

Summer 2005 Research Experiences for Undergraduates

Dear Colleague,

The accompanying one-page announcement describes an exciting undergraduate research opportunity for this coming summer (2005) at Hobart & William Smith Colleges. This NSF-supported undergraduate research experience involves analysis of state-of-the-art meteorological data sets and the use of idealized mesoscale model simulations to examine the development, structure, and evolution of lake-effect snow storms in the Great Lakes and NYS Finger Lakes regions.

Selected students will participate in an 8-week summer research program and work with me on several scientific issues that are important towards enhancing the meteorological communities understanding of lake-effect snow storms. These include: (1) investigating the influence that differing concentrations of ice cover have on surface fluxes within lake-effect boundary layers, (2) systematically examining the role that vertical wind shear has on the development and evolution of lake-effect snow bands, and (3) determining the frequency and structure of lake-effect events over small lakes (i.e., NYS Finger Lakes). Participating undergraduate students will also have the opportunity to attend and present their work at the Joint Mesoscale Meteorology and Radar Meteorology conferences sponsored by the American Meteorological Society during October 2005 in Albuquerque, NM.

This is a wonderful opportunity for motivated undergraduate students that are interested in mesoscale weather systems and that are interested in gaining experience in meteorological research. I would ask that you bring this announcement to the attention of undergraduate students that may be interested in applying for this research opportunity.

Regards,

Dr. Neil F. Laird
Department of Geoscience
Hobart & William Smith Colleges
Geneva, NY 14456

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**Summer 2005 Research Experience for Undergraduates
Hobart & William Smith Colleges, Geneva, NY**

Lake-Effect Snowstorms in the Great Lakes and Finger Lakes Regions

**National Science Foundation Funded Project
May 23-July 16, 2005**

Program description

This 8-week summer research program at Hobart & William Smith Colleges is an opportunity for 3 undergraduate science students to learn meteorological data analysis and mesoscale modeling techniques as applied to investigations of lake-effect snowstorms. Students will join the summer science research program at Hobart & William Smith Colleges. The program runs from May 23 through July 16. Students will receive a stipend of \$2400 with room and board provided at no charge. Housing accommodations will be provided on the Hobart & William Smith Colleges campus in Geneva, NY.

This program will examine snow systems that develop in both the Great Lakes and New York State Finger Lakes regions. Data analyses will include utilization of Weather Surveillance Radar 88 Doppler (WSR-88D) data and measurements collected in February 2004 during the Great Lakes Ice Cover – Atmospheric Flux (GLICAF) project. More information regarding the GLICAF project can be obtained from the project website at <http://glicaf.atmos.uiuc.edu/glicaf-index.html>. Radar analyses will be used to examine both Great Lakes and NYS Finger Lakes snow bands. GLICAF project data will be used to examine the relationship between lake ice cover and boundary layer heat fluxes. Idealized mesoscale model simulations will be used, in collaboration with observational analyses being conducted at the University of Illinois, to examine the influence of vertical wind shear on lake-effect snow band development and evolution.

Participating undergraduate students will also have the opportunity to attend and present their work at the Joint Mesoscale Meteorology and Radar Meteorology conferences sponsored by the American Meteorological Society during October 2005 in Albuquerque, NM. Funding for this program is provided by the National Science Foundation.

Eligibility

This program is designed for undergraduate students in an appropriate geoscience major, geography major, or other applicable degree program. Background coursework in meteorology is essential. Prior experience with the analyses of meteorological data and established computer skills are highly recommended.

Application Procedure

Submit the completed application form (including statement of interest) and a copy of your college transcript to: Dr. Neil Laird, Department of Geoscience, Hobart & William Smith Colleges, Geneva, NY 14456. For more information regarding the summer program and student research opportunities send email to laird@hws.edu or call (315) 781-3603.

Deadline

Completed applications for these positions must be received by Friday, March 25, 2005. Applicants will be notified of decisions via e-mail by Friday, April 1, 2005.

Lake-Effect Snowstorms in the Great Lakes and Finger Lakes Regions
May 23 – July 16, 2005

Name: _____

Address: _____

Telephone: (____) _____

Email: _____

Home Institution: _____

Major: _____

Expected graduation date: _____

Please provide a statement of interest that includes the following items.

1. Describe your interest in this summer research program.
2. How would this research experience fit with your career goals?
3. List any background you have relevant to this program (science courses, research or work experiences etc.)

Please provide contact information for two faculty / research mentors:

1. Name: _____

Job Title: _____

Address: _____

Telephone: (____) _____

Email: _____

2. Name: _____

Job Title: _____

Address: _____

Telephone: (____) _____

Email: _____

Send this application form with a copy of your college transcript to:

Dr. Neil Laird, Department of Geoscience,
Hobart & William Smith Colleges, Geneva, NY 14456

For more information email laird@hws.edu or call (315) 781-3603

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