Mass Lobstermen Association's Spring 2005 eMOLT Update

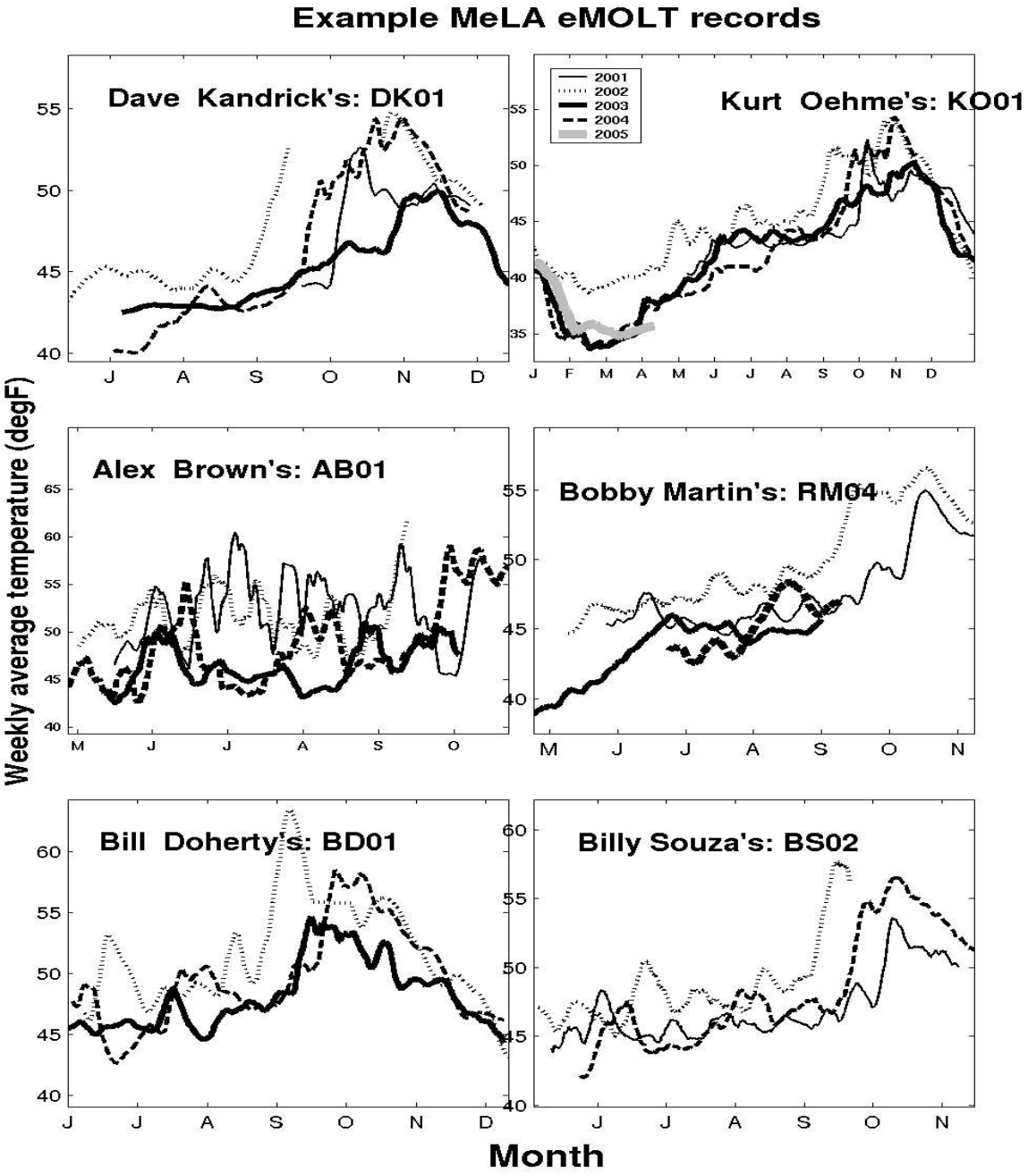

Figure 1. Multi-year records of bottom temperature collected by lobstermen.

Having evolved through various phases over the last 4-5 years, the eMOLT operation is settling into a routine that works for all those involved: the fishermen, administrators, and science partners. The primary objective of eMOLT (Environmental Monitors on Lobster Traps) has been, and still is, to maintain bottom temperature records at fixed locations on the Northeast Continental Shelf. While reserve funds will supply us in standard temperature probes for 3-4 years into the future, we have been investigating other technologies for obtaining "realtime" bottom temperatures. In 2004, we were able to secure funding to the Advanced Design Consultants Inc of Lansing, NY to develop a probe that sends data wirelessly to the wheelhouse. While this

unit failed in its first sea trial, we hope to see this technology work in the coming year. We have also experimented with units that telemeter data via satellite. We will keep you abreast of further development on both these fronts. In the meantime, we encourage our existing participants to keep their internally-recording probes in the water until the next download session later this year. A selection of temperature records are plotted in Figure 1 above. Given four years of houly observations at many sites, we can now begin to quantify what is a "normal" year. The top four panels represent locations in different parts of Cape Cod Bay and the bottom two are from outside Boston Harbor and on the backside of Cape Cod, respectively. One thing to note, for example, is the variability (especially in the case of DK01 and BS02) in timing of the fall overturning.

