

A. Hope Jahren, Ph.D.

School of Ocean and Earth Science and Technology, University of Hawaii, Honolulu, HI 96822
email: jahren@hawaii.edu; <http://www.jahrenlab.com>

BIRTHDATE

Born September 27, 1969 in Austin, Minnesota

EDUCATION

Ph.D. in Soil Science, University of California at Berkeley, 1996
B.A. *cum laude* in Geology, University of Minnesota at Minneapolis, 1991

ACADEMIC EMPLOYMENT

Full Professor with Tenure,
School of Ocean and Earth Science and Technology, University of Hawaii, 07/08 – present
Full Professor with Tenure, Geobiology, Johns Hopkins University, 07/06 – 06/08
Associate Professor of Geobiology, Johns Hopkins University, 07/03 – 06/06
Assistant Professor of Geobiology, Johns Hopkins University, 09/99 – 06/03
Assistant Professor of Geochemistry, Georgia Tech, 09/96 -- 09/99
Postdoctoral Researcher in Environmental Science, UC Berkeley, summer 1996

HONORS AND AWARDS

2013 Best University Research Award, Department of Energy, Geosciences Division
2011 Aldo Leopold Leadership Fellow
2010 Fulbright Award in Arctic Science (Norway)
2010 Exceptional Reviewer, *Geology*
2010 Scientist of the Year: ARCS Honolulu Chapter
2005 Named one of the *Popular Science* “Brilliant 10”
2005 James B. Macelwane Medal:
American Geophysical Union Young Scientist Award
2005 Biogeochemistry Fellow: American Geophysical Union
2003 Fulbright Award in Environmental Science (Denmark)
2001 Donath Medal:
Geological Society of America Young Scientist Award
2001 Geological Society of America Fellow
1997 Georgia Institute of Technology Teaching Fellow Award
1994 Outstanding Graduate Student Instructor Award, UC Berkeley
1992 Fulbright Award in Geology (Norway)
1991 NSF Graduate Fellowship
1991 Chevron Undergraduate Excellence Award

CITATIONS AND H-INDEX (GOOGLE SCHOLAR, ACCESSED 08/13/15)

2158 total number of citations
1240 citations since 2010
27 h-index (all years)
21 h-index (since 2010)

PUBLICATIONS (10 selected from a total of 69; *denotes student, postdoc or technician author)

1. B.A. Schubert and **A.H. Jahren**. 2015. Seasonal Temperature and precipitation recorded in the intra-annual oxygen isotope pattern of meteoric water and tree-ring cellulose. *Quaternary Science Reviews*, 125: 1-14. DOI: 10.1016/j.quascirev.2015.07.024.
2. B.A. Schubert and **A.H. Jahren**. 2015. Global increase in plant carbon isotope fractionation following the last glacial maximum caused by increase in atmospheric pCO₂. *Geology*, DOI: 10.1130/G36467.1.
3. B.A. Schubert* and **A.H. Jahren**. 2013. Reconciliation of marine and terrestrial carbon isotope excursions based on changing atmospheric CO₂ levels. *Nature Communications*, 4:1653, DOI: 10.1038/ncomms2659.

4. B.A. Schubert* and **A.H. Jahren**. 2012. The effect of atmospheric CO₂ concentration on carbon isotope fractionation in C₃ land plants. *Geochimica et Cosmochimica Acta*, 96: 29-43.
5. B.A. Schubert*, **A.H. Jahren**, J.J. Eberle, L.S.L. Sternberg, and D.A. Eberth. 2012. A summertime rainy season in the Arctic forests of the Eocene. *Geology*, 40(6): 523–526, doi: 10.1130/G32856.1.
6. B.A. Schubert* and **A.H. Jahren**. 2011. Quantifying seasonal precipitation using high-resolution carbon isotope analyses in evergreen wood. *Geochimica et Cosmochimica Acta*, 75(22) 7291-7303, doi: 10.1016/j.gca. 2011.08.002.
7. **A.H. Jahren** and B.A. Schubert*. 2010. Corn content of French fry oil from national chain vs. small business restaurants. *Proceedings of the National Academy of Sciences*, 107(5), 2099–2101, doi: 2010.1073/pnas.0914437107.
8. **A.H. Jahren**, R.A. Kraft*. 2008. Carbon and nitrogen stable isotopes in fastfood: Signatures of corn and confinement. *Proceedings of the National Academy of Sciences*, 105(46), 17855-17860. doi: 10.1073 pnas.0809870105.
9. **A.H. Jahren** and L.S.L. Sternberg. 2008. Annual patterns within tree rings of the Arctic middle Eocene (~45 Ma): Isotopic signatures of precipitation, relative humidity and deciduousness. *Geology*, 36(2), 99-102.
10. **A.H. Jahren**. 2007 (*Invited*). The Arctic forest of the middle Eocene. *Annual Review of Earth and Planetary Sciences*, 35, 509-540.

