

**Tuesday, March 8, 2011**  
**TERRESTRIAL IMPACT CRATERS**  
**8:30 a.m. Waterway Ballroom 5**

**Chairs:** David Kring  
 Keith Milam

- 8:30 a.m. Mohr-Westheide T. Reimold W. U. \* Thirlwall M.  
[\*Genesis of Pseudotachylitic Breccia from the Vredefort Dome, South Africa: Current State of Research\*](#) [#1146]  
 Field, petrographic, and chemical evidence pertaining to the genesis of pseudotachylitic breccia in large impact structures is reviewed and the still-debated formation of such breccias is evaluated.
- 8:45 a.m. Singleton A. C. \* Osinski G. R. Grieve R. A. F. Shaver C.  
[\*Characterization of Impact Melt-Bearing Impactite Dykes from the Central Uplift of the Mistastin Lake Impact Structure, Labrador\*](#) [#2250]  
 This study investigates the characteristics of impact melt-bearing breccias and impact melt rocks which occur as intrusive bodies in the central uplift of the Mistastin Lake impact structure.
- 9:00 a.m. Wright S. P. \* Newsom H. E.  
[\*Analyses of a Large Sample Collection of Shocked Deccan Basalt Reveal a Range of Shock Pressures, Protoliths, and Pre- and Post-Impact Alteration Products\*](#) [#1619]  
 A large, ~80 kg sample collection of shocked basalt does not grow on trees. The foresighted will appreciate the various research projects and implications described here.
- 9:15 a.m. Sharpton V. L. \*  
[\*Haughton Impact Structure: Re-Evaluation and Reassessment of its History and Current State\*](#) [#2822]  
 Recent hypotheses regarding the nature and state of the Haughton impact structure are evaluated.
- 9:30 a.m. Gibson R. L. \* Reimold W. U. Baegi M. Crósta A. P. Shbeli E. Eshwehdi A.  
[\*The Oasis Structure, Southeastern Libya — New Constraints on Size, Age and Mechanism of Formation\*](#) [#1024]  
 New results from the up to 36-km-wide, eroded, Oasis structure confirm shock deformation and a complex fold-and-fault interference pattern in sedimentary strata consistent with centripetal slumping and radial constriction.
- 9:45 a.m. Ferrière L. \* Osinski G. R.  
[\*The New Luizi Impact Structure \(Democratic Republic of Congo\) and Implications for Central Peak and Peak Ring Formation\*](#) [#1642]  
 Our findings at the Luizi structure provide insights into the formation of mid-sized impact craters in sedimentary target lithologies — structural ring structures within the central uplift may form by collapse of an unstable central peak.
- 10:00 a.m. Higgins M. D. \* Lajeunesse P. St-Onge G. Locat J. Duchesne M. Ortiz J. Sanfaçon R.  
[\*Bathymetric and Petrological Evidence for a Young \(Pleistocene?\) 4-km Diameter Impact Crater in the Gulf of Saint Lawrence, Canada\*](#) [#1504]  
 The Corossol Crater is a complex crater ~4 km in diameter with a central uplift, a prominent moat, and multiple, low-relief ridges. The minimum age is ~13 ka. The impact origin is confirmed by a sample of suevite.

- 10:15 a.m. Öhman T. \* Preeden U.  
[\*Shock Metamorphism of Quartz in Saarijärvi and Söderfjärden Impact Structures, Finland\*](#) [#1546]  
Samples from Saarijärvi and Söderfjärden structures reveal multiple sets of PFs, PDFs, and feather feature lamellae in orientations typical for shock metamorphism, establishing their impact origin. Saarijärvi is most likely Early Cambrian or younger.
- 10:30 a.m. Kring D. A. \* Balcerski J. Blair D. M. Chojnacki M. Donohue P. H. Drummond S. A. Garber J. M. Hopkins M. Huber M. S. Jaret S. J. Losiak A. Maier A. Mitchell J. Ong L. Ostrach L. R. O'Sullivan K. M. Potter R. W. K. Robbins S. Shankar B. Shea E. K. Singer K. N. Sori M. Sturm S. Willmes M. Zanetti M. Wittmann A.  
[\*Fold Hinge in Overturned Coconino Sandstone and its Structural Displacement During the Formation of Barringer Meteorite Crater \(a.k.a Meteor Crater\)\*](#) [#1740]  
New details are uncovered about the overturning and emplacement of impact ejecta at the classic impact site: Meteor Crater.
- 10:45 a.m. Raschke U. \* Reimold W. U. Schmitt R. T.  
[\*Preliminary Stratigraphy and First Petrographic and Geochemical Results from the ICDP Drill Core from El'gygytgyn Crater \(Russia\)\*](#) [#1299]  
The first lithological description and geochemical analysis of the 2009 drilled (ICDP-Project) impact rocks of the El'gygytgyn-crater in northeast Siberia. It is one of the best-preserved impact craters in silicious rocks.
- 11:00 a.m. Pittarello L. Koeberl C. \* El'gygytgyn Scientific Party  
[\*Geometrical Characterization of Quartz Clasts in Impact Melt Breccia from the El'gygytgyn Drill Core\*](#) [#1697]  
Image analysis applied to quartz clasts in samples from the El'gygytgyn drill core, e.g., shape, preferred orientation, and abundance, may provide a basis for differentiating various types of impact melt breccia.
- 11:15 a.m. Huber M. S. \* Crne A. E. Leland A. Melezhik V. A. Koeberl C. FAR DEEP Science Team  
[\*Possible Occurrence of Distal Impact Ejecta from the Vredefort Impact Event in Drill Cores from the Onega Basin, Russia\*](#) [#1487]  
Round-ovoid, millimeter-scale features are described from drill cores from the Onega Basin, Russia, in a stratigraphic unit with age constraints including the Vredefort impact event.
- 11:30 a.m. Davatzes A. E. \*  
[\*Impact Plume Fractionation as Indicated by Size and Mineral Diversity in Archean Spherules\*](#) [#1751]  
The size distribution and relative abundance of the five major types of spherules in the S3 section of the Barberton greenstone belt, South Africa are analyzed and quantified.