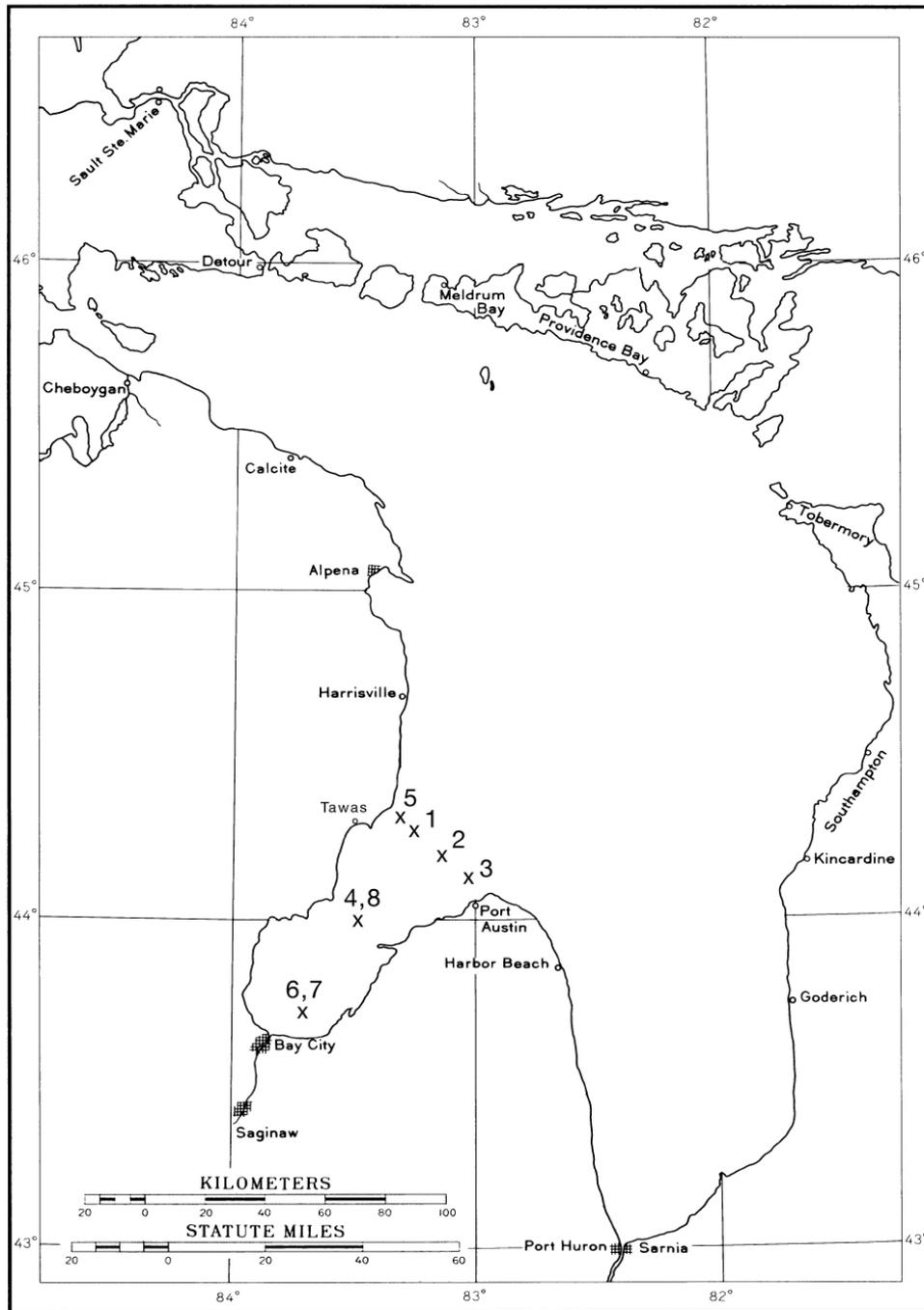


Time series measurements in Saginaw Bay

Nathan Hawley

Objectives:

- 1) Provide temperature and current velocity data for hydrodynamic model
- 2) Quantify resuspension during the spring
- 3) Provide size data of suspended particles for modelers
- 4) Sediment traps



