

eMOLT Spring 2017 Update

Realtime telemetry ... the future of eMOLT

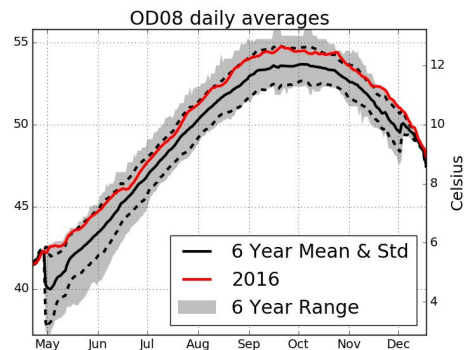
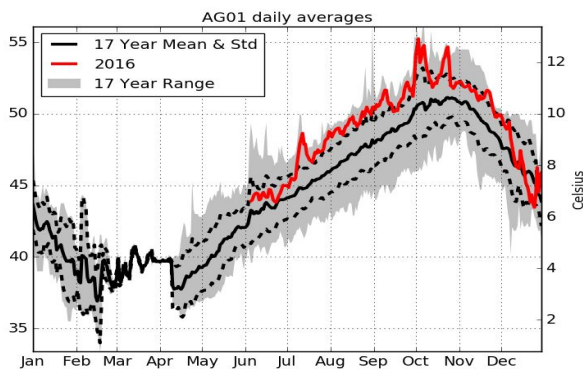
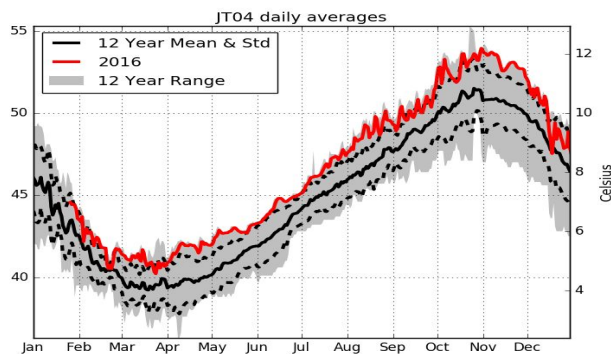
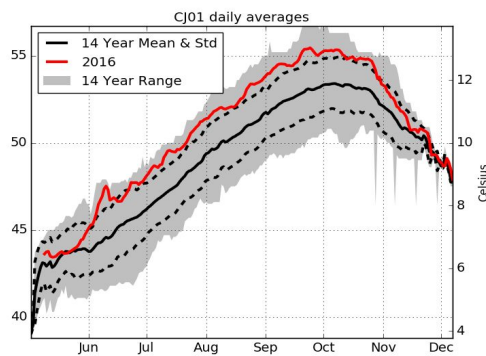
We hope to maintain the eMOLT operation for many years to come but we are slowly transitioning to some new technology. It is finally possible to start transmitting bottom temperature in realtime! In the past few years, we have received a few thousand haul-averaged bottom temperatures from fishermen who have been set up with this new equipment. More than a dozen trawlers are already rigged. As the probe is hauled on deck, it automatically sends raw data to an on-board computer, processes the information, plots it, and relays the position along with averaged temperature and depths to our desktops via the satellite. If you would like to try the new instrumentation on a lobster boat, please let us know. It comes with the wireless Lowell Instrument probe, a small micro-computer with a 7" screen for data display in your wheelhouse, and a satellite transmitter. The raw data is transmitted via WiFi when available. We have a limited supply of this setup so email james.manning@noaa.gov if you are interested.

The importance of good documentation

Without repeating the entire notice in last year's newsletter, we need to remind those using the original probes to supply well-documented latitude, longitude, and depths. See Spring 2016 eMOLT newsletter for details.

2016 was another warm year

As seen at Jon Carter's 25 fathom site off Bar Harbor (upper left), Jim Tripp's 63 fath site mid-coast (upper right), Arnie's 22 fath site off Bristol (lower left), and John Drouin's 48 fath site Downeast, 2016 (red) was significantly warmer than mean (solid black line).



Other Project Updates:

Current meters

The current meter prototype that many of the eMOLT participants tested several years ago is now being used on several different platforms to study a variety of processes. Given funding in the future, we may be bringing these further-enhanced instruments back the lobster traps where they were first tested. If anyone would like to deploy a year-round current meter mooring, please let us know. They are best deployed on a stationary mooring that doesn't get hauled regularly.

Drifters

As reported in the last newsletter, approximately 50 high schools around New England had drifters in their classrooms in 2016 and subsequently had them deployed by various mariners. If any of your local schools would like to be involved, please have them contact Erin Pelletier (erin@gomlf.org at the Gulf of Maine Lobster Foundation) who has been instrumental in making this program work. See gomlf.org "drifters" section.

Cameras on traps

As with many of these pilot projects from the past, the camera project is only limited by funding. With help from several eMOLT participants a few years ago, we proved it was possible to secure water-proofed Go-Pros on traps and got thousands of images. However, it takes man-hours to process these images and/or devise the image-analysis routines to inform the science.

Unmanned sail boats

The "Educational Passages" non-profit organization, based in Belfast Maine, has now launched close to 100 miniboats and has been expanding its operation in the last few years (visit educationalpassages.org). Dozens of these units are being deployed around the world each year and some by eMOLT participants. Sensor packages have been installed on some of the boats to report back oceanographic parameters in realtime. Several boats have landed on distant European shores in the past year. They are tracked along with the drifters so you can see where they are located at anytime at http://www.nefsc.noaa.gov/drifter/drift_X.html.

Weather Stations on Fishing Boats

This is another project that could potentially grow given more support. We are still negotiating with the the National Weather Service to get funding needed to install weather sensors on more fishing vessels.