

**Monday, August 8, 2016**  
**IMPACT EXPERIMENTS: SHAKEN NOT STIRRED**  
**3:30 p.m. Room B**

**Chairs: Katarina Miljkovic**  
**Thomas Kenkmann**

- 3:30 p.m. Güldemeister N. \* Wünnemann K.  
[\*Recording and Analysis of Seismic Signals Generated by Hypervelocity Impacts from Numerical Modeling and Laboratory Experiments\*](#) [#6035]  
 We quantify seismic signals induced by hypervelocity impacts from numerical models in dependency of different target material properties. Therefore, a calibration of numerical material models based on experimental observations is required.
- 3:45 p.m. Spray J. G. \*  
[\*Experimental Vibration Melting Without Offset: Post-Shock Materials Behaviour\*](#) [#6118]  
 Experiments have been performed on Westerly granite using linear friction welding apparatus to induce oscillatory slip. This can explain the production of friction melts in faults displaying negligible offset, yet significant displacement.
- 4:00 p.m. Kenkmann T. \* Zwiessler R. Poelchau M. H. Hess S. Nau S.  
[\*Strain-Rate Dependent Brittle Deformation During Impact Cratering\*](#). [#6253]  
 Rock deformation above a critical strain-rate of one to ten per second shows a strain-rate dependency of brittle failure with a dynamic strength enhancement. During an impact a large volume of rocks is affected by such or even higher strain rates.
- 4:15 p.m. Hamann C. \* Zhu M.-H. Wünnemann K. Hecht L. Stöffler D.  
[\*Tracing Shock Wave Attenuation in Porous, Particulate Targets: Insights from Impact Experiments and Numerical Modeling\*](#) [#6335]  
 We directly compare shock zoning (representing shock pressures from ~59 to ~5 GPa) preserved in layered melt particles recovered from impact experiments with quartz sand targets with numerical models of crater formation and shock wave attenuation.
- 4:30 p.m. Salge T. \* Kearsley A. T. Price M. C. Burchell M. J. Cole M. J.  
[\*Assessment of the Preservation of Impact Residues in Stardust Analogue Craters Using Advanced EDX Imagery with an Annular SDD\*](#) [#6463]  
 Low voltage SEM/EDX analysis with an annular SDD can show relationships between even tiny impact residues throughout complex crater shapes. The technique should be used as a preliminary reconnaissance method on all Stardust cometary dust craters.
- 4:45 p.m. Poelchau M. H. \* Winkler R. Schäfer F. Kenkmann T.  
[\*Experimental Cratering into Layered Targets: MEMIN Experiments with Maggia Gneiss\*](#) [#6446]  
 We performed impact experiments into gneiss targets. Craters are larger and ejecta cones wider when layering is perpendicular to the impact direction than when it is parallel. We'll try to look into subsurface deformation before the conference.