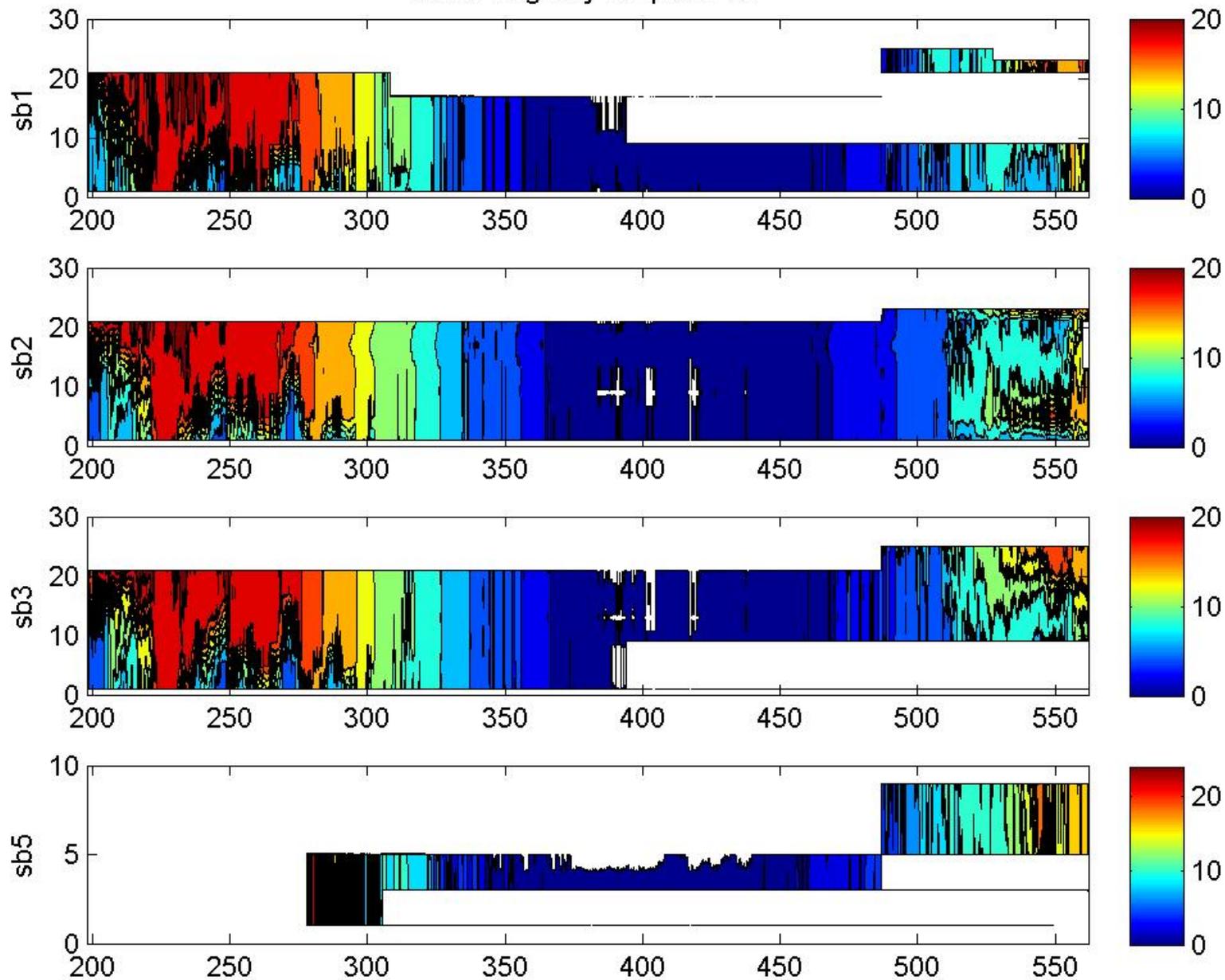
- Time series observations of water temperature, wave activity, current velocity, and water transparency were made at several locations in both inner and outer Saginaw Bay.
- 5 Moorings with ADCPs and temperature sensors were deployed from July 2008-July 2009, an additional mooring was deployed at station 6 from April-July 2009. The moorings at stations 1, 2, 3, and 5 were redeployed until July 2010. The mooring at station 4 was lost.
- Instrumented tripods were deployed at stations 4 and 6 from April-June 2009 to monitor resuspension events.
- There were numerous instrument problems with both the ADCPs and the temperature sensors.

