

2008 Undergraduate Research Opportunities Mesoscale & Climatological Studies

**Hobart & William Smith Colleges
Summer Research Program
June 2 – July 25, 2008**

Six Student Positions Available



For questions or more information contact:

Professor Neil F. Laird
Department of Geoscience
Hobart and William Smith Colleges
(laird@hws.edu; (315) 781-3603; <http://people.hws.edu/laird>)



Student Positions sponsored by The National Science Foundation

**Summer 2008 Undergraduate Research Opportunities
June 2 – July 25, 2008**

Lake-Effect Snowstorms, Great Lakes Ice Cover, and Summer Lake Breezes

**Hobart & William Smith Colleges
Funds provided by the National Science Foundation**

Program Description

Six summer research positions are available for undergraduate students to examine several aspects of lake-effect snowstorms, Great Lakes ice cover, and summer lake-breeze circulations using a variety of meteorological data sets. Accepted students will conduct research investigations in close collaboration with Dr. Neil Laird during an 8-week summer program at Hobart & William Smith Colleges from June 2 through July 25. Students will receive a \$2,800 summer salary, a food allowance of \$800, free housing (with kitchen facilities) on the Hobart & William Smith Colleges campus, and reimbursement of travel costs to and from Geneva, NY.

The research topics which will be investigated during the summer research program include:

Lake-Effect Snowstorms: This study will examine historical lake-effect snowstorms associated with several smaller mid-latitude lakes (e.g., New York State Finger Lakes) and the Great Lakes. Data analyses will include utilization of WSR-88D radar data and climatological data sets.

Great Lakes Ice Cover: This research will integrate historical Great Lakes ice cover data sets with meteorological measurements collected over the last 35 years to understand the influence of weather conditions on rapid change ice cover events.

Summer Lake-Breeze Circulations: This investigation will determine the climatology of lake breezes throughout the Great Lakes region and understand their impact on near shore environmental conditions. In addition, the impact of the stable marine boundary layer on severe thunderstorm development over the Great Lakes will be examined.

This research is funded through two National Science Foundation grants and is collaborative with Dr. David Kristovich of the University of Illinois / Illinois State Water Survey. Students will have the chance to interact with several visiting researchers during the program. In addition, student will have the opportunity to present their research results at subsequent regional or national scientific meetings.

Eligibility

Undergraduate students (first year through senior year) working toward a degree in meteorology, atmospheric sciences, or other related degree program are encouraged to apply. Background coursework in meteorology is essential. Prior experience with meteorological data, statistical methods, and established computer skills are preferred. Applicants should have excellent oral and written communication skills and be willing to work both within a collaborative group setting and independently.

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, 4002 Scandling Center, Geneva, NY 14456. The 2008 application form is available at <http://people.hws.edu/laird> along with information on past summer research students and their accomplishments. For additional information please contact Dr. Neil Laird (laird@hws.edu; (315) 781-3603).

Deadline

Completed application materials for these positions must be received by March 3, 2008. Applicants will be notified of decisions by March 17, 2008.

Name: _____

School Address: _____

Home Address: _____

Telephone: (____) _____

Email: _____

Home Institution: _____

Major: _____ Minor: _____

Expected graduation date: _____ (example, May 2010)

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 benefit your undergraduate education and career goals?
3. List any background you have relevant to this program (science courses, research or work experiences, conference or meeting presentations, etc.)

Check all areas of interest.

- ☐ Lake-effect snowstorms
- ☐ Great Lakes ice cover
- ☐ Summer lake-breeze circulations

Provide contact information for two faculty / research mentors that may be contacted to discuss their interaction with you:

1. Name: _____

Job Title: _____

Email: _____

Address: _____

Phone: (____) _____

2. Name: _____

Job Title: _____

Email: _____

Address: _____

Phone: (____) _____

Send this application form (with statement of interest) and a copy of your college transcript to:

Dr. Neil Laird, Department of Geoscience, Hobart & William Smith Colleges, 4002 Scandling Center,
Geneva, NY 14456

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

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