

Aaron Donohoe
aaron@atmos.washington.edu

1614 21st Avenue
Seattle, WA 98122
(978) 314-0233

Education

2004-present **University of Washington, Seattle, WA**

Doctor of Philosophy expected March, 2011, Department of Atmospheric Sciences.

- Doctoral Qualification topic: “Causes of Reduced Storm Activity in a General Circulation Model Simulation of the Last Glacial Maximum”
- Proposed dissertation title: “Compensation Between Heat Transport in the Different Components of the Climate System”
- Committee: David Battisti (Chair), Gerard Roe, Dargan Frierson, Greg Hakim, and Eric Steig

1999-2003 **Bowdoin College, Brunswick, ME**

A.B. in Physics Summa Cum Laude awarded May 2003.

- Honors Topic: “Biases in Inferred Carbon Sources due to Selective Atmospheric Sampling of Carbon Dioxide”
- Advisor: Mark Battle

2001 **University of Otago, Dunedin, New Zealand**

One semester as an international student with course work in Geology, Chemistry and Physics.

Peer Reviewed Publications

- 2011 Donohoe, A. and D.S. Battisti: What controls meridional heat transport in global climate models? In preparation.
- 2011 Donohoe, A. and D.S. Battisti: A heuristic model of the seasonal cycle in energy fluxes and climate. Submitted J. Climate.
- 2010 Donohoe, A. and D.S. Battisti: Atmospheric and surface contributions to planetary albedo. Accepted with revisions. J. Climate.
- 2009 Donohoe, A. and D.S. Battisti: The amplitude asymmetry between synoptic cyclones and anticyclones: implications for filtering methods in feature tracking. Mon. Wea. Rev., 137, 3874-87.
- 2009 Donohoe, A. and D.S. Battisti: Causes of Reduced North Atlantic Storm Activity in a CAM3 Simulation of the Last Glacial Maximum. J. Climate, 32, 4793-4808.

Research Experience

2004-present

University of Washington, Seattle, WA

Research Assistant in the Department of Atmospheric Sciences. Developed models of linear barotropic and baroclinic stability which were applied to simulations of the glacial mean state and the mid-winter suppression of the Pacific storm track. Assessed the eddy kinetic energy budget for the modern and glacial climate states. Applied Lagrangian tracking analysis and developed tools to evaluate ensemble eddy growth rates in different climate states, using a Lagrangian reference frame. Diagnosed biases and aliasing in eddy statistics due to several different commonly used filtering techniques. Compared Lagrangian eddy statistic resulting from spatially and temporally filtered fields and assessed the validity of each by applying skew-normal statistics. Developed an (untested) theory of abrupt climate change during the glacial based on GCM simulations in which the extratropical jet “jumps” poleward of the Laurentide ice sheet. Developed a simplified energy balance model for the seasonal cycle of energy fluxes. **Field Experience:** Greenland Summit air and snow sampling with the Eric Steig Group (2005), Blue Glacier, Mount Olympus, WA, glacier monitoring (2005-present), Quinalt mixed precipitation monitoring network, Olympic Mountains, WA (2004-present).

2003

Scripps Institute of Oceanography, San Diego, CA

Developmental Technician, Bob Guza group, Nearshore Canyon Experiment. Worked as a member of research group responsible for a dense network of *en situ* measurements of pressure and velocity in a surf zone. Developed and fabricated instrument frames and deployment and recovery strategies. Calibrated instrumentation and assessed performance in real time. Maintained suite of instruments during the 3 month observation period and performed public outreach for beach users.

2003

Bowdoin College, Brunswick, ME

Undergraduate student, honors work. Assessed impact that baseline selection of atmospheric carbon dioxide measurements has on inverse calculations of terrestrial and ocean carbon sources.

2002

Woods Hole Oceanographic Institute, Falmouth, MA

Summer Student Fellow, Department of Physical Oceanography. Advisor: Al Plueddemann. Performed data analysis to assess the momentum transfer across the air sea interface and the form of bottom drag in a rectilinear tidal flow.

2001

Frost Gulley Stream Team Freeport, ME

Hydrological Researcher. Developed and implemented rating curves to monitor watershed discharge as a part of a student research group.

Teaching Experience

2010 University of Washington. Co-directed a graduate level special topics seminar (ATMOS/OCE/ESS 586) on climate feedbacks with Gerard Roe.

2009, 2007 Cornish College. Guest Lecturer: Gave several lectures on climate dynamics for Introduction to Climate Change Class

2007 University of Washington. Teaching Assistant in ATMOS/OCE/ESS 587: Climate Dynamics. Gave several lectures, created and graded homework and projects.

2006 University of Washington. Teaching Assistant, ATMOS 101: Weather. Lead two discussion sections per week, additional review sessions, developed and graded all homeworks and exams.