Problems with winter moorings

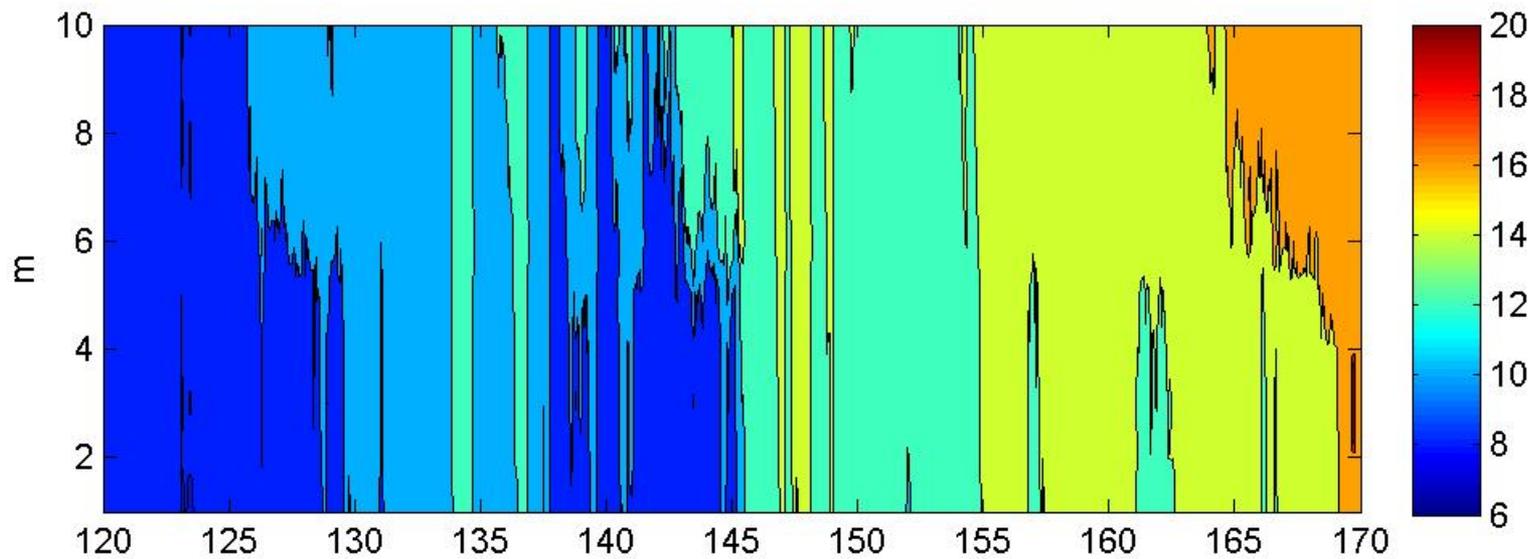
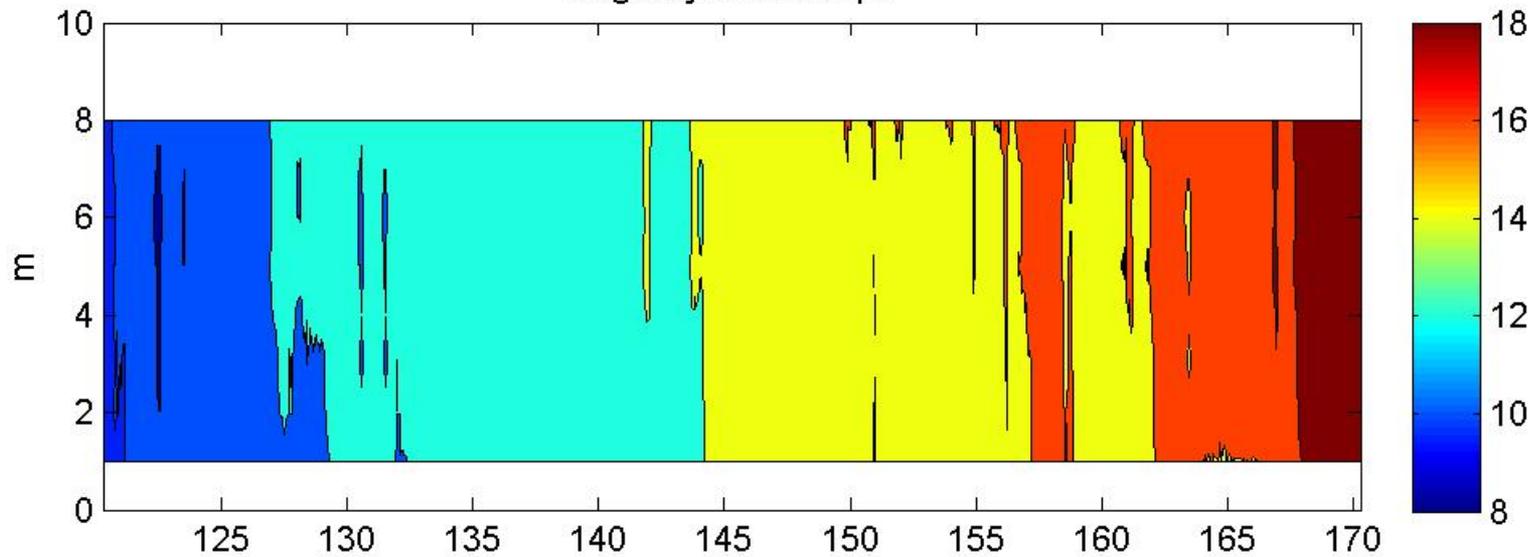
- 1) Of the 5 ADCPs deployed over the winter, only 1 worked correctly – 1 failed completely, 1 was lost, and the other 2 provided only partial data
- 2) Many of the temperature sensors failed or provided only partial records – the string at station 4 was lost