CURRENT FUNDING

\$ 0.9 M in total external funds to A.H. Jahren (2015 active contracts only)

FUNDING AGENCIES: The Department of Energy (DOE), The National Science Foundation (NSF), The National Institutes of Health (NIH)

HISTORY OF MAJOR FUNDING

- NIH (NIDDK): “^δ13C Added Sugar Intake Biomarker: Determining Validity in Children” 2014-2016 (subcontracted to VaTech P.I. B. Davy) \$61,750 to Jahren
- DOE Division of Geosciences (BES): “Fundamental Research on the Fractionation of Carbon Isotopes during Photosynthesis” 2014-2016 (no Co-P.I.) \$405,000 to Jahren
- NSF Division of Sedimentary Geology and Paleontology: “Paleoclimate Analysis of a Miocene Arctic Forest from the Kolyma River Basin, Northeastern Russia” 2013-2015 (Co-P.I. B. Schubert) \$170,000 to Jahren
- NIH (NIDDK): “SIPsmarter” 2011-2016 (subcontracted to VaTech P.I. J. Zoellner) \$230,402 to Jahren
- DOE Division of Geosciences (BES): “Development of the Carbon Isotope Signature of Terrestrial *n*-alkanes as a Potential Proxy for Palaeo-pCO₂” 2010-2013 (no Co-P.I.) \$599,338 to Jahren
- NSF (OS/MRI): “Acquisition of IRMS Instruments for Stable Isotope Analyses of New Geobiological Substrates” 2010-2013 (Co-P.I. B. Popp) \$716,368 to Jahren
- NSF Division of Arctic Sciences: “Collaborative Research: Transarctic Paleoclimate of the Eocene” 2008-2012 (Co-P.I.s J. Eberle, L. Sternberg and R. Summons) \$350,677 to Jahren
- NSF (EXE): “Method Development for Stable Isotope Characterization of High Explosives” 2007-2010 (no Co-P.I.) \$397,198 to Jahren
- DOE Division of Geosciences (BES): “Development of New Biomarkers for Surficial Earth Processes” 2006-2009 (no Co-P.I.) \$313,595 to Jahren
- The Seaver Institute: “Exploring the Link Between High Fructose Corn Syrup (HFCS) and Type 2 Diabetes: A Novel Approach Using Stable Carbon Isotopes” 2007 (no Co-P.I.) \$20,000 to Jahren
- Center for a Livable Future (CLF) Innovation Grant: “High Fructose Corn Syrup Levels in Blood: The Development of a Biochemical Assay for the Consumption of High Fructose Corn Syrup Archived in Blood Plasma” (no Co-P.I.) \$18,321 to Jahren

NSF Division of Arctic Sciences: “Environmental Fluctuations during the Arctic Eocene Growing Season: Stable Isotope Analyses of Plant Fossils from Axel Heiberg Island” 2003-2006 (Co-P.I.s L. Sternberg and R. Summons) \$154,257 to Jahren

NSF Division of Antarctic Geology and Geophysics: “Permian-Triassic Mass Extinction in Antarctica” 2003-2005 (Co-P.I. G. Retallack) \$84,226 to Jahren

Andrew W. Mellon Foundation: “Quantifying Forest Productivity over a Uniquely Short Growing Season” 2002-2003 (no Co-P.I.) \$150,000 to Jahren

