

Engineering Weekly Report 8/26/2021 - 9/2/2021

Executive Council Notes

- LRAUV operations in the Great Lakes have ended, and the two vehicles are boxed up on their way back to MBARI. While there were a couple of issues, the vehicles, ESP samplers and HAB toxin module all worked great. During the deployment, Brian and Yanwu developed a new, autonomous mission to trigger the ESP/SPR module to sample at the best position within a bloom. 25 new operators were trained, and nine of them piloted the vehicles for much of the deployment. Makai flew almost 500 km throughout southern Lake Michigan and collected 56 archive samples that will be analyzed for eDNA for prey fish. Brizo zigzagged through western Lake Erie to collect the same number of samples while monitoring the extent and toxicity of a Harmful Algal Bloom in real-time.

Individual Activities

- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring buoy
 - Cleaned up equipment
 - 901700 - Acoustical Ocean Ecology
 - Design frame
 - 902106 - Niobicon-Based AUV Docking Development
 - Designing buoy and electronics box
 - Out of Office
 - Took 2 days of vacation and 2 days of sick time.
- Mark Chaffey
- Danelle Cline
- Duane Edgington
 - Out of Office
 - Tuesday Aug 24. Vacation
 - Thursday afternoon Aug 26. Personal leave.
 - IJCAI 2021 workshop on Long-tailed distribution learning, and on Continual semi-supervised learning, Aug 19-20. Conference Aug 21-26. Virtual (Montreal time)
- Jon Erickson
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
- Kevin Gomes
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Set up repo for TRN regression test data and related content
 - Meetings are code maintenance and related planning/activities
 - 901101 - Seafloor Mapping
 - Attempted debug of communications issue between TRN and new sonars - no joy, will resolve post-cruise.
 - 901220 - Midwater Ecology
 - Worked w/ Craig Okuda and Steve Litvin to update and test BRS scripts
 - 901803 - Carbon Wave Glider Development

- Wrap up work
 - Refactored I2C code to accommodate bit-banged and/or MCC peripherals
 - Updated doc to include GUI
 - Generated tag and release
- Overhead
 - Resource balancing
 - Misc admin
- Rich Henthorn
 - Out of Office
 - Sept 24 - Oct 1, vacation
- Brett Hobson
- Scott Jensen
 - Out of Office
 - September 13-17 vacation
- Brent Jones
 - Out of Office
 - 2 sick days (definitely not covid)
- Chad Keczy
- Brian Kieft
 - 300082 - DMO Support - Wave Glider
 - Piloted this weekend
 - DQ2025 - L. Erie HAB
 - Wrapped up successful LRAUV deployments in Lake Erie and Lake Michigan, packed up, and came home!
 - Fixed issue with Brizo and grabbing full res data now for STOQs export.
 - DQ2029 - L Michigan



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- Overhead
 - Phase 2 and SOW creation for LRAUV UX
- Out of Office
 - Sep 7-8 (vacation)
 - October 25-31 (PLOCAN glider school tentative GMT+1)
 - April TBD LRAUV ops
- Denis Klimov
- Diana LaScala-Gruenewald
 - Out of Office
 - Aug. 30 & 31 - Backpacking, won't be reachable
- Eric Martin
 - Out of Office
 - July 19-Aug16 Pacific Northwest for Dorado support.

- Thom Maughan
 - Out of Office
 - Vacation last week in Aug for memorial and family reunion in Colorado. 25 Aug to 3 Sep.
- Mike McCann
 - 901101 - Seafloor Mapping
 - Continue developing the graphql api – about a third of the way through the model classes
 - Working on serialization/deserialization of datetime & geospatial fields
 - 901111 - AUV Infrastructure Support
 - Created [Lake Erie](#) and [Lake Michigan](#) STOQS databases for recent LRAUV deployments
- Rob McEwen
 - Out of Office
 - 25 Aug - 8 Sept
- Paul McGill
 - 300070 - DMO Support Ventana
 - Continue to work on DTech Ground Fault Isolator board with Jose.
 - 901618 - Pelagic-Benthic Coupling
 - Finished Squirty schematics.
 - Responded to reviewer's comments on Rover paper, and found a few more errors.
 - 901700 - Acoustical Ocean Ecology
 - Finished system schematics for MARS Echosounder and got half of chassis wiring finished.
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Tested ROV cable for Coral Macro Camera so it's now ready for potting.
 - Finished system schematics for Deep Sea Data Connect.
 - Finished assembling and testing laser targeting system for Coral Macro Camera, will mount them on tripod on Thu.
 - Out of Office
 - Took vacation day Fri
- Ed Mellinger
- Tom O'Reilly
- Craig Okuda
 - Out of Office
 - Vacation day
- Doug Pargett
 - 881135 - 3G ESP Cartridge Redesign
 - In the few hours I could be onsite this last week, I helped modify the Alpha 3 cartridge and it passed pressure testing.
 - Picked up equipment from Function in Palo Alto.
 - 901205 - ESP SURF Center
 - A couple meetings...
 - Out of Office
 - Work from home...
 - Covid testing for possible school exposures.
- Ben Raanan
 - Out of Office
 - June 8-22
- Mike Risi
 - Out of Office
 - April 26-30: Ocean Imaging Cruise

- May 3-7: Vacation
 - June 4-11: Vacation
 - June 28-July 2: Vacation
 - August 30-September 14: Ocean Imaging Cruise
 - September 14-17: Vacation
 - Vacation on alternate Fridays
- Brent Roman
 - Out of Office
 - August 25 - September 17
- Carlos Rueda
- Karen Salamy
- Brian Schlining
 - Out of Office
 - Aug 30 - Sep 10 - Vacation
- Rich Schramm
 - Out of Office
 - 7/1 - 8/30 Vacation
 - 8/31 last day
- Alana Sherman
 - 300080 - DMO Support Mini ROV
 - Working on new Benthic Epod schematics
 - 901618 - Pelagic-Benthic Coupling
 - Test the Solo camera tripod which had a mechanical failure of the glass port during the last cruise. After it was tidied up and the batteries replaced I pulled together all the pieces to do a lab test of the system. It was a walk down memory lane but I got it working on the bench. Next step will be to test it on the tripod.
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Arghh, found an issue with our Sony a7R3, which is that the internal battery (which is not customer serviceable) gets drained resulting in the loss of date/time info. While I found a software work around that allows me to still take images, it does not solve the issue of not having a timestamp. I am running some tests to try to determine the lifetime per charge of this battery. And thinking about hacks to make it work. We are far in to change the battery.
 - Still have one strobe to reprogram, trying to collect the pieces to do that but missing a test cable..
 - Overhead
 - Finished the job search for MiniROV/ EE (congrats to Ben Erwin) and started job search for EE