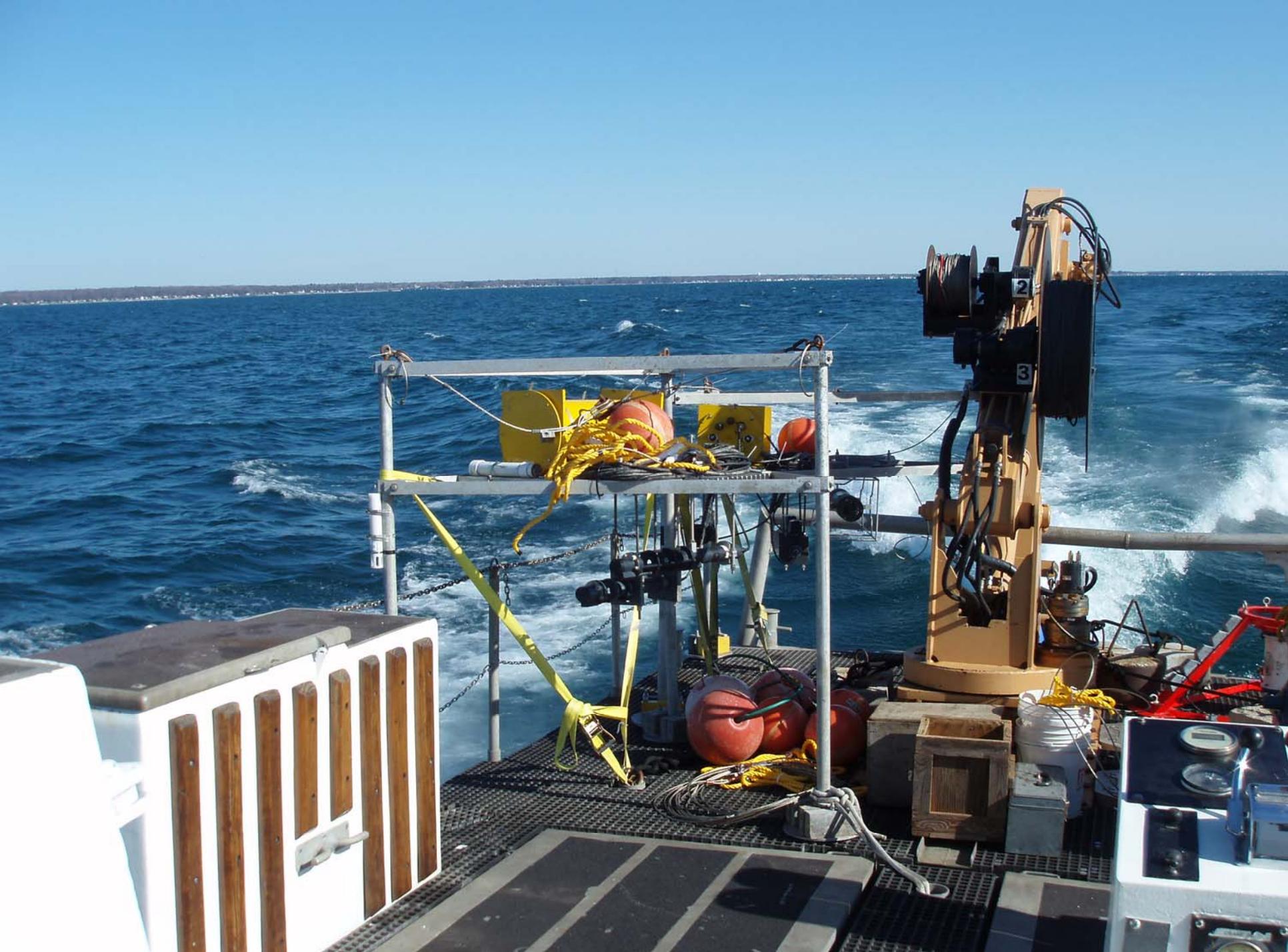


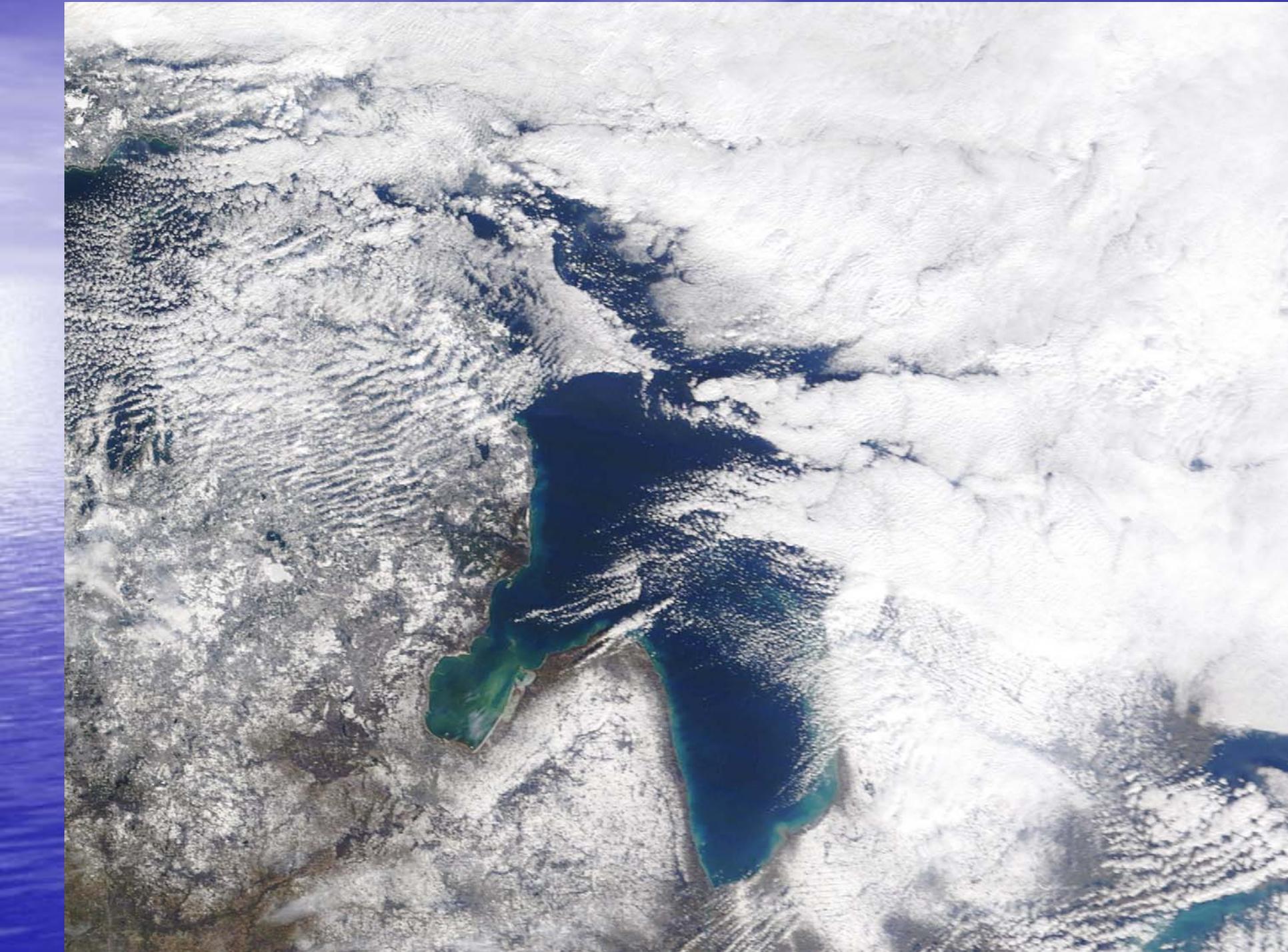
