Wednesday, March 22, 2017 [W404]
ROCKY CLUES ABOUT IMPACT CRATERING PROCESSES
8:30 a.m. Waterway Ballroom 6

Chairs: **Aaron Cavosie**
Martin Schmieder

8:30 a.m. Greenberger R. N. * Ehlmann B. L. Osinski G. R. Tornabene L. L. Green R. O.
Impact Melt Mixing and Heterogeneity: Lessons from the Haughton Impact Structure, Canada **[#2588]**
We quantitatively map compositions of impact melt rock outcrops at Haughton using imaging spectroscopy and find spatial variations indicating incomplete mixing.

8:45 a.m. McGregor M. * McFarlane C. R. M. Spray J. G.
The Nicholson Lake Impact Structure: Shock Features and Age of Formation **[#2151]**
The in situ analysis of apatites from the Nicholson Lake impact structure, Northwest Territories, Canada, yields an LA-ICP-MS age of 389 ± 6.7 Ma.

9:00 a.m. Gaither T. A. Hagerty J. J. * Villarreal K. A. Gullikson A. L. Leonard H.
Flynn Creek Impact Crater: Petrographic and SEM Analyses of Drill Cores from the Central Uplift **[#2263]**
We discuss the USGS Flynn Creek Crater Drill Core Collection and initial results of petrographic and microbeam exploration of the FC79-12 drill core.

9:15 a.m. Huber M. S. * Kovaleva E.
Inhomogeneous Distribution of Clasts in the Daskop Granophyre Dyke, Vredefort Impact Structure, South Africa **[#1999]**
Clast map of the dyke / Distribution not even! / Emplacement: complex.

9:30 a.m. Gibson R. L. * Wela S. S. Andreoli M. A. G.
Origin of Suevite by Mechanical Mixing of Friction Melt and Cataclasite During Peak Ring Formation in the Morokweng Impact Structure, South Africa **[#1364]**
Suevite dikes in core drilled 18 km from the center of the 70 km Morokweng structure formed by mixing of impact-induced friction melt and cataclasite.

9:45 a.m. Osinski G. R. * Grieve R. A. F.
"Suevites" of the West Clearwater Lake Impact Structure, Canada: A Demonstration of the Need for a Revised Classification Scheme for Impactites **[#2381]**
In this contribution we demonstrate the need for a revised classification scheme for impactites based on a case study of the West Clearwater Lake Crater, Canada.

10:00 a.m. Brunner A. E. * Hodges K. V. van Soest M. Osinski G. R.
Dating West Clearwater Lake Impactites with Multiple Chronometers **[#2925]**
U/Pb, (U+Th)/He, and radiation damage age data from zircons in West Clearwater Lake impact melts.

10:15 a.m. Sapers H. M. * Osinski G. R. Caudill C. Longstaffe F. J. Tornabene L. L. et al.
A Tale of Two Temperatures: Hydrothermal or Ambient Aqueous Alteration at the Ries Impact Structure **[#2731]**
Clay XRD analyses and ^{18}O isotopic results from suevite ejecta suggest complex clay mineralogy consistent with dynamic heterogeneous alteration processes.

10:30 a.m. Koeberl C. * Mougel B. Moynier F.
Meteoritic Component in Melt Rocks from the Boltysh (Ukraine) and Lonar (India) Impact Structures: First Assessment **[#1331]**
Chromium isotopes on impactites from the Boltysh (Ukraine) and Lonar (India) Craters confirm the presence of meteoritic components; Boltysh is not a KPg crater.

10:45 a.m. Heck P. R. * Schmitz B. Bottke W. F. Rout S. S. Kita N. T. et al.
An Achondrite-Dominated Meteorite Flux Before the L-Chondrite Parent Asteroid Breakup Event 466 Myr Ago? **[#1694]**
We find that achondrites possibly dominated the meteorite flux to Earth in the Middle Ordovician before the breakup of the L-chondrite parent body 466 Myr ago.

11:00 a.m. Cavosie A. J. * Timms N. E. Erickson T. M. Koeberl C.
Reidite and ZrO_2 in Muong Nong-type Australasian Tektites and the Significance of Granular Zircon in Siliceous Impact Melt **[#1806]**
We present evidence of reidite and ZrO_2 in granular zircon within Muong Nong-type tektites from Thailand, providing new insights into their genesis.

11:15 a.m. Boonsue S. * Spray J. G.
Shock-Generated Labradorite Polymorphs in Terrestrial Impact Rocks at Manicouagan **[#2557]**
Two new natural occurrences of shock-generated HP-HT monoclinic- and tetragonal-structured labradorite (An58) in shock veins of anorthosite, Manicouagan.

11:30 a.m. Ma C. * Beckett J. R.
A New Type of Tissintite, $(Ca,Mg,Na,\square_{0.14})(Al,Fe,Mg)Si_2O_6$, in the Zagami Martian Meteorite: A High-Pressure Clinopyroxene Formed in Shock **[#1639]**
We report here a new type of tissintite, crystallized from a shock-induced melt whose composition came close to a 1:1 mixture of plagioclase and clinopyroxene.