

## Grant Rea-Downing

Department of Geology & Geophysics \* The University of Utah

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### Education:

2014 M.S., Geology, University of Utah, Salt Lake City; expected 2016; Advisor: Dr. Peter Lippert; Focus: Regional Structure and Tectonics, Paleomagnetism

2014 B.S., Earth and Planetary Science, University of California, Santa Cruz, Graduated 06/2014 with honors in the major and in the thesis; Thesis title: "Partial Anisotropy of Anhyseretic Remanent Magnetization and its Effect on the Basal Vitrophyre of Snake River Plain-Type Ignimbrites"

Relevant Undergraduate Coursework: Structural Geology; Sedimentology and Stratigraphy; Relevant Graduate Coursework: Petrophysics and Well Logging, Seismic Interpretation, Sedimentary Petrography, Tectonics of Sedimentary Basins

### Presentations:

**Grant Harold Rea-Downing**, David R Finn, Robert S Coe, Ethan Dewar Brown, Marc K Reichow, Tom Knott, and Michael John Branney, Dec. 2014, Partial Anhyseretic Anisotropy Measured in the Greys Landing Ignimbrite of the Central Snake River Plain, EOS Trans AGU Fall Meet. Suppl. 93, Abstract GP41A-3610, *Poster*

Ethan Dewar Brown, David R Finn, Robert S Coe, **Grant Harold Rea-Downing**, Michael John Branney, Tom Knott, and Marc K Reichow, Dec. 2014, Paleomagnetism of Cougar Point Tuff XII, Snake River Plane Idaho, EOS Trans AGU Fall Meet. Suppl. 93, Abstract GP41A-3609, *Poster*

### Awards:

2015 NSF EASPSI : East Asia and Pacific Summer Institutes for U.S. Graduate Students, National Science Foundation, Chinese National Science Foundation and Chinese Ministry of Science, 5000 USD + travel

2015 GSA Research Grant, 1200 USD

2014 Physical and Biological Sciences Undergraduate Research Award, 1000 USD

2014 Weber-Holt Summer Field Scholarship, 500 USD

**Field Experience:**

- 2015 University of Michigan Summer School - Mountain Ranges and High Plateaus: Field and classroom investigation of high terrain formation and interaction with climate. Strong focus on both geodynamic and climate dynamic processes and their coupling, two weeks
- 2014 UC Santa Cruz field study of the eastern Sierras: 5-week program utilizing field mapping techniques and GIS to generate a geologic map and report on the Poleta Fold Belt of the White-Inyo Mountains in eastern California; included stratigraphy, petrology, and structural analysis
- 2013 - 2014 Snake River Plain paleomagnetic sample collection: Two field seasons drilling, orienting, and collecting samples of ignimbrite flows in southern Idaho and northern Nevada to study magnetic anisotropy and its relationship to strain. Responsibilities included: Operating drills, orienting and collecting cores, and recording relevant field information. Two seasons, five weeks total

**Laboratory Experience:**

- 2013-14 Ignimbrite paleomagnetic sample analysis; responsibilities included: Step-wise demagnetization of samples, re-magnetization of samples using various methods (IRM, ATRM, and AARM), measurement of sample magnetization (magnitude and direction), writing of a thesis at the culmination of the project reporting results and interpretations

**Teaching Experience:**

- 2013 Teacher's Assistant: Aided a graduate student in the teaching of an undergraduate-level laboratory class: "Evolution of the Earth". Responsibilities included: Aiding in the set-up of labs each week, assisting the graduate student throughout the lab by answering questions and advising students (3 hours/week), attending a weekly meeting to discuss the laboratory experience and prepare for the next (1 hour/week), designing and giving a lecture on plate tectonics for one class