Outer Sag Bay temps 08-09



Sag Bay 2009 temps



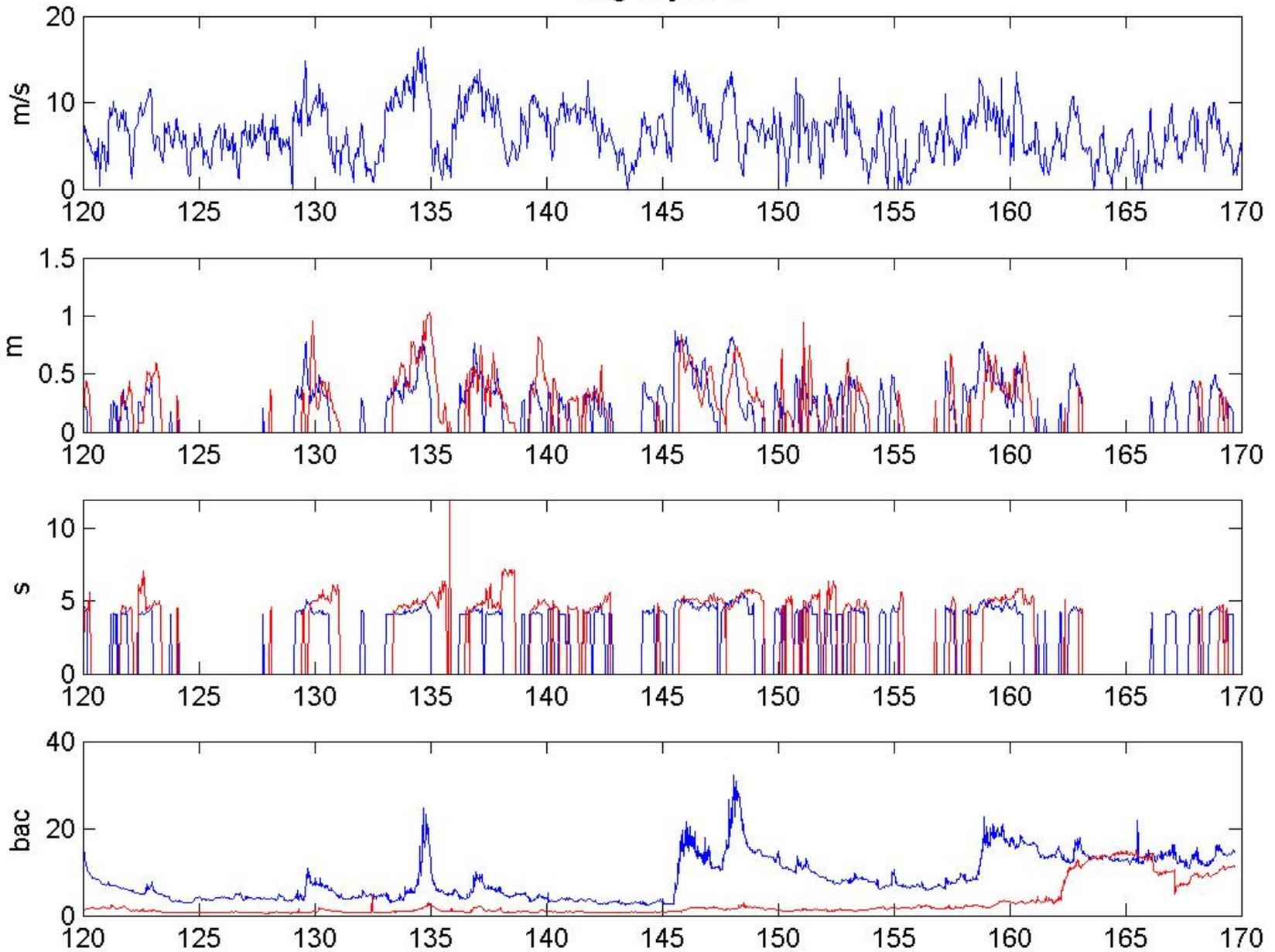




