

24th Hubbert Quorum - December 11, 2016

Program

11:00 Brunch

12:45 Ingebritsen & Hurwitz – Welcome

12:50 Tiziana Vanorio (Stanford U.) – *Rock physics of fluid-rock interactions*

1:20 Steven Micklethwaite (Monash U.) – *Carbonate precipitation and multi-phase fluid separation as mechanisms for generating porosity windows in the crust*

1:40 Dana Thomas (Stanford U.) – *Trace element cycling during basalt-CO₂ interaction in Iceland*

2:00 Andrew McCaig (U. Leeds) – *Rotten rocks at the heart of black smoker systems*

2:15 Posters:

Cecile Coulon – *Exploring the causes of distal volcano-tectonic (dVT) seismicity using hydrothermal modeling*

Cansu Culha – *Crystalline heterogeneities and instabilities in a thermally convecting magma chamber*

Kristen Fauria – *Trapped bubbles keep pumice afloat and gas diffusion makes pumice sink*

Kohei Higuchi – *Comparisons of long-term trends of crustal strain and its principal axes measured by quartz tube extensometers and GNSS in southwestern Miura Peninsula, Japan*

Stephanie James – *Imaging fractures through relative velocity change using ambient seismic noise and distributed acoustic sensing (DAS): A SUBTER pilot study at Blue Canyon Dome, Socorro NM*

Yury Klyukin – *A revised model to calculate the dynamic viscosity of H₂O-NaCl fluids at elevated temperatures and pressures (≤ 1000 °C, ≤ 500 MPa, 0-100 wt. % NaCl)*

Alexander Lewerentz – *Rapid release of crustal CO₂ during metamorphism*

Emma McConville/Mark Szymanski – *Disparity of chlorine to fluorine concentration ratios between thermal waters and rocks of Yellowstone National Park, USA*

Brooks Proctor – *The effects of water on stress drop and heat production during laboratory stick-slip*

Noah Randolph-Flagg – *Seasonal creep on longitudinal valley fault, Taiwan: Fault hydrology before and after the 2003 Chengkung Earthquake*

2:25 Break

2:55 Rob Sohn (Woods Hole) – *A model for internal geyser oscillations*

3:15 James Patterson (ETH) – *Numerical modeling of natural convection in fractured media*

3:30 Olivia Miller (U. Utah) – *The end of the ice as we know it: Investigations of a perennial firn aquifer in the Greenland ice sheet*

3:50 Sarah Evans (U. Colorado) – *Coupled heat and groundwater transport in variably saturated media with frozen ground under a warming climate*

4:10 Break

4:40 Matthew Weingarten (Stanford U.) – *Are we past peak pressure in Oklahoma?*

5:00 Zhiqiang Fan (U. Texas-Austin) – *How does fluid injection into sedimentary reservoirs induce earthquakes in underlying basement?*

5:20 Steve Grasby (Natural Resources Canada) – *Dirty water events: Impact of seismicity on geothermal systems*

5:30 Adjourn