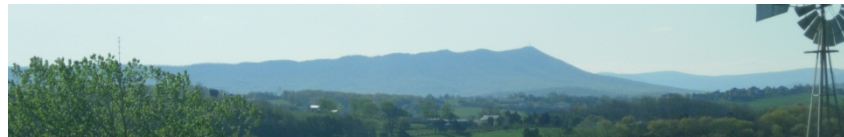


# **An REU site at James Madison University**



**Elizabeth A. Johnson, Anna M. Courtier, John T. Haynes, Anthony S. Hartshorn, Stephen A. Leslie, Kristen E. St. John, and Steven J. Whitmeyer**

**Department of Geology and Environmental Science, James Madison University, Harrisonburg, VA**

# One (of multiple...) REU sites

- EarthScope: IRIS Consortium Summer Internship Program
- GeoPRISMS: proposed similar network administered through Rice University
  - Alison Henning / Julia Morgan
  - 1-week orientation at Rice
- Why JMU as an REU site?

# Goals

- Provide research experiences for students
  - attend graduate school
  - continue in careers in GeoPRISMS / Earthscope disciplines
- Strengthen existing research collaborations between institutions
- Create new collaborations and share instrumentation and equipment resources

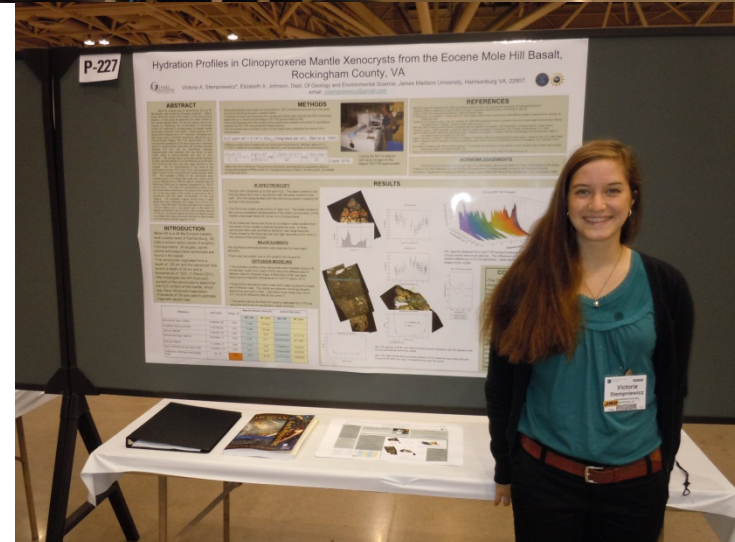
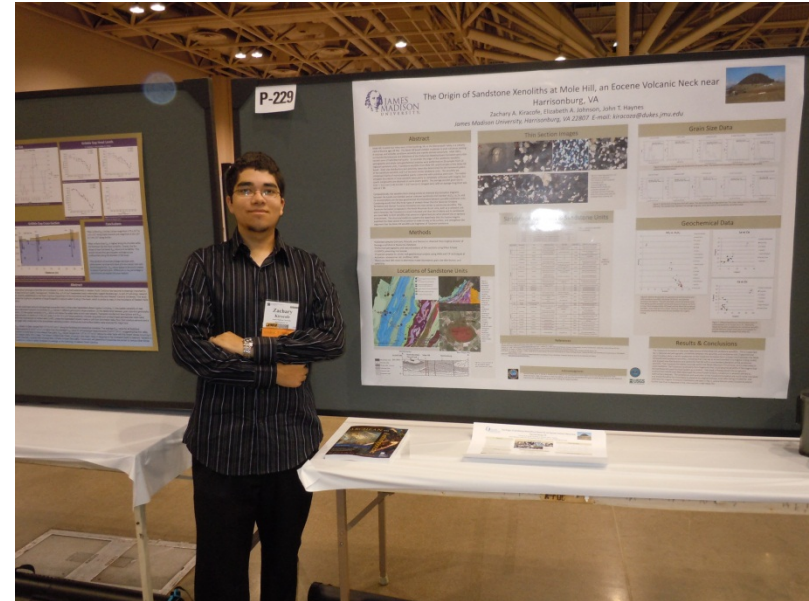
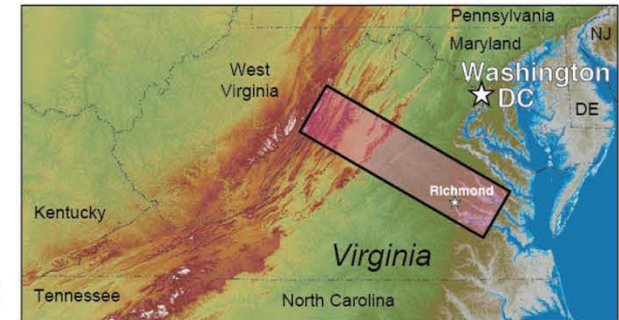
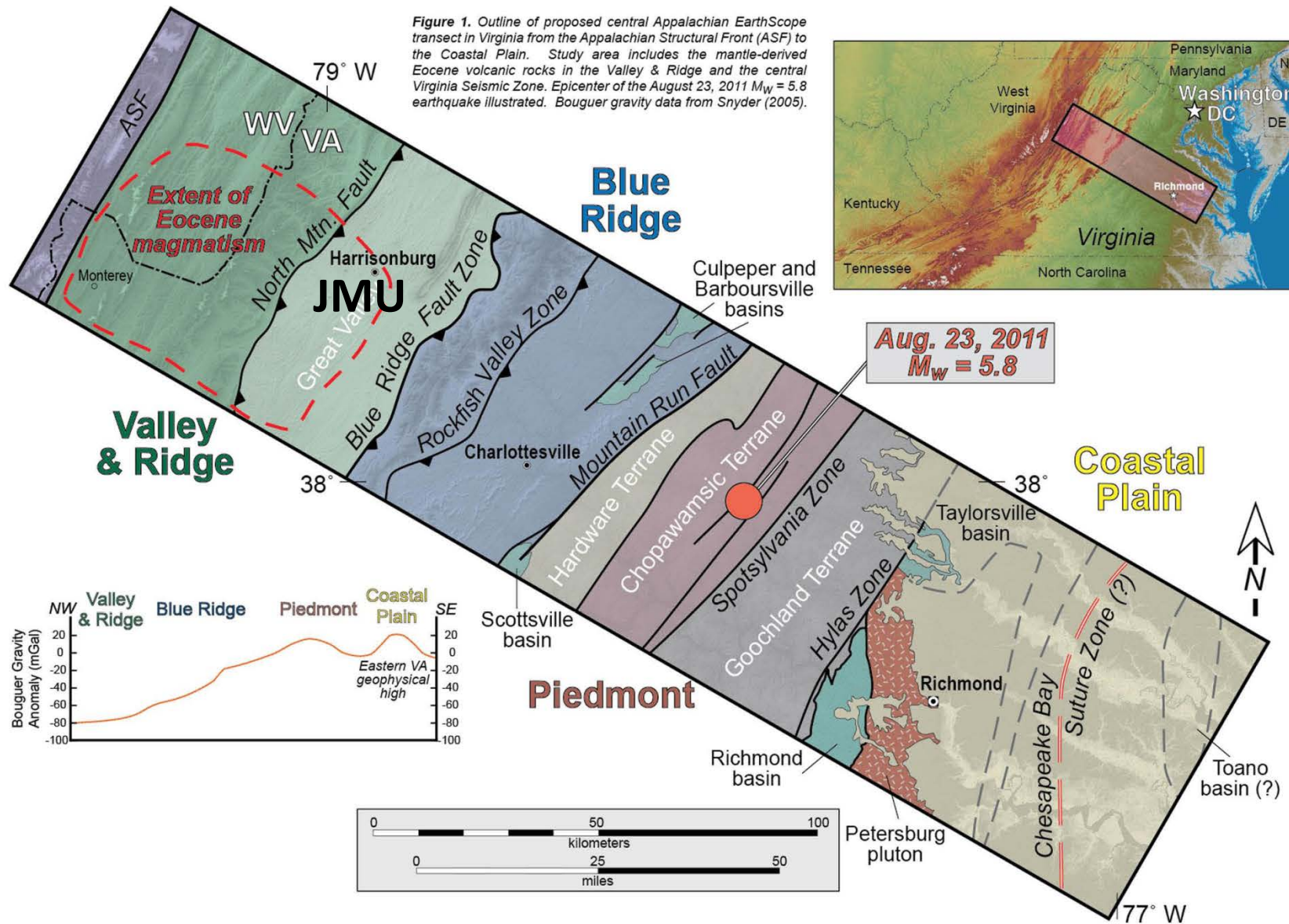