NSF Geology and Paleontology (EAR): “Carbon Isotope Composition of Aptian Plant Fossils from the Arundel Formation, Western Maryland” 2001-2002 (no Co-P.I.) \$72,315 to Jahren

NSF Division of Environmental Biology: “Amount, Rate and $\delta^{13}\text{C}$ of Soil Organic Matter Production by *Armadillidium vulgare*” 2001-2002 (Co-P.I. K. Szlavecz) \$60,000 to Jahren

Andrew W. Mellon Foundation: “Composition, Structure, Dynamics, Productivity and Climate of Eocene Forests of the Canadian High Arctic” 1999-2001 (no Co-P.I.) \$183,000 to Jahren

ACS/Petroleum Research Fund: “Carbon Isotopic Record of the Atmosphere Across the K-T Boundary Inferred from the Carbon Isotope Composition of Petroleum Source-Rocks.” 1998-2000 (no Co-P.I.) \$20,000 to Jahren

TEACHING:

Graduate Courses:

GG711 Terrestrial Geobiology (Lecture with Lab Exercises) 2008 – 2009; 2011, U of Hawaii
270.624 Stable Isotope Techniques (Lecture and Lab) Spring ; 2000 – 2002; 2007 – 2008, Johns Hopkins
EAS 8103B Earth System Chemistry (Lecture and Field course) Fall 1999, Georgia Tech
EAS 6625A Stable Isotope Geochemistry (Lecture course) Spring 1997 and 1998, Georgia Tech

Undergraduate Courses:

GG102 Introduction to Global Change (Lecture) 2012 – present, U of Hawaii
GG101 The Dynamic Earth (Lecture) Fall 2009 and Spring 2010, U of Hawaii
GG101L The Dynamic Earth (Laboratory) Fall 2011, U of Hawaii
270.222 Earth Materials (Lecture, Lab and Field course) Fall 2001 through Fall 2006, Johns Hopkins
270.424 Geobiology (Lecture, Lab and Field course) Fall 1999 – 2002; 2006 – 2007 Johns Hopkins
270.109 Exploring Earth's History through Fossils (Field course) Fall 2001, 2002 and Spring 2006, Johns Hopkins
270.120 The Extinction of the Dinosaurs (Lecture course) Fall 2004 and Spring 2005, Johns Hopkins
EAS 4803 Scientific Analysis of Environmental Change (Lecture course), Winter 1998 and 1999, Georgia Tech
EAS 4802A Soil Biogeochemistry (Lecture, Lab and Field course) Spring 1997, Georgia Tech
EAS 2501A Geology 1 (Lecture and Lab course) Fall 1996, Georgia Tech

Student Evaluations:

Overall Course Rating = 4.64 out of 5.00 (average rating for 6 courses taught at Johns Hopkins)

PROFESSIONAL SERVICE:

Organizer, Goldschmidt Conference 2014 (Biogeochemistry Theme)

Member, Board of Directors, STEPPE – Geological Society of America

Editor, *GSA Bulletin* (2010-present)

Associate Editor, *GSA Bulletin* (2006-2009)

Editorial Board, *Geochemical Transactions* (2005-2009)

Editorial Board, *Geology* (2003-2006)

Secretary, AGU Biogeosciences Section (2010-2014)

Selection Committee, AGU Fellows (2008-2010), AGU Union Medals and Awards (2012-present)

Selection Committee, GSA Young Investigator Award (2004-2007),

GSA Student Research Grants (2006-2008)

Invited Participant, NSF Deep Time Earth-Life Observatories Workshop, Washington, DC (April 2010)

Invited Participant, National Academy of Sciences Kavli Frontiers Conference, Irvine, CA (October 2008)

Advisory Board, Department of Geology and Geophysics, University of Minnesota (2006 and 2007)

Memberships:

Geological Society of America, American Geophysical Union

Reviewer/Panelist, Numerous Journals/Agencies including *Nature*, *Science*, *Geology*, *Geochimica Cosmochimica et Acta* and NSF, DOE, USDA, EPA.