

# Data Buoy

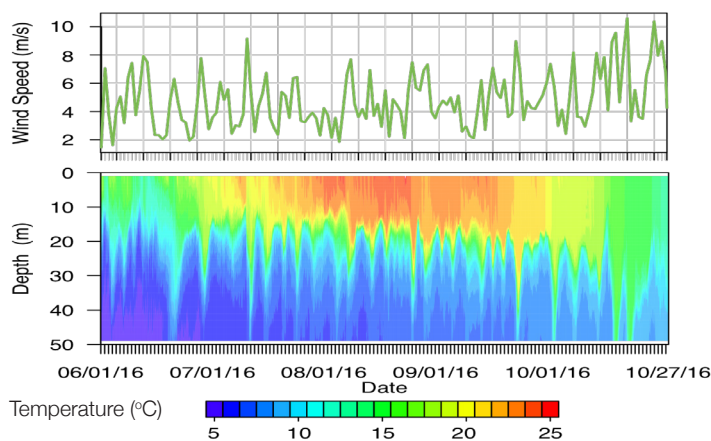
## Monitoring Lake Champlain to assess future climate change impacts

Dr. Eric Leibeinsperger, Associate Professor in the Center for Earth and Environmental Science at SUNY Plattsburgh is leading a research project, with funding from Lake Champlain Sea Grant, that collects continuous surface weather and lake water temperature data.

A buoy located near Valcour Island in Lake Champlain is outfitted with instruments to collect data. Water temperature is measured at various depths down to 50 meters. Air temperature, wind speed and direction, and air pressure are recorded from the lake surface.

The data are being used as part of long-term monitoring in Lake Champlain to characterize temperature structures, reassess climate change and monitoring strategies, and provide real-time observations to the community.

The live data observations are used by the National Weather Service, U.S. Coast Guard, recreationalists, and researchers.



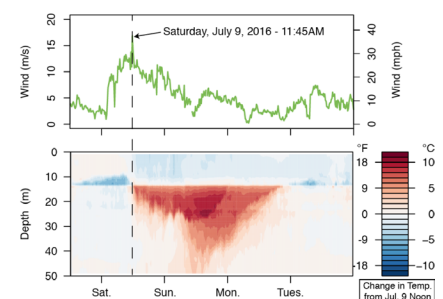
Vertical temperature structure as influenced by surface wind speed.

### STUDENT RESEARCH

Five undergraduate students have worked with Dr. Leibensperger to analyze the wind and water temperature data. Students have participated in data collection and analysis and presented findings at research symposiums. The analysis will improve future local climate change projections.

### LOCAL ANGLERS FIND VALUE IN WEATHER BUOY

Fishing and boating represent important economic drivers in the Champlain basin. However significant variability in water temperatures from surface to bottom challenges salmon and trout anglers as they seek the best depths and locations to fish. The data buoy is providing them with real-time data that aids in their endeavors. The buoy is also valuable to boaters and anglers who seek wind data to ensure safe boating.



A one-day wind event after which warm water was pushed downward in the water column.