Pratesi G. et al. **POSTER LOCATION #223**
[New Data on the Fe Oxidation State and Water Content of Belize Tektites](#) [#2322]

Fe³⁺ and water content of eight Belize tektites, determined by XAS and FTIR, are comparable with literature data on tektites. Larger spread of Fe redox is remarked.

Akhter R. Shirai N. Ebihara M. **POSTER LOCATION #224**
[Chemical Characteristics of Dalat Tektites](#) [#1886]

We analyzed 13 tektites from Dalat in Vietnam and according to our results, Dalat tektites are rich in Cr, Co, and Ni. We verify the reason for this enrichment.

Huber M. S. Ventura Bordenca C. Goderis S. DeBaille V. Claeys P. **POSTER LOCATION #225**
[New Micrometeorite Collection Site Discovered at Wideroefjellet, Antarctica](#) [#2108]

Here we report the discovery of a new accumulation site in the Antarctic continent with an excellent preservation of micrometeorites and cosmic spherules.

Mohr-Westheide T. Fritz J. Hofmann A. Tagle R. Koeberl C. et al. **POSTER LOCATION #226**
[Petrology and Geochemistry of Archean Spherule Layer Occurrences in the BARB 5 ICDP Drill Core, Barberton Greenstone Belt](#) [#1356]

First petrographic and geochemical results for a set of new samples of spherule layer intersections from the Barberton Greenstone Belt, South Africa.

Davatzes A. K. Swartz N. G.

POSTER LOCATION #227

[Paraburdoo Spherule Layer Spinel Composition](#) [#1593]

Results of geochemical analyses from the Paraburdoo Spherule Layer and comparison to earlier Precambrian impacts.

Lai T. L. Davatzes A. K. D.

POSTER LOCATION #228

[Petrographic and SEM Analyses of Proterozoic Impact Spherules from the Grænsesø Layer, Greenland](#) [#1472]

Petrographic and SEM analyses of spherules in the upper part of the Grænsesø Formation in South Greenland reveal diversity in size, shape, and chemical makeup.

Ormö J. Nielsen A. T. Alwmark C.

POSTER LOCATION #229

[Evidence for an Early Cambrian Proximal Impact Ejecta Layer in the North-Swedish Caledonides](#) [#1025]

A hidden crater under Caledonian nappes may hold information on the Early/Mid Cambrian paleoenvironment of the area at the time of impact.

Belza J. Goderis S. Montanari A. Roose K. Vanhaecke F. et al.

POSTER LOCATION #230

[Textural and Geochemical Characterization of Ferromagnesian Microkrystite Spherules at the K-Pg Boundary and Similarities with Chondrules: A Comparative Approach](#) [#1716]

This work reports textural and geochemical characteristics of microkrystite spherules from the K-Pg boundary and its striking similarities with chondrule textures.