# eMOLT Spring 2015 Update

note: If you do not have time to read this entire newsletter, please read that highlighted in red.

## *Real-time temperature is closer to reality*

You have heard me talk about "real-time temperature" since the very beginning of eMOLT, more than 15 years ago. It may finally be a reality in 2015! The technology has now been developed where there are now multiple companies making affordable instruments. As these probes come on deck, they automatically download to the shipboard base station where it can then be viewed and telemetered to a server. In some cases, the "base station" is a regular smart phone (iPhone or Android) so that the probe costs only a few hundred dollars (similar to existing sensors). **If you are interested in trying one of these new units in 2015, email me at james.manning@noaa.gov.** Also, let me know if your eMOLT site is typically within cell phone coverage. We just got some funding from NOAA's Advanced Sampling Technology Program that will allow us to demonstrate this process in the coming year.

## *Keep the time series running in 2015*

Before we start spending $$ on new technology however, we want to ensure we keep the longterm time series running at all sites. I have enclosed a traditional probe in this mailing unless my records show you either already have a probe or you are no longer interested. When you are done fishing for the year, please remember to mail in your temperature probe to Jim Manning, NOAA, 166 Water St, Woods Hole, MA. 02543 and remember to provide documentation of lat/lon and depth deployed. **Please include this information even if it is the same spot as previous years so that I can validate my records.**

Despite the long cold winter we have had, there is evidently some warm water that has entered the deep Gulf of Maine and may be making its way up to the shallows (see figure below).

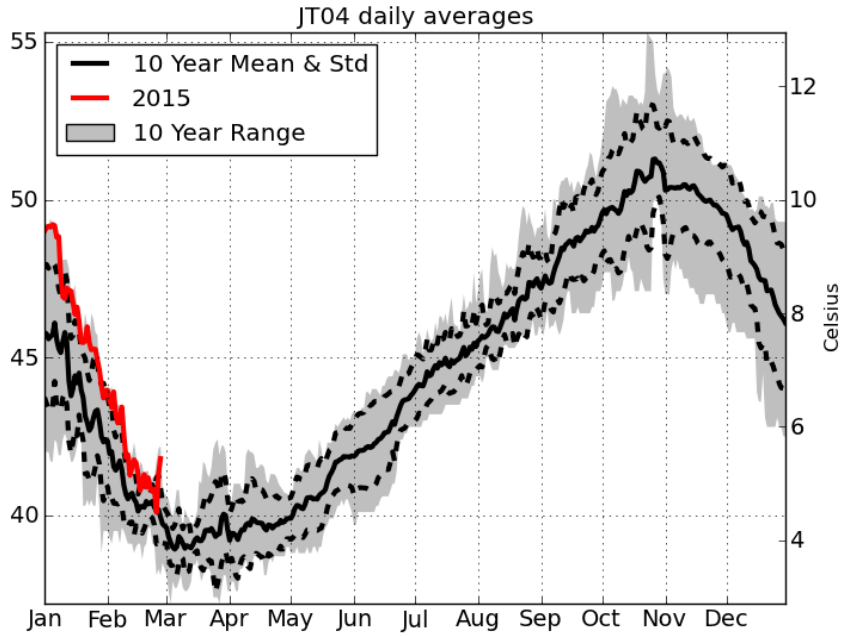


*Figure 1. Jim Tripp's temperature record from the deep (65 fathoms) off Mid-coast Maine.*

## *Some temperature probes are low on battery*

Most of you are getting new probes this year so you do NOT need to worry about the battery dying. You can tell if they are new probes if they do not have the small protrusion on one end of the probe. You can tell when the battery dies on the old probes with protrusions when the little red light on the end cap stops flashing every 10 seconds. If you do get an old probe this year and you happen to notice yours red light stops blinking during the year, please let me know and I will mail you a new one. We can still extract the data collected before it went dead.

## *Status of other projects*

We got a few more bottom **current meters** funded in 2015 to be deployed again near long line gear in the deep Gulf of Maine. The **drifter** project will be active this year with dozens of high school teachers now involved in building these in the classrooms. Several high schools in Downeast Maine and several high schools just south of Boston will be deploying this Spring. If you are interested in helping with deployments let me know. The **real-time temperature** probe project, as noted above, is finally starting to take off. The **camera** project is still on hold. The **unmanned sail boat project** is also active in 2015 with a few dozen launches planned. Those school-sponsored units deployed in recent years have landed in Spain, Portugal, Ireland, France, and Brazil.

## *Proposals in the works*

We are actively submitting climate change-related proposals to keep the eMOLT project running. The Northeast Cooperative Research Program at the Northeast Fisheries Science Center has stepped up to support eMOLT activity recently and we are also looking for support from the Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS).

## *Presentations made*

The eMOLT project was presented at several venues in recent months including a talk at the annual Regional Association for Research in the Gulf of Maine Symposium, the Mass Lobstermen Weekend, and the Maine Fishermen Forum.

## *Manuscript in the works*

A manuscript is under revision after getting comments back from reviewers. This paper is comparing eMOLT-collected bottom temperatures with multiple ocean models. This is, after all, the primary purpose of collecting this data, to help numerical modelers simulate the conditions in the deep. We have been able to show the modelers that their simulations of bottom temperature are often off by a few degrees especially in the summer/fall seasons where there is extra stratification of the water column.