

eMOLT

Summer 2010 Update

Mail in temperature probes later this year

As usual, I will mail you all self-addressed envelopes later this year to remind you to send in your temperature probes.

Current Meters to be mailed out soon!!!

As I discussed with many of you during the forums earlier this year, we are planning to deploy many more "current meters" in the fall of 2010 like the ones we tested in the Fall of 2008. We have as many as 50 instruments that we would like to mail out to you the same way we mail you temperature probes. **IF YOU DO NOT WANT TO MEASURE THE CURRENT, PLEASE NOTIFY US IMMEDIATELY** at james.manning@noaa.gov. Otherwise, you should expect an instrument in the mail within the next month along with instructions on how to deploy it. Similar to the temperature probe, we are asking you to simply attach it to your trap and mail it in at the end of the year along with basic documentation on where it was deployed and at what depth.

Drifter results for 2010

More than 200 drifter deployments were made this year (Fig 1) to document flow patterns around the Gulf of Maine. To see their tracks through the rest of the year, visit: <http://www.nefsc.noaa.gov/drifter>. This website is constantly under development so we appreciate any feedback to make it easier to use. There is also a new site that you may find easier to use at: <http://gisweb.wh.whoi.edu/cgi-bin/ioos/drift/index.html>

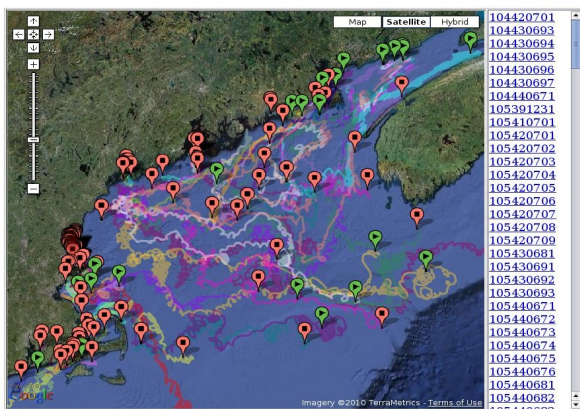


Figure 1 Tracks of the 200+ SMCC/eMOLT drifter deployments made in 2010 most being off Massachusetts.

Thanks to a grant from NOAA's Northeast Fisheries Science Center, we were also able to mail dozens of drifters to be deployed in the Gulf of Mexico this summer (see Figure below). These units were deployed off several different ships by colleagues at various institutions including Florida State, Univ of South Florida, NOAA's Miami lab, and the Dauphin Island Sea Lab. We also sent them to the gulf on our New England Based R/V ENDEAVOR and R/V DELAWARE II. At the time of this writing (mid-August), there are two drifters passing Key West, Florida and headed towards the Gulf Stream. Several more drifters are at the dock in St Petersburg and have yet to be deployed at the time of this writing.

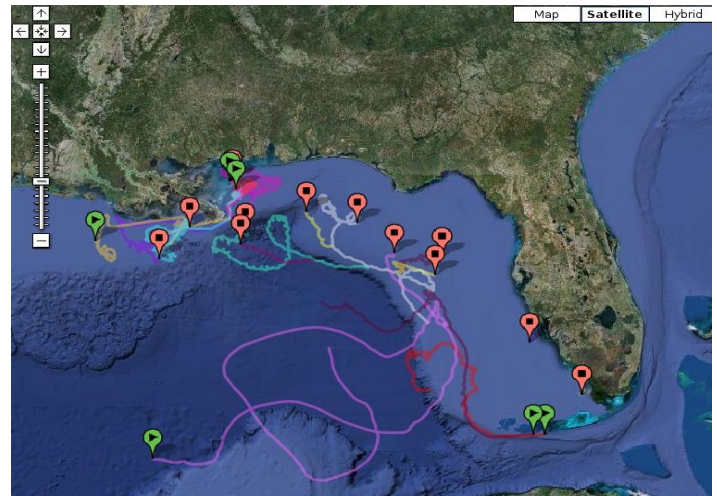


Figure 2. Tracks of GoMLF-supplied drifters deployed in the Gulf of Mexico as early as the 4th of June where the green icons depict those still transmitting.

Validating Circulation Models

We are working on a project recently funded by Northeast Consortium which continues our observational network for purposes of validating ocean circulation models. This involves a series of computer codes to download and simulate particle tracks based on the 3-d flow fields generated at our local universities in New England and compare them to actual tracks. While progress is slow, we hope to also compare the modeled bottom temperatures with those observed on your traps and be able to estimate how well the ocean forecast are doing at this time in 2010. They show lots of promise.

Proposal Update

While our first proposal to NOAA's Environmental Literacy Grants was rejected, we are resubmitting one this fall in a 2nd attempt. Since it is directed at K-12 learning in marine science, we are proposing to hold

workshops for dozens of schools around New England. We are proposing to teach educators how to build drifters and follow them on the web. We would be asking help from fishermen to deploy these instruments.

tMOLT: listening for marine life

While the tMOLT project did not happen at the scale imagined in 2010, NOAA's salmon researchers at the Orono field station did make some progress in monitoring the migration patterns of smolts exiting the Penobscot River. By securing small pingers on them and then listening for them at several stations down stream (including a few lobster traps), they detected the direction and timing of the migration on some animals. To learn more about this effort visit <http://www.nefsc.noaa.gov/salmon/Finaltelemetry.html>

Dave Novak, an eMOLT intern

Thanks to a grant from the Veteran's Administration we are fortunate to have help from Dave Novak who recently received his masters degree from UMASS Boston's Earth, Environmental, and Ocean Sciences Department. He has been working on outreach activities. He has, for example, compiled a fairly extensive mailing list of nearly all the marine science facilities in the New England. We will use this list to recruit "project partners" for our next proposal.

eMOLT at 2011 Maine Fishermen's Forum

We are in the process of planning a 10-year anniversary of eMOLT gathering on the Thursday of the MFF this year. We hope to have a day-long session with presentation on both the eMOLT results and some lectures from various lobster scientist. Stay tuned for a invitation letter later this year.

Real-time Probe Development

The development of a real-time temperature probe, as first proposed back in 2005, has so far failed. We still wait for this technology to become feasible. While several engineers have considered the project, none have been able to produce a probe that could reliably, economically, and accurately transmit data to the satellite as it is hauled on deck. We are now considering a compromise of having the data sent to the wheelhouse where it can later be relayed to the satellite but progress on this front is very slow. In the

meantime, we plan to maintain the monitoring strategy that we have used successfully for the past decade.

Sea Surface Temperature Animations

Thanks to Emily Smotz, a student of oceanography at SUNY Maritime College and a participant in the Partnership in Education Program this summer in Woods Hole, we have an online animation of satellite-derived sea surface temperature at:

http://www.nefsc.noaa.gov/epd/ocean/MainPage/anim/sst_may2010/sst.html

The purposes of this project was to visualize the relationships between sea surface temperature structure and the path of the drifters. You will see that the drifters that come down the Eastern Maine Coastal Current and are drawn offshore near Penobscot after they encounter a significant front. This may explain, for example, why there the harmful algal blooms this year in Southern Maine were less than previously expected.