

IMS Seminar
October 2, 2013
201 O'Neill, 3:30 pm

Jonathan Whitefield
Ph.D. Oceanography Program

Modelling the long- and short-term Bering Strait transport

The Bering Strait is the only passage for the flow of water from the North Pacific to the Arctic Ocean. Flow is typically northwards due to a difference in sea surface height between the two oceans, but varies considerably over shorter time scales. A series of moorings in the Bering Strait capture temperature, salinity and current speed close to the sea floor, but do not resolve the buoyant heat and freshwater content. By using these moored observations to validate a high resolution global model, we are able to use the model to “fill in the gaps” in the observations and make estimates of unresolved transport in the Bering Strait. We also look at short term variability of Bering Strait throughflow, influences of high volume transport compared to high heat or freshwater content, and finally infer that remote wind forcing also plays a large role in controlling the magnitude of the transport.