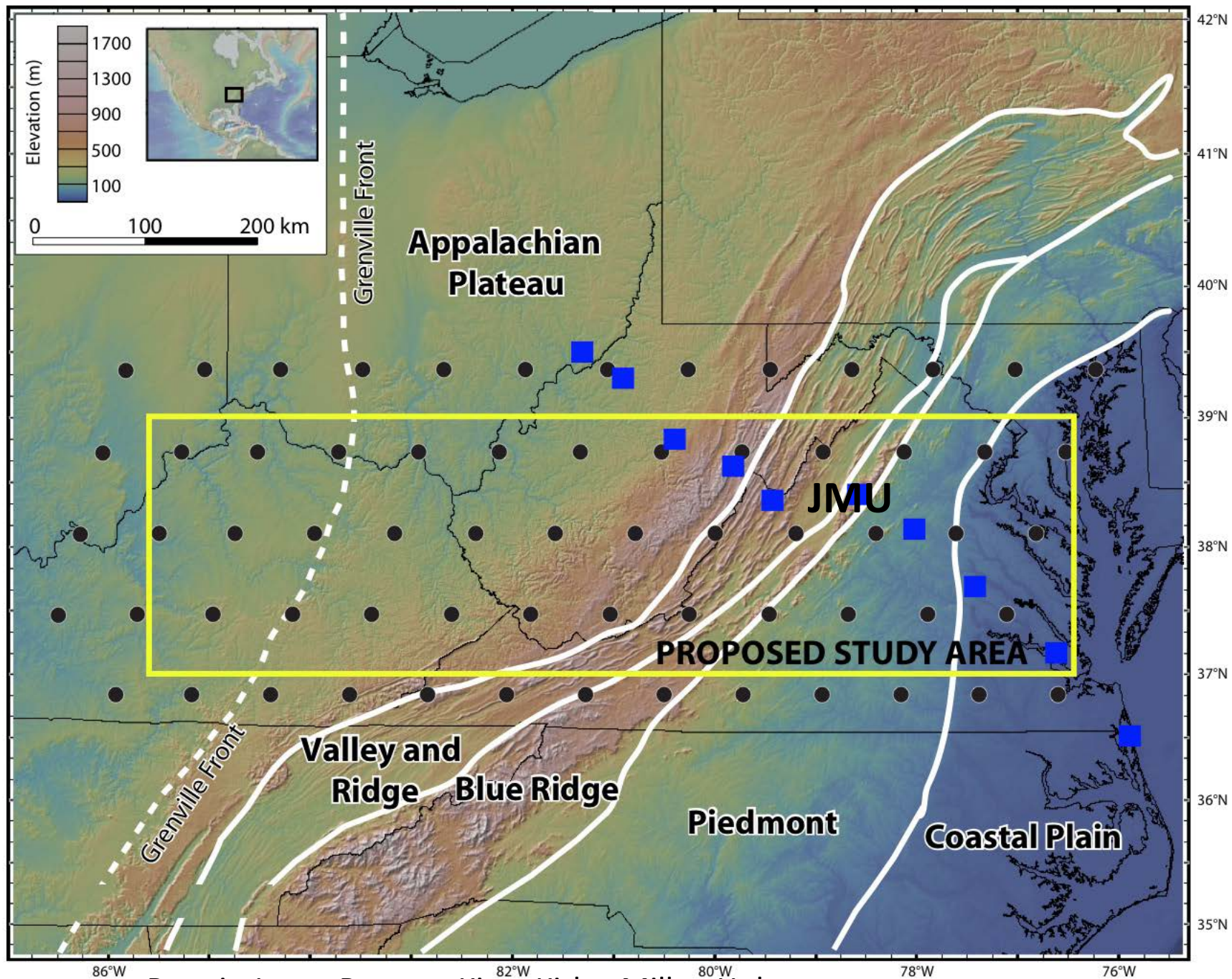
Figure 1. Outline of proposed central Appalachian EarthScope transect in Virginia from the Appalachian Structural Front (ASF) to the Coastal Plain. Study area includes the mantle-derived Eocene volcanic rocks in the Valley & Ridge and the central Virginia Seismic Zone. Epicenter of the August 23, 2011  $M_w = 5.8$  earthquake illustrated. Bouguer gravity data from Snyder (2005).



