Tuesday, July 28, 2015
POSTER SESSION: IMPACT CRATERING:
MAPPING, MELTING, SHOCK EFFECTS
5:30 p.m. Hearst Memorial Mining Building (HMMB) Floor Three

Gottwald M. Fritz T. Breit H. Schaettler B. Harris A.
The TanDEM-X DEM — Status of the New Dataset for Studying Topography of the Global Impact Crater Record **[#5004]**
In the TanDEM-X mission two X-band radar satellites were operated as a single-pass SAR interferometer. From the acquired data a new digital elevation model is being generated. We report on the capabilities of this DEM for impact crater studies.

Hauser N. Guimarães E. Velcic M. do Carmo D. de Almeida T. Garnier J. Vieira L. C. Valadares G. C. F. Brandão M. V. Adorno R. R. de Araujo M. C. Pereira M. G. Guerra A. Cunha S. Silva K. S. Rocha M. G. von Glehn A. Araújo T. Carneiro J. de Oliveira D. E. M. Citon R. T. P. Dantas R. Ferreira L. V. R. Yokoyama E. Reimold W. U.
A New, Improved Map of the Araguainha Dome Impact Structure, Central Brazil **[#5096]**
Araguainha Dome (~40 km diameter), is the largest impact structure known in South America. In 2012, as part of the annual fifth year UnB students´ final mapping course, 15 undergraduate students of Brasilia University remapped the structure.

Sahoui R. Belhai D.
Ouarkziz Impact Structure, Algeria: Preliminary Petrographic and Geochemical Studies **[#5081]**
Ouarkziz impact crater in Algeria is set in Namurian lower limestone and marls with gypsum. We present here preliminary petrographic and geochemical studies of the rocks and breccias forming the rings ans the central area of the structure.

Mahmood S. S. Jarret S. J. Sessa J. A. Bigolski J. N. Aldoroty R. J. Ebel D. S. Landman N. H.
Presence of Shocked Quartz at Two Cretaceous / Paleogene (K/Pg) Sites in the New Jersey Coastal Plain **[#5329]**
Upon re-observation of samples collected at the chemo stratigraphic boundary of the Agony Creek (30m paleodepth) and Crosswicks Creek (100m paleodepth) shocked quartz was found confirming their status as K/Pg sites.

Krzesińska A. M. Wirth R. Kusiak M. A.
Shock and Annealing Record in Zakłodzie Enstatite Meteorite **[#5229]**
TEM observation of striated enstatite in Zakłodzie shows that meteorite was severely shocked, impact melted and annealed due to burial in deep, warm ejecta on the chondritic parent body.

Jaret S. J. Cai Y. Hemming S. R. Rasbury E. T. Winslow F. D. Thompson L. M. Glotch T. D.
A Comparison of Argon Ages of Manicouagan Impact Melt and Solid-State Maskelynite **[#5221]**
Argon isotopes / Are partially reset at / Manicouagan.

Xie Z. Zuo S.
Partial Transformed High Pressure Phases in Shocked-Induced Melt Vein of Antarctic GRV Meteorites **[#5169]**
The study focus on partial solid-state transformation of major minerals in shock-induced melt veins of Antarctic GRV chondrites. The goal is to better elucidate mechanism of partial transformation, Mg-Fe diffusion, and estimate the shock duration.

El Kerni H. Chennaoui Aoudjehane H. Reimold W. U. Koeberl C. Baratoux D. Bouley S. Aoudjehane M.
Agoudal Shatter Cones (High-Atlas, Morocco) — Constraints on Erosion of an Associated Impact Crater **[#5122]**
While some researchers assume that the formation of the Agoudal shatter cones is related to the fall of the iron meteorites found in the vicinity, our group prefers the interpretation that the two are not genetically linked.

Wilk J. Kenkmann T.
Formation of Shatter Cones in the MEMIN Impact Experiments **[#5102]**
We recovered shatter cone fragments from the MEMIN cratering experiments in sandstone, quartzite and limestone blocks. We analyzed the conical to hyperboloid, curved and striated fracture surfaces with SEM, WLI and produced µm-accurate 3D models.

Bertoglio O.
On the Role of Shock Wave Reflections in Impact Cratering **[#5047]**
When the downward impact shockwave meets a rock discontinuity, an upward reflected pressure wave is created. When travelling through the crater fill deposits, this wave projects upwards the shattered rocks which so may contribute to the rim creation.

Xie Z. Zuo S. Wang H.
Fe-Rich Spherules Bearing Angular Quartzes of Taihu Lake: Possible Fallout of Eject Plumes **[#5183]**
Fe-rich spherules bearing angular quartes are dispersed in a specific mud layer of Taihu Lake dated as 7500 BP, are products of aggreation of shattered angular quartz fragments and fine materials, possible fallout of an eject plume by an airburst.

Harris T. H. S.
Tektite Suborbital Science **[#5135]**
The australite fall sites in S. Australia at 10 km/s require loft times of 7.5 hrs from Indochina and 112.5 deg Earth spin, inconsistent with a launch from that same hemisphere. Alternative AA source regions must explain these imprint elements.

Harris T. H. S.
Tektite Process Constraints **[#5053]**
Shock accounts for only half of "australite" tektites 10 km/s morphologically derived speed. 5,000 m/s delta V remains unaccounted. In perspective, this is equivalent to ~50 years of geosynchronous station keeping budget, and 3/4 of the tektite's KE.

Koeberl C. Nishiizumi K. Caffee M. W. Glass B. P.
Beryllium-10 in Individual Australasian Microtektites and Origin of Tektites **[#5187]**
Be-10 measurements in individual microtektites are reported for the first time, and show high contents, indicating formation early in the impact process (pre-crater-formation).

Van Ginneken M. Genge M. J.
Microtektites from the Larkman Nunatak, Transantarctic Mountains **[#5114]**
We report the discovery of microtektites in glacial moraine from the Larkman Nunatak, Transantarctic Mountains. Major and trace element compositions match those of Australasian microtektites. This discovery could extend the Australian strewnfield.