We have expanding the eMOLT operations in recent years to include student-built, lobstermen-deployed, satellite-tracked drifters. The objective here is to provide current observations (along with temperature) to help validate numerical simulation of flow. More than 50,000 km of ocean has been logged to date.

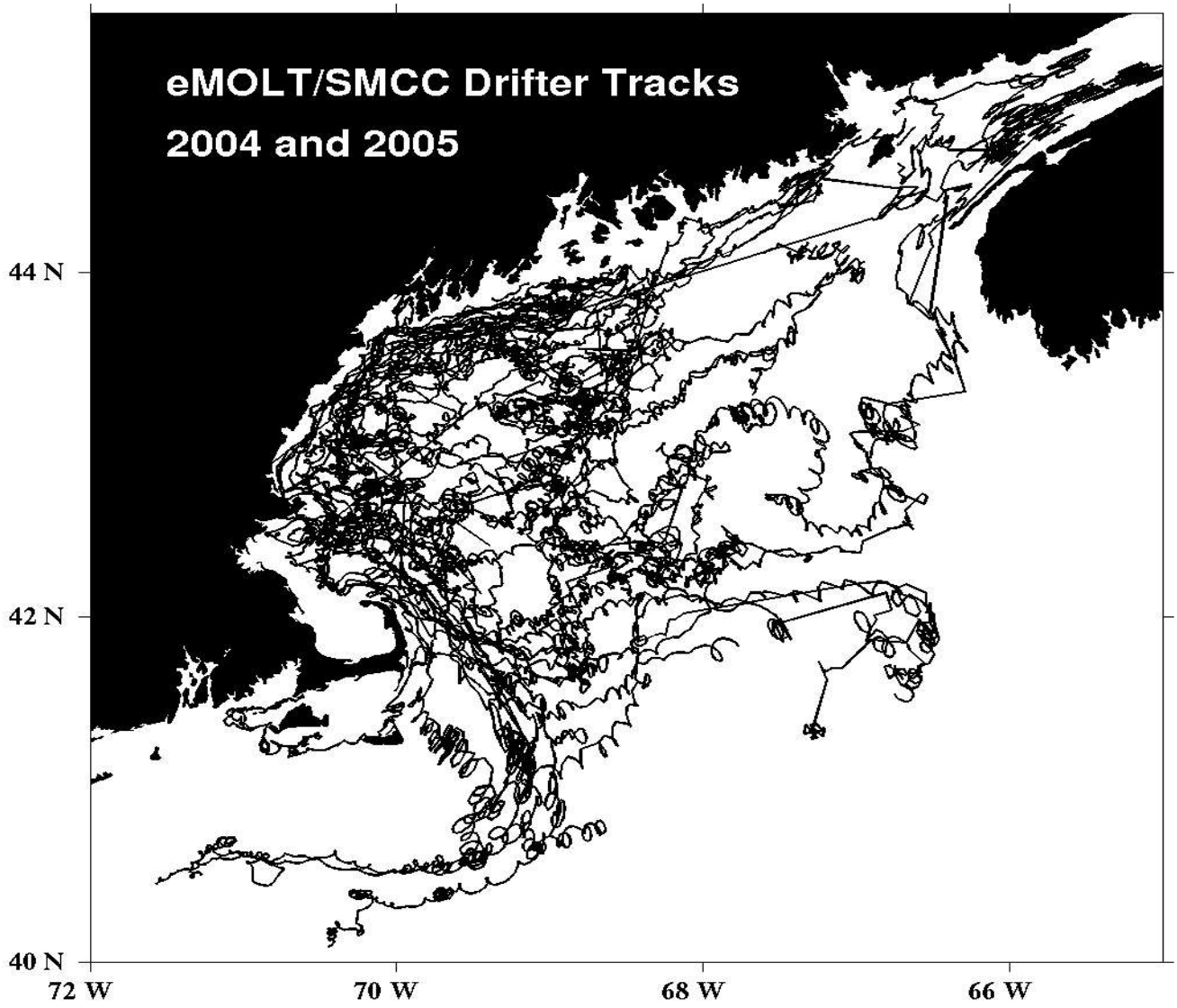

Figure 2. Combination of trajectories from eMOLT drifters built by Southern Maine Community College students.

Visit emolt.org for more details or contact james.manning@noaa.gov (508-495-2211) and Dave Casoni.