**Aug. 23, 2011**  
 **$M_w = 5.8$**







Benoit, Long, Rooney, King, Kirby, Miller, Hole

# JMU REU Programs

- Materials Science (Physics – Chemistry- Geology)
- Chemistry
- Biology
- Mathematics and Statistics

Work together with activities and final presentations



**Table 1:** Science and engineering doctorates earned by graduates of PUIs (2000-2009)

1	<b>Carleton College</b>	<b>503</b>
2	<b>Oberlin College</b>	<b>497</b>
3	<b>Wesleyan University</b>	<b>466</b>
4	<b>Cal Poly U- San Luis Obispo</b>	<b>455</b>
5	<b>Swarthmore College</b>	<b>445</b>
6	<b>Williams College</b>	<b>419</b>
7	<b>Reed College</b>	<b>371</b>
8	<b>Wellesley College</b>	<b>370</b>
9	<b>James Madison University</b>	<b>344</b>
10	<b>Harvey Mudd College</b>	<b>343</b>

Data taken from NSF survey of earned doctorates: <http://webcaspar.nsf.gov/>.

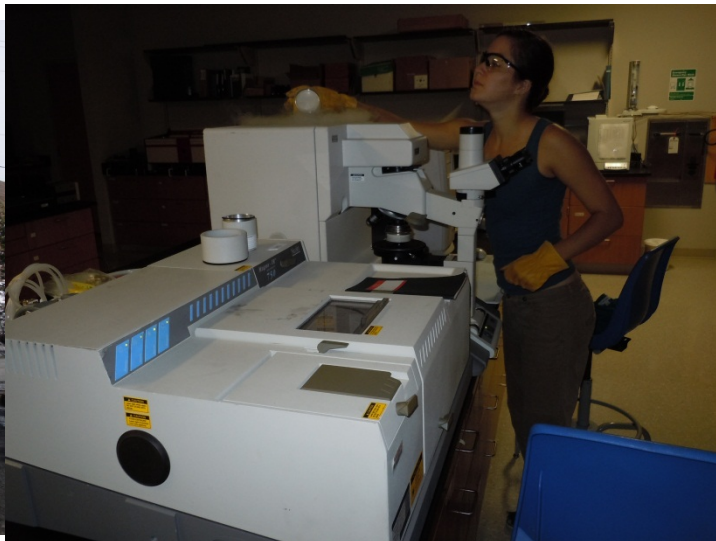
# About JMU Geology and Environmental Science

- JMU: ~19,000
- Public Primarily Undergraduate Institution
- Geology and Environmental Science
  - 15 full-time faculty
  - ~125 majors in BS Geology and BA Earth Science
  - Undergraduate research projects for all students
  - Geoscience education
  - Connection to community colleges



# JMU Resources

- Field Vehicles and Equipment
- Laboratory Equipment
- Connections to government agencies and laboratories
- Faculty dedicated to undergraduate education





# JMU Geology Faculty Interested in REU



**Anna Courtier**  
Geophysics  
Structural  
Seismology



**Stephen Leslie**  
Paleontology,  
Stratigraphy



**Shelley Whitmeyer**  
Coastal  
Processes



**John Haynes**  
Sedimentary  
Petrology



**Kristen St. John**  
Paleoceanography,  
Paleoclimate



**Tony Hartshorn**  
Soils and  
Landscapes



**Elizabeth Johnson**  
Igneous  
Petrology &  
Geochemistry



**Steven Whitmeyer**  
Structural  
Geology



**Eric Pyle**  
Geoscience  
Education

# One (of multiple...) REU sites associated with GeoPRISMS

- IRIS Consortium Summer Internship Program
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