

Spencer Alan Hill

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Education

Princeton Ph.D., Program in Atmospheric and Oceanic Sciences (AOS), expected 2015.
M.A. conferred 2013. Advisors Yi Ming and Leo Donner.
UCLA B.S., AOS/Applied Mathematics double major conferred June 9, 2011 with
Magna Cum Laude, Phi Beta Kappa, and UCLA College Honors distinctions.

Selected Research and Professional Experiences

6/2013–cont. Organizer, GFDL Climate Sensitivity Journal Club
9/2012–8/2013 Organizer, Princeton AOS Student/Postdoc Seminar Series
9/2012–8/2013 Princeton AOS Program Student Representative to the Faculty
4/2012–5/2013 Member, Princeton Energy and Climate Scholars
7/2012 GFDL Summer School on Atmospheric Modeling
6–8/2011 Research Intern, UCLA California Research Training Program in Computational
and Applied Mathematics, Slurry Flows Group.
1/2011 Invited Student Secretary, International Geosphere-Biosphere Program
Workshop on Ecosystems Impacts of Geoengineering, Scripps Institution of
Oceanography, UCSD, La Jolla, CA.
6–8/2010 Research Intern, National Oceanic and Atmospheric Administration Geophysical
Fluid Dynamics Laboratory, Princeton, NJ. Advisor Dr. Yi Ming.
1–6/2009 Team Leader, UCLA In-Dorm Composting Action Research Team.

Peer-reviewed Publications

1. **Hill, S. A.** and Y. Ming. “Nonlinear climate response to regional brightening of tropical marine stratocumulus.” *Geophysical Research Letters*. Vol. 39, L15707, 5 pp., 2012, doi:10.1029/2012GL052064

Other Publications

1. **Hill, S. A.** “A head in the clouds elucidates” (book review of *Atmosphere, Clouds, and Climate* by David Randall). *Science*, Vol. 337, 1 pp., 2012, doi:10.1126/science.1225615

Submitted Manuscripts

1. **Hill, S. A.**, Y. Ming, and I. M. Held. “Mechanisms of forced tropical meridional energy flux change.” In GFDL internal review for submission to *Journal of Climate*.

Manuscripts In Preparation

1. **Hill, S. A.** and Y. Ming. “On the roles of forced changes in the mean and spatial pattern of surface temperature in tropical precipitation.” In preparation for submission to *Geophysical Research Letters*.
2. **Hill, S. A.** and Y. Ming. “East Asian aerosols and the Pacific Walker circulation.” In preparation for submission to *Journal of Climate*.

Selected Presentations

- “Mean and extreme tropical precipitation changes caused by the uniform and spatially varying components of anthropogenic forcing.” Oral presentation. AMS 2014 Annual Meeting, Atlanta, GA. 5 February 2014.
- “Mechanisms of forced tropical meridional energy flux change.” Oral presentation. AGU 2013 Fall Meeting, San Francisco, CA. 13 December 2013.
- “Mechanisms of forced tropical meridional energy flux change.” Oral presentation. Princeton AOS Student/Postdoc Seminar Series. 3 December 2013.
- “Discussion of *Xie et al 2013*.” Oral presentation. NOAA GFDL Climate Sensitivity Journal Club. 22 November 2013
- “Mechanisms of forced tropical meridional energy flux change.” Oral presentation. Graduate Climate Conference, Woods Hole Oceanographic Institution, Woods Hole, MA. 2 November 2013.
- “Discussion of *Armour et al 2013*.” Oral presentation. NOAA GFDL Climate Sensitivity Journal Club. 26 July 2013
- “Mechanisms of forced tropical meridional energy flux change.” Poster presentation. Gordon Research Seminar and Conference, Colby-Sawyer College, New London, NH. 6 and 9 July 2013.
- “Using climate models to understand the role of aerosols in tropical circulation.” Oral presentation. Princeton Energy and Climate Scholars. 25 April 2013.
- “Tropical response to forced SST changes.” Princeton AOS Program generals exam oral examination presentation. 12 March 2013.
- “Some DOs and DON'Ts in oral presentations.” Princeton AOS Program Student/Postdoc Seminar Series. 20 February 2013.
- “Global warming, aerosols, and precipitation.” Invited oral presentation. Princeton University Energy Table. 9 October 2012.
- “Climate response to a geoengineered brightening of subtropical marine boundary clouds.” Oral presentation. Princeton AOS Program Student/Postdoc Seminar Series. 28 February 2012.
- “Climate response to a geoengineered brightening of subtropical marine boundary clouds.” Poster presentation. 11th Annual Student Conference at the AMS Annual Meeting, New Orleans, LA. 22 January 2012.
- “Climate response to a geoengineered brightening of subtropical marine boundary clouds.” Oral presentation. Princeton University Department of Geosciences Graduate Research Symposium, Princeton, NJ. 11 November 2011.
- “Slurry flows: An experimental and modeling study.” Invited oral presentation. UCLA Applied Mathematics Undergraduate Research Showcase/Alumni Appreciation Event, UCLA Faculty Center, Los Angeles, CA. 3 August 2011.
- “Slurry flows: An experimental and modeling study.” Group oral presentation with 3 co-presenters. UCLA California Research Training Program in Computational and Applied Mathematics Concluding Symposium, UCLA Institute for Pure and Applied Mathematics, Los Angeles, CA. 3 August 2011.
- “Climate response to a geoengineered brightening of subtropical marine boundary clouds.” Poster presentation. Session GC31A: “Can We Counteract Global Warming?” American Geophysical Union Fall Meeting. San Francisco, CA. 16 December 2010.
- “Climate response to a geoengineered brightening of subtropical marine boundary clouds.” Oral presentation. Special Symposium on Aerosols in Geoengineering at the American Association for Aerosol Research 29th Annual Conference. Portland, OR. 26 October 2010.
- “Investigating climate response to geoengineering using a global climate model.” Oral presentation. National Oceanic and Atmospheric Administration Office of Education Science Symposium, Silver Spring, MD. 3 August 2010.

- “Investigating feasibility of an on-campus housing composting program: Results of three “zero waste floor” experiments.” Group oral presentation. UCLA Office of Residential Life. 5 June 2009.

Selected Honors and Awards

2013	Department of Defense National Defense Science and Engineering Graduate Fellowship
2012	Princeton University Elliotte Robinson Little '25 Fellowship
2012	American Meteorological Society Climate Change Travel Scholarship for Graduate Students to 92 nd AMS Annual Meeting
2012	NSF Graduate Research Fellowship Honorable Mention
2009	National Oceanic and Atmospheric Administration (NOAA) Ernest F. Hollings Scholarship
2007	Presidential Scholar. Honored by President George W. Bush at the White House as part of the Presidential Scholars National Recognition Week.