2003 Bowdoin College. Teaching Assistant in Physics 101. Ran extra help/review sessions and graded homework assignments.

Fellowships and Awards

National Science Foundation Graduate Fellow (2006-2009), Gary Comer Abrupt Climate Change Fellow(2005-2006), Program on Climate Change Fellow (2004), Achievement Award for Colleges Scientists (ARCS) Fellow (2004-2007). Phi Beta Kappa Alpha of Maine, Bowdoin book prize winner, Sarah and Jamnes Bowdoin scholar, recipient of Edward Acorn Prize (Religion Department) and Bradley Noel Prize in Experimental Physics.

Conferences/Workshops Attended/Talks Given

2010, San Francisco, CA. AGU Fall Meeting. Speaker in Atmospheric Sciences, General Contributions, Climate and Radiation.

2010, Emuclaw WA. 4th Annual Graduate Climate Conference. Speaker in Atmospheric and Ocean Dynamics Session.

2010, Friday Harbor WA. University of Washington Program on Climate Change Summer Institute: Climate Feedbacks.

2009, San Francisco, CA. AGU Fall Meeting. Speaker in high-latitude climate feedback session.

2009, University of Washington. Dynamics Seminar Speaker.

2009, National Academies of Science: BASC Annual Board Meeting, Seattle, WA. Invited Speaker.

2009, Pasadena, CA. Ocean and Atmosphere Energy Transport Conference. Poster presentation.

2009, Emuclaw, WA. 3rd Annual Graduate Climate Conference. Speaker in Atmospheric Dynamics Session.

2008, San Francisco, CA. AGU Fall Meeting. Speaker in mid-latitude cyclone session.

2008, University of Washington. Dynamics Seminar Speaker.

2008, Friday Harbor Labs, WA. University of Washington Program on Climate Change Summer Institute: The ocean circulation and climate change. Attendee.

2007, Enumclaw, WA. 2nd Annual Graduate Climate Conference. Co-organizer, Paleoclimate Session Chair, Speaker.

2007, Friday Harbor Labs, WA. University of Washington Program on Climate Change Summer Institute: Biogeochemical coupling to climate. Attendee.

2007, Valle de Aosta, Italy. Alpine Summer School- Convective Processes in Climate dynamics/ Attendee.

2007, Lamont Doherty Observatory, New York. Gary Comer Abrupt Climate Change Roundtable/ Invited Speaker.

2007, University of Washington. Dynamics Seminar Speaker.

2006, Cambridge University, England. Geophysical Fluid Dynamics Summer School. Attendee.

2006, Enumclaw, WA. 1st Annual Graduate Climate Conference. *Co-founder of Conference*, Dynamics Session Chair, Speaker.

2006, Lamont Doherty Observatory, New York. Gary Comer Abrupt Climate Change Roundtable/ Poster Presentation.

2005, Leavenworth, WA. University of Washington Program on Climate Change Summer Institute: El Nino. Attendee.

Professional Experience (not already listed)

Appalachian Mountain Club/ Maine Woods Initiative **Gorham, NH**
Professional trail crew member/ chain saw operator and grip hoist technician. Cut 15 miles of cross country ski and hiking trails in a newly acquired conservation area in the 100 mile wilderness of Maine. Finished trail work included rock step construction and heavy bridge construction out of locally fabricated materials. Lived in the backcountry and coordinated volunteer trail work. Summer of 2004.

Student Conservation Association/ Baxter State Park **Millinocket, ME**
SCA Resource Assistant/ Summer Trail Crew. Participated in trail maintenance, rock step and water bar construction, bog bridging, and new trail cutting. Learned skills of chain saw, bush saw and grip hoist operation. Summer 2000.

Student Conservation Association/ Payette National Forest **McCall, ID**
High School Trail Crew Member/ Backcountry Rehabilitation Crew. Partook in trail rehabilitation operating sixteen miles into the backcountry of a designated wilderness. Trained in hand tool/cross cut operation and fire suppression. Summer 1998.

Additional Activities

- Graduate Student Representative for the Department of Atmospheric Science (UW, 2008-2009)
- Certifications in Wilderness First Aid, Anaphylaxis response, professional CPR, life guarding, Avalanche Education (I), Glacier Travel and Crevasse Rescue, Chainsaw Operation.
- President of the Bowdoin Society of Physics Students (2002-2003)
- Club Head of the Service and Ecology Club and leader in the Bowdoin Outing Club
- Member of the Bowdoin College Varsity Indoor and Outdoor Track Teams, letter winner (1999-2003)
- Student Mentor and Tutor for local high school students
- Social House leader in charge of organizing campus events for an affiliate of 250 students
- Captain of varsity soccer(1998), alpine skiing(1999), and track and field (1999) teams at Acton-Boxborough Regional High School and Dual County League All Star (track 1997-1999, soccer 1998, skiing 1999)