

Vandy Blue Spikes:

Climate Change Institute and the Department of Earth Sciences
University of Maine, 5790 Bryand Global Sciences Center, Room 303
Orono, Maine 04469 US A

Phone: 207-581-2112 – E-mail: vandy.spikes@maine.edu
website: http://www.geology.um.maine.edu/user/blue_spikes/research.htm

Experience in Glaciology:

- * Participated in nine field projects in Greenland and Antarctica.
- * Used GPS to measure the deformation of polar ice sheets.
- * Developed computer software to integrate GPS, INS, and laser altimetry data recorded in Antarctica.
- * Used laser altimetry to map the surface of the Antarctic ice-sheet and measure changes in elevation over time.
- * Developed model of ice flow through meteorite concentration zones in Antarctica using data obtained during two seasons on the ice.
- * Currently using ice core and radar data to determine spatial and temporal variations in snow accumulation rate.
- * Currently collaborating with NASA to validate measurements from the Ice, Cloud, and Land Elevation Satellite (ICESat).

Selected Publications:

Spikes, V.B., Csatho, B., Whillans, I.M., 1999. Airborne laser profiling of Antarctic ice stream for change detection. *International Archives of Photogrammetry and Remote Sensing*, **32**(3W14), La Jolla, CA.

Spikes, V.B., Csatho, B., Whillans, I.M., 2003. Laser profiling over Antarctic ice streams: a technical report. *Journal of Glaciology*, **49**(165), in press.

Spikes, V.B., Csatho, B., Whillans, I.M., 2003. Elevation changes on Whillans Ice Stream and Ice Stream C. *Journal of Glaciology*. **49**(165), in press.

Spikes V.B., S.A. Arcone, G.S. Hamilton, S. Kaspari, P.A. Mayewski. 2003. Primary causes of accumulation variability in Antarctica. *Annals of Glaciology*. in review.

References:

Dr. Gordon Hamilton, Professor of Geology and Quaternary Sciences at the University of Maine, 5790 ETB Global Sciences Center, Orono, ME 04469, gordon.hamilton@maine.edu, 207-581-3446.

Dr. Steve Arcone, USA-Cold Regions Research and Engineering Laboratory, 72 Lyme Rd, Hanover, NH 03755, steve.a.arcone@erdc.usace.army.mil, 603-646-4368.

Dr. Paul Mayewski, Professor of Quaternary and Climate Studies at the University of Maine, 5790 ETB Global Sciences Center, Orono, ME 04469, paul.mayewski@maine.edu, 207-581-3019.

Education:

University of Maine, Orono, ME, USA

Expected to complete PhD in December of 2003.

Dissertation title:

The mass balance of the West Antarctic Ice Sheet.

Coursework completed:

Stable Isotope Geochemistry, Radar Geophysics, Remote Sensing, Field Glaciology (Glacio-Euro)

The Ohio State University, Columbus, OH, USA

MS Geology, September 2000, Overall GPA 3.76.

Thesis: Laser altimetry, mass balance, and meteorites: A two-part study of ice streams and blue ice.

Coursework: Advanced structural geology, Physics of glaciers,

Groundwater contaminants, Rock rheology, Engineering geology

Emporia State University, Emporia, KS, USA

BS Earth Science, May 1997, Overall GPA 3.46

Science Related Coursework: Hydrogeology, Sedimentology,

Stratigraphy, Meteorology, Physics, Chemistry, Calculus, Mineralogy,

Environmental Geology, Historical Geology, Geographic Information

Systems (GIS), Optical Mineralogy, Glacial Geology

Awards:

NASA Fellowship - 2001-2004

ESU Academic Scholarship - 1993-1994

American Express Scholarship for Academic Excellence - 1993-1997