Tuesday, July 24, 2018
IMPACT CRATERING PROCESSES AND DYNAMICS OF SMALL BODIES: I
9:00 a.m. Green Room

Chairs: **Joanna Morgan**
Anna Losiak

9:00 a.m. Morgan J. V. * Gulick S. P. S. Expedition 364 Scientists
Drilling the K-Pg Impact Crater: IODP-ICDP Expedition 364 Results **[#6027]**
This will be an overview talk on recent offshore drilling into the peak ring of the Chicxulub impact crater, and will include an update on some of the recent expedition results.

9:15 a.m. Collins G. S. Rae A. S. P. Morgan J. V. * Gulick S. Expedition 364 Scientists
The Formation of Peak Rings in Large Impact Craters **[#6215]**
Simulations of Chicxulub crater formation are in good agreement with both large-scale geophysical observations and fine-scale geological and petrophysical observations from the IODP-ICDP Expedition 364 drill core.

9:30 a.m. Wittmann A. * van Soest M. Hodges K. V. Darling J. R. Morgan J. V. Gulick S. P. S. Stockli D. Rasmussen C. Kring D. A. Schmieder M.
Petrology and Radioisotopic Ages of Allanite in the Peak Ring of the Chicxulub Impact Crater **[#6286]**
We report Th-Pb ages for REE-rich allanite in Chicxulub's peak ring that chronicle alteration events, possibly including hydrothermal/metasomatic alteration triggered by the impact.

9:45 a.m. Poelchau M. H. * Riller U. Rae A. S. P. Ebert M. Schuster B.
Deformation of the Chicxulub Peak Ring: First Insights from Fault-Slip Analysis **[#6261]**
Fault-slip analysis in Chicxulub peak ring granites from Expedition 364 reveals a highly complex deformation history of peak ring formation. Calculation of stress tensors is difficult.

10:00 a.m. Artemieva N. * Morgan J.
Numerical Simulations of Chicxulub Ejecta **[#6034]**
We present recent results on Chicxulub ejecta modeling and discuss open questions: fraction of fine ejecta, back reactions within the plume, and possible separation of HSE from impact spherules.

10:15 a.m. Manske L. Wünnemann K. * Güldemeister N. Nakajima M. Burger C.
Impact-Induced Melting by Giant Impact Events **[#6185]**
We present new result on the impact-induced melt production as a function of impactor size, impact velocity and angle, and the initial temperature of the target. For the systematic study we use different numerical methods (iSALE, SPH).

10:30 a.m. Bender Koch C. * Kasami T. Gundlach C. Wynn J.
Impactites Beyond Metamorphism: A Plasma Origin of Vesicles **[#6163]**
We report the association of a specific type of metallic FeNi spherules from vesicles in Black Wabar impact glass. The implication is that these vesicles form via a confined metallic plasma isolated within the silicate glass.

10:45 a.m. Huber M. S. * Kovaleva E. Fourier F.
Lowermost Termination of Vredefort Granophyre Dyke Results in Unusual Features **[#6262]**
Unusual features of the Vredefort Granophyre Dyke, including melt segregation veins and anomalous clast distribution, are best explained as the exposed portion of the dyke representing the lowest termination of the injected melt.

11:00 a.m. Corrigan C. M. * Evans T. Andrews B. J. Loring S.
Chemical Composition of Mistastin Lake Impact Glasses **[#6346]**
We examine glassy impact melts from the Mistastin Lake, Canada, Impact Structure.

11:15 a.m. Rochette P. * Braucher R. Folco L. Horng C. S. Aster Team
^{10}Be in Australasian Microtektites Compared to Tektites: Size and Geographic Controls **[#6242]**
We show that microtektites are richer in ^{10}Be than tektites from the same geographic areas, and that the one from Antarctica are the richest impact glass ever measured.

11:30 a.m. Starunov V. A. Kharitonskii P. V. * Kosterov A. Sergienko E. S. Yanson S. Yu. Markov G. P. Sakhatskii A. S. Lezova I. E. Shevchenko E. V.
Magnetism of Tektite-Like Glasses from the Zhamanshin Impact Structure, Kazakhstan **[#6113]**
In >95% of tektite-like impact glasses from the Zhamanshin crater, Kazakhstan, ferrimagnetic fraction appears to be dominated by very fine superparamagnetic grains, implying an extremely high temperature and cooling rate of their initial material.

11:45 a.m. Barakat A. A. *
Iron Deposit and Its Bearing on the Meteorite Impact Event in the Libyan Glass Area Southwestern Egypt **[#6006]**
Recent studies report iron deposit in the western side of the Libyan glass area. The general characters of the deposit indicate that post impact iron rich solutions circulated in masses of meteorite impact breccia within the Libyan glass area.