

# GEOSCIENCES

*at Virginia Tech*

Weekly Newsletter #3, Fall 2014



**PHOTO (Sarah Mazza):** North Fork of Big Pine Creek, Sierra Nevada Mountains, CA: Cretaceous granodiorite of Temple Crag lies to the immediate right, quartz monozite of Mount Alice in the center-right, and three man-made lakes fed from the Palisades glacier in the center. Owens Valley and the White Mountains can be seen in the distance.

## UPCOMING EVENTS

### **Department Seminar, 9/19:** *Recycling of oceanic lithosphere: Water and Fe isotopes constraints from Hawaiian mantle xenoliths*

- **WHO:** Michael Bizimis (University of South Carolina).
- **WHEN:** Friday, September 19, 4:00 pm. Refreshments served at 3:45 pm in the 4<sup>th</sup> floor lounge.
- **WHERE:** Room 4069, Derring Hall
- **ABSTRACT:** The largest part (perhaps >90%) of a subducting oceanic plate is the attached mantle lithosphere, yet its contribution to the compositional heterogeneity of the upper mantle is little understood. To a large extent this is because the oceanic lithosphere, particularly its deeper parts, are not easily assessed due to lack of appropriate samples. Here I will present new data on water concentrations and Iron-isotope systematics of spinel peridotite and garnet pyroxenite xenoliths from Hawaii. These samples provide important clues about the composition of the oceanic lithosphere, and can be used to assess its contribution to mantle heterogeneity upon recycling.

### **Newmont Mining recruiting session, 9/16-9/17**

- **DESCRIPTION:** Jeff Perkins of Newmont Mining will be recruiting in the department on September 16 and 17.
- **WHEN:** Monday and Tuesday, September 16-17, Information session on September 16 from 5:30-6:30 pm

- **WHERE:** Room 4069, Derring Hall (information session), location of interviews TBD

## NEWS AND ANNOUNCEMENTS

- **Geofair and Mineral Sale - CALL FOR VOLUNTEERS:** The Geofair and Mineral Sale will be taking place on Saturday, October 4 from 10 am to 4 pm at the Museum of Geosciences. This is a charter VT event of the first-ever Virginia Science Festival, which features interactive activities, exhibits, and programs throughout a number of venues on the VT campus. The goal of the Virginia Science festival is to fascinate families from all over the Commonwealth and provide hands-on, interactive inspiration at a time when STEM careers offer the most opportunity for future employment, social, and financial advancement. Our role will be to use museum facilities to educate families about the processes that have (and continue to) shape our planet (and others). Come out and represent VT Geosciences! Contact Llyn Sharp ([llyn@vt.edu](mailto:llyn@vt.edu)) for more information, or if you would like to volunteer.

## NEW VT GEOS PUBLICATIONS

**Adam C.**, M. Yoshida, D. Suetsugu, Y. Fukao, and C. Cadio, Geodynamic modeling of the South Pacific Superswell, *Physics of the Earth and Planet. Int.*, 229, 24–39, 2014

Babcock, L.E., Peng, S., Zhu, M., **Xiao, S.**, and Ahlberg, P., 2014. Proposed reassessment of the Cambrian GSSP. *Journal of Asian Earth Sciences* 98: 3-10.

Bezzeghoud M., **C. Adam**, E. Buforn, J. F. Borges and B. Caldeira, Seismicity along the Azores-Gibraltar region and global plates' kinematics, *J. of Seismology*, DOI 10.1007/s10950-013-9416-x, 2014

Neves M. C., R. M. Fernandes, and **C. Adam**, Refined models of gravitational potential energy compared with stress and strain rate patterns in Iberia, *Journal of Geodynamics*, <http://dx.doi.org/10.1016/j.jog.2014.07.010>, 2014

**Lowell, R.P., K. Kolandaivelu**, and P.A. Rona (2014), Hydrothermal activity, *Reference Module in Earth Systems and Environmental Science*, Elsevier, doi:10.1016/B978-0-12-409458-9.09132-6.

Have a picture and short caption, or news that you want to send for next week's newsletter? Email your news items to Victor Guevara at [vguevara@vt.edu](mailto:vguevara@vt.edu).