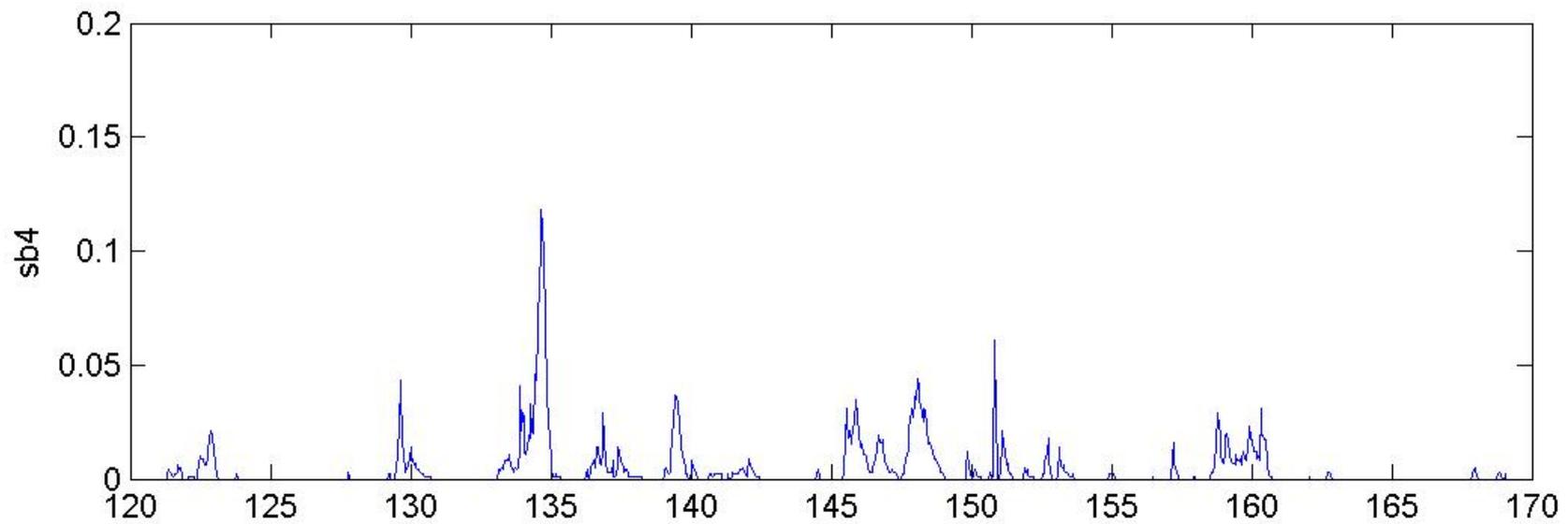
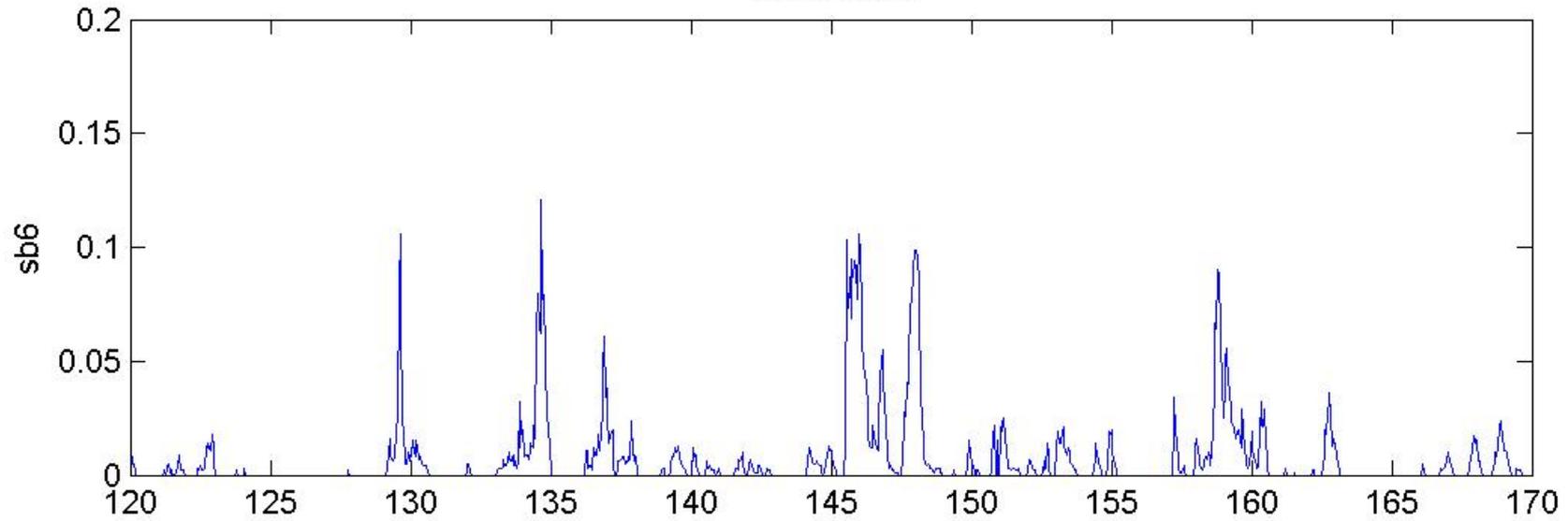


