

Thursday, March 22, 2018

[R610]

POSTER SESSION II: IMPACTS VII: SHOCK METAMORPHISM AND EXPERIMENTS

6:00 p.m. Town Center Exhibit Area

Jaret S. J. Harris R. S. Rasbury E. T. Albin E. F. **POSTER LOCATION #170**
[The Martha's Vineyard Tektite Revisited: A Distinct Subcategory of North American Tektite](#) [#2574]

The tektite found on / Martha's Vineyard is not a / Misplaced Georgiaite.

Ma C. Tschauner O. Beckett J. R. **POSTER LOCATION #171**
[Discovery of a New High-Pressure Silicate Mineral, \$\(Mg,Fe\)_3Si_2O_7\$ with a Tetragonal Spinelloid Structure, in Shock Melt Veins from the Tenham Meteorite](#) [#1566]

We report a high pressure and temperature, vacancy-stabilized silicate spinel, crystallized from a shock-induced melt with a high-P $MgSiO_3$ phase in Tenham.

Jaret S. J. Johnson J. R. Sims M. Glotch T. D. **POSTER LOCATION #172**
[A Microspectroscopic Comparison of Experimentally Shocked Basalts](#) [#2355]

Plag in shocked basalt / Responds differently to shock / Could it be grain size?

Izawa M. R. M. Hall B. J. Chanou A. Jephcoat A. P. **POSTER LOCATION #173**
 Applin D. M. et al.
[Comparing Martian Regolith Breccia Northwest Africa 8171 with Terrestrial Impact Breccias](#) [#2360]

Northwest Africa 8171 was studied using image analysis and machine learning to compare its textural properties with terrestrial impact-melt bearing breccias.

Fudge C. Sharp T. G. Hu J. Ma C. Tschauner O. et al. **POSTER LOCATION #174**
[Characterization of a New High-Pressure Assemblage After Anorthitic Plagioclase in Polymict Eucrite Northwest Africa 10658](#) [#2417]

We summarize structural and textural results on a new, garnet-bearing high-pressure assemblage after plagioclase in polymict eucrite Northwest Africa 10658.

Chinchalkar N. S. Duraiswami R. A. **POSTER LOCATION #175**
[Quenched Morphologies in Impact Glass from Lonar Crater, India: Role of Water?](#) [#2849]

Samples of impact glass collected from the northern exterior of the Lonar Crater, near Amber Lake, showed presence of quenched morphologies in phenocrysts.

Chanou A. Grieve R. A. F. Osinski G. R. **POSTER LOCATION #176**
[Ballen Fractures in Impactites and Fulgurites](#) [#2992]

Ballen are a fracture phenomenon caused by thermal shock and have been observed with co-existing PDFs and in impactites, as well as fulgurite rocks.

Molnár M. Švanda P. Beneš L. Ventura K. Ernstson K. **POSTER LOCATION #177**
[Asphaltic \(Bituminous\) Breccias with Carbolite \(Carbon Allotrope\) and Ballen Structures in Silica as Indicative of Thermal Shock: More Evidence of a Holocene Meteorite Impact Event in the Czech Republic](#) [#1423]

We report on a so far naturally unknown carbon allotrope and unusual ballen quartz suggesting strong thermal shock in an asphaltic polymictic impact breccia.

Erickson T. M. Kirkland C. L. Timms N. E. **POSTER LOCATION #178**
[Deformation Microstructures Preserved in Zircon and Monazite from the Yarrabubba Impact Structure, Western Australia](#) [#1764]

This study undertakes a detailed microstructural examination of shock features in zircon and monazite from the impactites of the Yarrabubba impact structure.

Schmieder M. Erickson T. M. Tohver E. Kring D. A. **POSTER LOCATION #179**
[*A Ti-, Zr-, Th-, and U-Rich Hydrothermal Assemblage Associated with the Precambrian Yarrabubba Impact Structure \(Western Australia\) \[#1782\]*](#)

Zircon and thorite / From Yarrabubba Crater / formed in cooling melt.

Cox M. A. Cavosie A. J. Miljković K. Bland P. A. Kenkmann T. **POSTER LOCATION #180**
[*The Search for Shocked Zircon at Spider Impact Structure, Western Australia*](#) [#1890]

Survey for shock deformed zircon grains in shatter cones from the Spider Impact Structure.

Guo Z. Li Y. Xie Z. D. Li S. J. Li X. Y. et al. **POSTER LOCATION #181**
[*High Temperature Clinoenstatite Discovered in the Heavily Shocked Ordinary Chondrite Grove Mountains 022115: Implication for the Decomposition of Pyroxene*](#) [#1974]

High temperature clinoenstatite discovered in the heavily shocked ordinary chondrite GRV 022115, and associate with silica glass in the amorphous glass.

Anderson J. L. B. Cintala M. J. Dechant L. E. Ebel J. M. Plescia J. B. **POSTER LOCATION #182**
[*Ejecta Dynamics and Crater Topography During Experimental Impacts into Sloped Targets*](#) [#2646]

We compare two near-identical experimental impacts (into horizontal vs. sloping targets) to investigate the effects of target topography on the impact process.