Friday, March 23, 2018 **[F705]**
IMPACTS IV: TERRESTRIAL IMPACT CRATERING
8:30 a.m. Montgomery Ballroom

Chairs: **Axel Wittmann**
Roberta Flemming

8:30 a.m. Kenkmann T. * Sundell K. A. Cook D.
Exhumed Paleozoic Impact Crater Strewn Field Near Douglas, Wyoming, USA: Evidence from Microstructural Analysis, Satellite, and Drone Imagery **[#1469]**
Impact crater strewn fields are ephemeral and none documented to date are older than 10,000 years. Here we report on a newly discovered 280 Ma old strewn field.

8:45 a.m. Lambert P. * Alwmark C. Baratoux D. Bouley S. Brack A. et al.
Rochechouart 2017–Drilling Campaign: First Results **[#1954]**
Characteristics and initial description of the 18 holes and ~515 m of cores recovered (cumulative length) at Rochechouart.

9:00 a.m. Ormö J. * Gulick S. P. S. Whalen M. T. Goto K. King D. T. Jr. et al.
Granulometric and Lithologic Line-Logging of Graded Suevite in the IODP-ICDP Expedition 364 Chicxulub M0077 Core: Evidence for a Rapid Seawater Resurge **[#1221]**
The graded suevite in the Chicxulub M0077 core has a genesis that includes initial slumping during peak ring formation followed by a forceful water resurge.

9:15 a.m. Poelchau M. H. * Ebert M. Schuster B. Kenkmann T. Karagöz O.
Structural Mapping of Granitoids in the Peak Ring of the Chicxulub Crater: Damage Distribution and Block Sizes **[#2009]**
A look at the structure of deformed granitoids from Chicxulub's peak ring suggests block sizes of either 500 or 150 m. Feather features complicate the issue.

9:30 a.m. Ferrière L. Feignon J.-G. Leroux H. Koeberl C. *
What Do Shocked Quartz Grains in Impactites from the IODP Expedition 364 Drill Core Tell Us About the Chicxulub Impact Event? **[#2238]**
Investigated granitoids from the Chicxulub peak ring experienced shock pressures of ~12–15 GPa. PDFs were recrystallized during a post-shock thermal episode.

9:45 a.m. Wittmann A. *
Constraints for Emplacement Conditions of the Chicxulub Impact Crater's Upper Peak Ring Section (747–617 mbsf) in IODP-ICDP Expedition 364 Drill Cores **[#2994]**
Petrography and zirconology of suevites and impact melt rocks from Chicxulub.

10:00 a.m. Walton E. L. * Timms N. E. Hauck T. E. MacLagan E. A. Herd C. D. K.
Evidence for Melting and Decomposition of Sedimentary Target Rocks from the Steen River Impact Structure, Alberta, Canada **[#2330]**
We report evidence for impact melting of Devonian carbonates and evaporites, as well as post-impact carbonate decomposition at the Steen River impact structure.

10:15 a.m. Debono L. E. * Osinski G. R. Grieve R. A. F.
The Upper Contact Unit (Roof Rocks) of the Sudbury Igneous Complex, North Range, Sudbury Impact Structure **[#2389]**
A targeted study of the geological characteristics of the SIC's Upper Contact Unit (North Range), and proposal for the new terminology of the roof rock lithology.

10:30 a.m. Flemming R. L. * Newman J. D. Botor R. J. Cao F. Caudill C. M. et al.
Preliminary Investigation of Shocked Carbonates from the Haughton Impact Structure, Devon Island, NU, Using X-Ray Diffraction and Rietveld Refinement **[#3000]**
Calcite and dolomite in shattercones from the Haughton impact structure show increased line broadening and decreased unit cell volume by XRD/ Rietveld refinement.

10:45 a.m. Caudill C. M. * Osinski G. R. Tornabene L. L. Longstaffe F. J.
Degassing Pipes at the Ries Impact Structure as an Analogue for Crater-Related Pitted Materials **[#2765]**
This study provides crater-wide characterization of degassing pipes at the Ries, applying modern analytical techniques to determine characteristics and origin.

11:00 a.m. Cavosie A. J. * Timms N. E. Ferrière L. Rochette P.
Former Reidite in Granular Neoblastic Zircon (FRIGN Zircon) from the Luizi Impact Structure and Proposed Pantasma Structure **[#1816]**
We report new occurrences of granular zircon that are the only terrestrial minerals that record both high-pressure and high-temperatures diagnostic of impact.

11:15 a.m. Drake S. M. Beard A. D. Downes H. *
A Meteorite Ejecta Layer at the Base of Mid-Paleocene Lavas, Western Scotland **[#1061]**
Ejecta layer is 61 Ma old and was recognized by presence of unmelted osbornite grains, barringerite, iron spherules, pdfs in quartz, and shocked zircons.

11:30 a.m. Bottke W. F. * Mazrouei S. Ghent R. R. Parker A. H. Gernon T. M.
What Really Happened to Earth's Older Craters? **[#1457]**
Earth/Moon crater records are surprisingly similar. Both show big increases in impacts starting 250 Ma. Terrestrial craters > 650 Ma erased by "Snowball Earth."