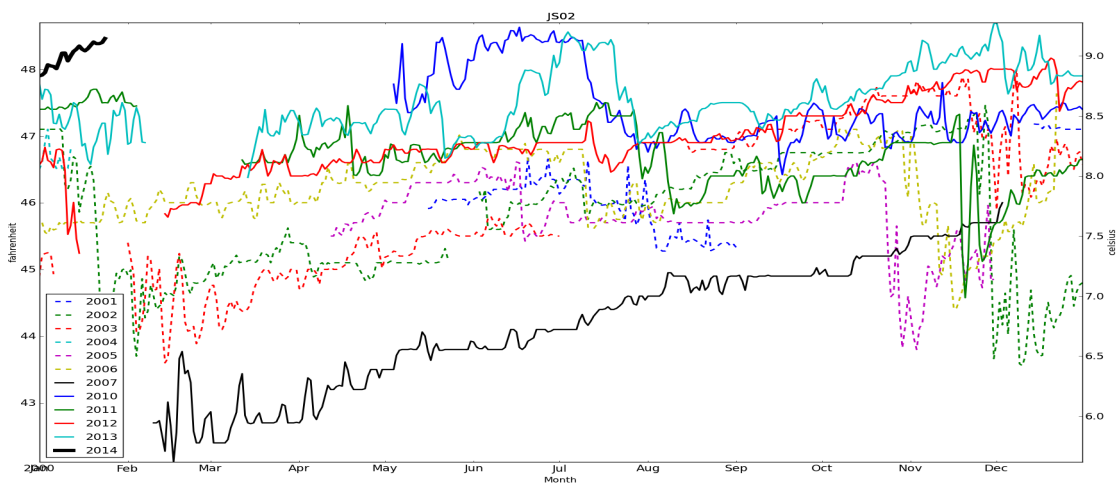


eMOLT Spring 2014 Update

Temperature probes in 2014

Thanks to all who returned temperature data from 2013. Lets keep the time series running in 2014! I have enclosed a probe in this mailing unless my records show you already have a probe for 2014. In some cases where participants had multiple bottom temperature probes, they may now be limited to one until we fund more new probes.



I am particularly interested in seeing what happens in 2014 after getting some data back a few months ago from Pete Begley (NH) who fishes in the very deep Gulf of Maine at nearly 200 fathoms. The temperature down there was warmer than it has been in the eMOLT decade (see black line in the upper left corner of the figure above). It will be interesting to see if that water makes it way into the shallows in the coming year.

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.**

Some temperature probes are low on battery

A total of ten probes were taken out of inventory this past year because their non-replaceable batteries were used up. You can tell when the battery dies on these probes when the little red light on the end cap stops flashing every 10 seconds. If you happen to notice yours dies 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. Fortunately, I have a small batch of new probes for 2014 but I struggle to keep enough in stock. Still looking for routine annual funding.

Status of other projects

We got a few bottom **current meters** funded in 2014 to be deployed near long line gear in the deep Gulf of Maine. Vitalii Sheremet, who many of you met in the last few years, will be building and deploying these instruments for a variety of other projects in the next few years. We appreciate the help of many of you in putting out the original prototypes. The **drifter** project will be very active this year

with dozens of high school teachers coming to Woods Hole in mid-May to learn how to build them. The drifter project was presented at a recent National Science Teachers Association Annual Conference in Boston and will be again this summer at the National Marine Educators Conference in Annapolis Maryland. Again, it was New England lobstermen who deployed the first prototypes back in 2004. The **realtime temperature** probe project is still in the works but moving slowly. The **camera** project is still on hold. The **unmanned sail boats** that three of our participants deployed in December 2013 are today cruising along north of the Azores (http://www.nefsc.noaa.gov/drifter/drift_ep_2013_2.html).

Proposals in the works

We are actively submitting proposals to keep the eMOLT project running. While most of these have to do with drifters, those in the future will be focused primarily on replenishing the standard temperature probes and secondly to get us a batch of these new “real-time” temperature probes. The Northeast Cooperative Research Program at the Northeast Fisheries Science Center has stepped up to support eMOLT activity recently so we hope to keep things going with them.

Manuscript in the works

Hopefully, by the end of this year, we will be submitting a manuscript 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. While they have had satellite-derived surface temperatures assimilated into their runs for years, it is the bottom temperatures that have been missing. So, your data collection efforts are much appreciated by multiple parties who are now ingesting the information into their 3-d simulations of the past. We need to make sure we can “hindcast” the past before we attempt to “forecast” the future. Anyways, if this manuscript gets published, I hope to send you all a copy so you can see where this data is going. As an example of this model-data comparison, the figure below is from Mike Marchetti's 24 fathom data is plotted along with one of the many model outputs now available. Without saying exactly what model it is, I can say that it and many like it do a fairly good job in some places and times of year and less well in other places and times. The bottom panel shows that the model's monthly means are too warm during half of the year and cold the other half.