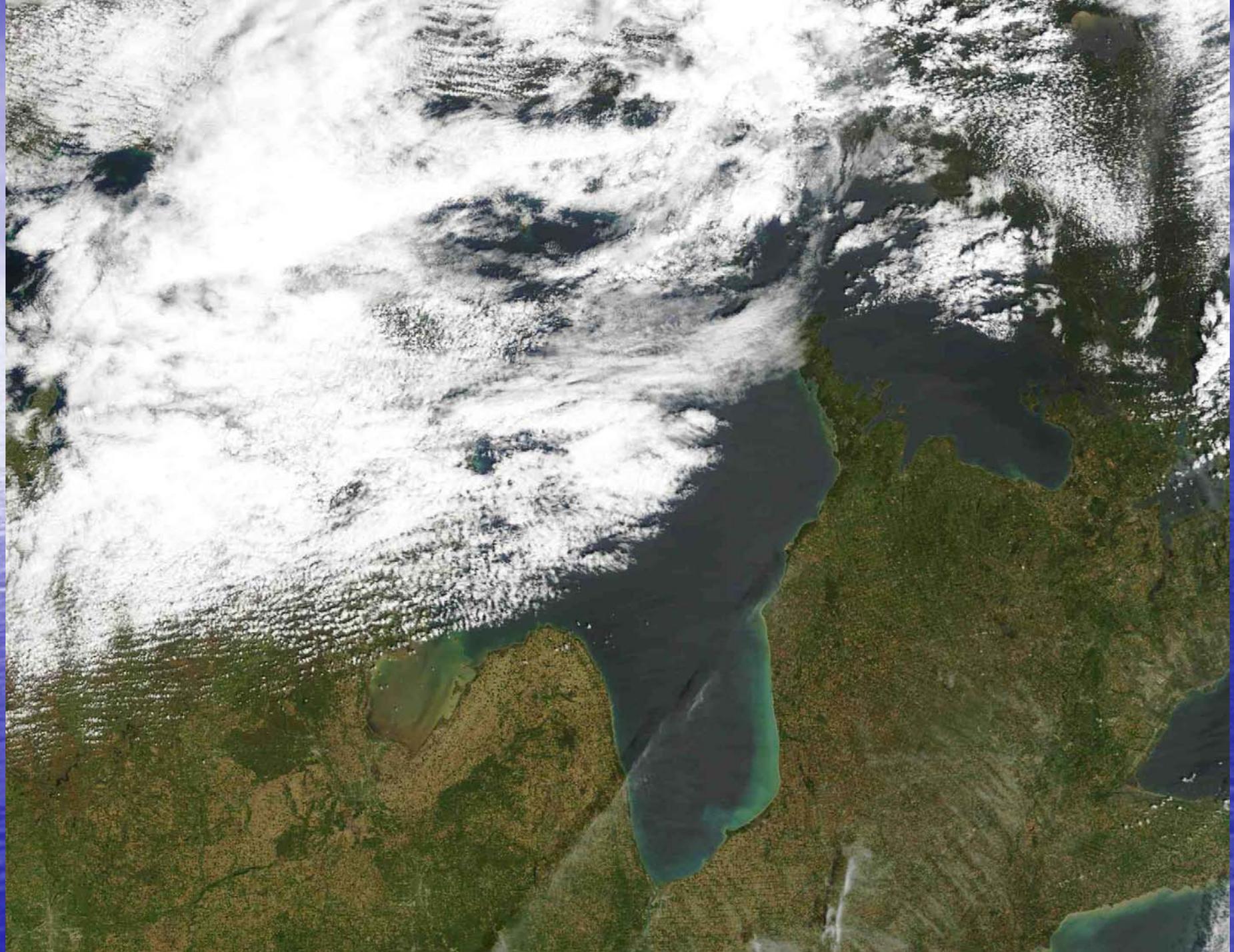


Sag Bay 2009

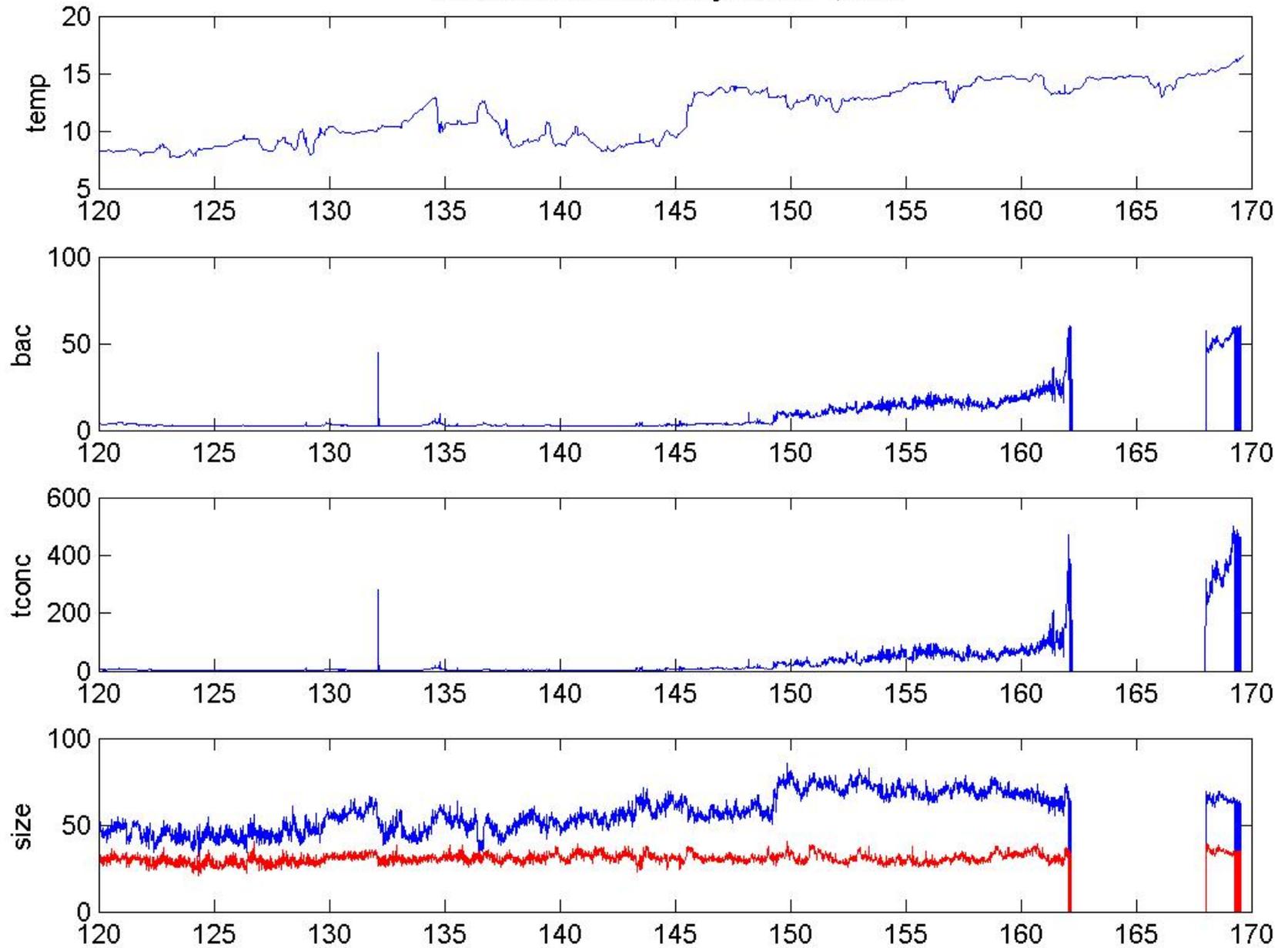


wave stress





Lisst data from Sab Bay station 4, 2009





Summary

- Only partial adcp and temperature data for 2008-2009
- Trying again this winter
- Spring deployments in 2009 were successful – no plans to repeat next year
- Sediment traps deployed, but no time to service them, some were lost
- Particle size data recorded in inner bay, profiles made at other stations in June