

Sierra V Petersen

University of Michigan, Department of Earth and Environmental Sciences
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EDUCATION

- Harvard University, Cambridge, MA** **2009-2014**
Ph.D., Earth & Planetary Sciences; Advisor: Daniel P. Schrag
Thesis: "Rapid Climate Change in the Cenozoic: Insights from Geochemical Proxies"
Research topics: Paleoclimate, Paleoceanography, Dansgaard-Oeschger events, glacial cycles, stable isotope geochemistry, clumped isotope paleothermometry, Cenozoic climate
- Harvard University, Cambridge, MA** **2009-2012**
A.M., Earth & Planetary Sciences; Advisor: Daniel P. Schrag
- California Institute of Technology (Caltech), Pasadena, CA** **2005-2009**
B.Sc. with honors, Geochemistry

TEACHING EXPERIENCE

- Harvard University**
- EPS 22: The Fluid Earth (teaching fellow) **SPR 2012**
SPU 26: Primitive Navigation (teaching fellow) **FALL 2012**
EPS 8: History of the Earth (teaching fellow) **SPR 2011**
- California Institute of Technology**
- GE1: Earth and the Environment (teaching assistant) **SPR 2008, SPR 2009**

TEACHING AWARDS

- Bok Center for Teaching & Learning "Teaching Certificate Program" **2014**
Departmental Teaching Fellow, Earth & Planetary Sciences Department **2012 – 2014**
White Prize for Excellence in Teaching, Harvard University **for SPU 26, FALL 2012**
Certificate for Distinction in Teaching, Harvard University **for EPS 8, SPR 2011**

ACADEMIC HONORS, AWARDS, and FELLOWSHIPS

- NSF Ocean Sciences Postdoctoral Research Fellowship **2014-Present**
NOAA Climate and Global Change Postdoctoral Fellowship (Declined) **2014**
Graduate School of Arts and Sciences Merit Fellowship, Harvard University **FALL 2013**
Peirce Fellowship, Harvard University **2009-2010**
Howard Reynolds Memorial Prize, Caltech **2009**
Summer Undergraduate Research Fellowship, Samuel P & Frances Krown Fellow, Caltech **2008**
Summer Undergraduate Research Fellowship, Jim & Karen Cutts Fellow, Caltech **2006**

PEER-REVIEWED PUBLICATIONS

Sierra V Petersen

Petersen, S. V., D. P. Schrag, Antarctic ice growth estimates across the Eocene-Oligocene transition from clumped isotopes, *in prep.*

Petersen, S. V., D. P. Schrag (2014), Clumped isotope measurements of small carbonate samples using a high-efficiency dual-reservoir technique, *Rapid Communications in Mass Spectrometry*, 28, 2371-2381, doi: 10.1002/rcm.7022.

Petersen, S. V., D. P. Schrag, and P. U. Clark (2013), A new mechanism for Dansgaard-Oeschger cycles, *Paleoceanography*, 28, 24-30, doi: 10.1029/2012PA002364.

Chapman, A. D., P. I. Luffi, J. B. Saleeby, and **S. Petersen** (2011), Metamorphic evolution, partial melting and rapid exhumation above an ancient flat slab: Insights from the San Emigdio Schist, southern California, *Journal of Metamorphic Geology*, 29: 601-626, doi: 10.1111/j.1525-1314.2011.00932.x.

PRESENTATIONS + CONFERENCE ABSTRACTS

Petersen, S.V., D.P. Schrag, Reductions in sample size requirements using a dual-reservoir measurement technique and its application to foraminifera. *4th Clumped Isotope Workshop*, Zurich, Switzerland, oral presentation, August 2014

Petersen, S.V., D. P. Schrag, Temperature Change across the Eocene-Oligocene Transition using the Carbonate Clumped Isotope Paleothermometer on Foraminifera. *Goldschmidt*, Sacramento, California, poster presentation, June 2014

Petersen, S.V., D.P. Schrag, Applying the clumped isotope paleothermometer to foraminifera from the Eocene-Oligocene transition. *Grad Student/Post-doc Seminar Series*, Harvard University, Cambridge, Massachusetts, seminar, April 2014

Petersen, S.V., D.P. Schrag, and P.U. Clark, Dansgaard-Oeschger cycles driven by ice-shelf break-up and regrowth. *AGU Fall Meeting*, San Francisco, California, poster presentation, December 2012

Petersen, S.V., D.P. Schrag, and P.U. Clark, A new ice-shelf driven mechanism for Dansgaard-Oeschger cycles. *Grad Student/Post-doc Seminar Series*, Harvard University, Cambridge, Massachusetts, seminar, April 2012

Chapman, A.D., P Luffi, J.B. Saleeby, and **S. Petersen**, Partial melting, counterclockwise P-T path, and rapid exhumation above an ancient flat slab: Insights from the San Emigdio Schist, southern California. *GSA Annual Meeting*, Denver, Colorado, abstract, November 2010

Petersen, S., Thermobarometry of the San Emigdio Mountains, *SURF Seminar Day*, Caltech, Pasadena, California, oral presentation, October 2008

Ghosh, P, J. Eiler, and **S. Petersen**, Carbonate clumped isotope thermometry of Mollusks and Its applications to Pleistocene gastropod fossils from South Dakota, *Goldschmidt*, Cologne, Germany, abstract, August 2007

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Petersen, S., Application of the Clumped Carbonate Isotope Thermometer to a sinkhole in South Dakota, *SURF Seminar Day*, Caltech, Pasadena, California, oral presentation, October 2006

EXTRACURRICULARS, LEADERSHIP POSITIONS

Academic Positions:

Field Trip Organizer, Graduate Student Field Trip, Harvard University	2013
Agassiz Visiting Lecturer Committee, Harvard University	2010, 2012
ClimaTea Seminar Series Organizer, Harvard University	2009-2010
Student-Faculty Committee Chairman, GPS Department, Caltech	2008-2009
Board of Control (student academic disciplinary committee), Caltech	2005-2009

Leadership in Student Organizations:

Geoclub Officer, Earth & Planetary Sciences Department, Harvard University	2009-2014
<i>Co-President (2012-2014), New Student Czar (2011-2012)</i>	
<i>EPS Day Organizer (2010-2011), Social Czar (2009-2010)</i>	
Fleming House Officer, Dorm Student Government, Caltech	2005-2009
<i>Vice President (2008-2009), Social Chairman (2007-2008)</i>	
<i>Social Team (2005-2007), Student Waiter (2006-2009)</i>	

Mentoring Programs and Activities:

Women-Mentoring-Women, mentor	2008-2009
Upperclassman Counselor, counselor and program leader	2008-2009
Big-Brother/Big-Sister program, Harvard EPS Dept, mentee (G1) and mentor (G3)	2009, 2011
Non-resident tutor, Winthrop House, Harvard University	2011-2013
Mentor for senior thesis student, Schrag Lab, Harvard University	2013-2014

SERVICE ACTIVITIES AND PROFESSIONAL AFFILIATIONS

Peer reviewer for *Geology*

Member of American Geophysical Union, Geochemical Society