



**DEPARTMENT OF GEOSCIENCES**  
**JUNIOR PAPERS (Class of '16)**  
**SPRING 2014-2015**

---

**Ryan T. Barker**

“Understanding the Chemical Abrasion Method of U-Pb Dating in Zircon: An ICP-MS and Raman Spectroscopic Analysis”  
*B. Schoene / T. Duffy*

**Alyson K. Beveridge**

“Dissolved Inorganic Carbon as a Measure of Ocean Productivity”  
*M. Bender / D. Sigman*

**Ethan C. Campbell**

“Simulated Changes in Amazon Precipitation in Response to Tropical Atlantic Sea Surface Temperature Anomalies”  
*D. Medvigy / S. Fueglistaler*

**Alison M. Campion**

“Modeling Diagenesis of Carbonate Platforms as a Marker of Paleo-Sea Level”  
*J. Higgins / A. Maloof*

**Shanna L. Christian**

“The Effect of Unconventional Wells on Methane Flow Rates from Abandoned Oil and Gas Wells in Pennsylvania”  
*T. Onstott / M. Celia*

**Jay B. Dessy**

“Applying a Stomatal Optimization Theory to Capture Trends in Mexico’s Diurnal Temperature Range”  
*D. Medvigy / S. Fueglistaler*

**Collin R. Edwards**

“Temperature Dependence of Aerobic Methane Consumption by Antarctic Cryosols”  
*T. Onstott / D. Medvigy*

**Atleigh G. Forden**

“Development of  $^{87}\text{Sr}/^{86}\text{Sr}$  Measurement Protocol on Neptune ICP-MS for the Analysis of Sr in Ediacaran Carbonates”  
*J. Higgins / B. Schoene*

**Weber Liu**

“A Revised Method for Earthquake Cluster Identification in Southern California”  
*A. Rubin / F. Simons*

**Rebecca A. Lowy**

“N-limited *Thalassiosira weissflogii* Growth and Physiology at Varied  $p\text{CO}_2$  Conditions”  
*F. Morel / B. Ward*



**DEPARTMENT OF GEOSCIENCES  
JUNIOR PAPERS (Class of '16)  
SPRING 2014-2015**

---

**Sophia C. Myers**

“Nitrogen Isotopes in Fish Otoliths and their Intra-Organism Correlation”

*B. Ward / J. Sarmiento*

**Evan M. O'Brien**

“Effects of Rising North Pacific Sea Surface Temperatures on Chinook Salmon Populations via Impact on Prey Sources”

*J. Sarmiento / G. Philander*

**Anteneh A. Sarbanes**

“Zonal Climate Response to Albedo Modification in Low Lying Marine Clouds”

*G. Philander / A. Rubin*

**Anjali Taneja**

“An Examination of Uncertainty in Climate Observations: Implications for Climate Impacts Research”

*M. Oppenheimer / S. Fueglistaler*

**Anna C. Van Brummen**

“Imaging the Crust Beneath Princeton”

*J. Irving / F. Simons*

**Ethan M. Vasquez**

“Vulnerability of the U.S. Electric Grid System: Predicting Wildfires and Power Outages in California”

*M. Oppenheimer / F. Simons*

**Fiona M. West**

“Soil vs. Climate Drivers in Amazon Forest Turnover Gradient”

*D. Medvigy / L. Hedin*

**Claire M. Zarakas**

“Spatial and Seasonal Variations in the Size Structure of North Atlantic Phytoplankton Assemblages”

*B. Ward / D. Sigman*