

# Engineering Weekly Report 4/9/2026 - 4/16/2026

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2026/>

## Executive Council Notes

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## Individual Activities

- Michael Anderson
- Kevin Barnard
  - Out of Office
    - OOO Apr 2, 2026
    - Working remotely May 11, 2026 – May 14, 2026
    - MIW May 18, 2026 – May 22, 2026
    - CVPR Jun 1, 2026 – Jun 5, 2026
- Francois Cazenave
- Danelle Cline
  - Out of Office
    - April 1-2, Vacation
- Duane Edgington
  - 901502 - Ocean Soundscape
    - Continuing evaluation of Perch-hoplite Perch2.0 model embeddings for few-shot transfer learning.
    - Resampling 2018 April month of Pacific Sound data to 32kHz for Perch2.0 . Stored in [smb://thalassa.shore.mbari.org/PAM\\_Analysis/GoogleMultiSpeciesWhaleModel2/resampled\\_32kHz/2018/04/](smb://thalassa.shore.mbari.org/PAM_Analysis/GoogleMultiSpeciesWhaleModel2/resampled_32kHz/2018/04/)
  - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
    - Team meeting
    - Weekly check-in meeting with Tim Sananikone. Plan to submit abstract to IEEE Oceans Conference 2026 Monterey
  - Overhead
    - Project proposal workshop
- Kevin Gomes
- Andy Hamilton
- Kent Headley
  - 901101 - Seafloor Mapping
    - Fixed issue resulting in incorrect beam count in published MB1 records. The issue was a bookkeeping error, in which beams were not checked for flags and incorrectly included in the output count.
  - 902204 - Scalable Robotics
    - Fixed issue in mbtrnpp that was causing anomalous behavior in mb1stream
    - Looks like the pipeline I'd intended to try out this week on the cruise won't work: it's not intended for use with the Reson sonar.
    - While testing mb1stream on linux, found potential issue in lcm 1.5.2 cmake (build breaks on find\_package(lcm)); filed issue and potential fix with LCM developers.
  - Overhead

- John Ryan inquired about interactive whale sound keyboard, and mentioned that Thom Maughan may have done something like this. Will find out and maybe see what I can do.
  - Met w/ Brent Jones re cell/satellite solutions for OASIS telemetry. We're looking at a cell modem and driver that Paul Barter (Cawthron) uses with OASIS in New Zealand, along with other potential ideas.
  - Attended proposal workshop
  - Misc admin
- Out of Office
  - Apr 17 - Rachel Carson Caress/Troni LASS cruise
  - Apr 20-24 (personal travel, available by phone/online)
- Rich Henthorn
  - Out of Office
    - Apr 9 to 13 - Durkin Packard Cruise
    - Apr 15 and 16 - Rachel Carson LASS
    - May 18 to 28 - Vacation
    - June 29 to July 6 - Vacation
- Akshay Hinduja
  - 901809 - Deep Sea Bioinspiration
    - Debug archiving issue with tritonCAM. Seems to delete everything which should not be happening.
    - Setup test bench to run on desk and observe behaviours.
  - 902101 - LRAUV Technology Development
    - Been on standby due to other projects, but will resume sim development soon
  - 902204 - Scalable Robotics
    - Tested data from Portuguese Ledge on SBN, results were iffy, not a good dataset
    - Spong Ridge data tests performed well, with complete surveys to test against. Still limited in terms of height variability
    - Got successful matches on RC cruise April 14 for a short while before hardware troubles with the Reson
  - Overhead
    - Watched proposal workshop
    - Working on a potential abstract
  - Out of Office
    - Apr 14, 2026 Rachel Carson LASS
    - Apr 16, 2026 Possibly RC LASS again
- Brett Hobson
- Irene Hu
  - 901101 - Seafloor Mapping
    - Reviewed schematics and materials for ORP sensor to start mapping out requirements and boards
    - Discussion w/ Dave and Dorado crew about requirements and where sensor would live
    - Began schematic for ORP main board
  - 901217 - Chemical Sensors
    - A bit of exploration re: lighting sources for wastewater ISUS
  - 901805 - Coastal Biogeochemical Sensing Program
    - Alkalinity
      - Measured a couple more chips and sent package to Lionix with explanatory email
  - 901904 - Deep-Sea Coral-Sponge Community Observatory
    - Test with Ventana went well

- Working on actuators. Fixed a bug causing comms delay, trying to implement new feature to goto position. This requires a series of commands and a two-point calibration that will be difficult to automate with the GUI. Need to discuss
  - Modified electronics in backlight to improve LED performance. Reassembled chassis with great effort.
- Scott Jensen
  - Out of Office
    - May 11-24 (vacation)
    - June 26-July 7 (vacation)
    - July 15 - 21 (vacation)
- Brent Jones
  - 901112 - Monterey Bay Time Series
    - Energy budget for M1 mooring
  - 902004 - Planktivore
    - Emergency LRAUV recovery from Packard
  - 902111 - Carbon Flux Ecology
    - Packard cruise
- Chad Kechy
  - Out of Office
    - Out of office on Fridays
- Brian Kieft
  - 300078 - DMO Support - AUV
    - Hyperion meeting
  - 300082 - DMO Support - Wave Glider
    - Piloting this weekend
  - 300083 - DMO Support - LRAUV
    - Supported CFE deployment over the weekend
    - Supporting Makai deployment
  - 901513 - Targeted Sampling by AUVs
    - Met with synchro team to discuss adaptive sipper mission with Yanwu
  - 902101 - LRAUV Technology Development
    - Ran radius tests in preparation for DAS testing next week
    - Fixed plumbing issue and stbd elevator issue on Opah
  - 902106 - Niobicon-Based AUV Docking Development
    - Docking meeting. Discussed addressing power issues on the solar dock with an external supply to support the fall campaign.
    - Trying to locate mock dock. Will build a new one if necessary.
  - 902607 - Autonomous Surface Vessel Replacement
    - Standing by on response from M team for NDAs
  - DQ2445 - NOWRDC Uncrewed Systems
    - Met with team today to discuss specifics of deployment
  - Overhead
    - Helping out WHOI with Stella
    - Reviewed diurnal vertical migration paper from Marc
    - Worked with HR to get offer out to new SE hire
- Denis Klimov
- Eric Martin

- Thom Maughan
  - 300078 - DMO Support - AUV
    - Decided against producing the updated Hyperion Power Supply due to issues with hand assembly likely stemming from too much copper for heat dissipation on the 400W PCB. Redesigned the power supply to use modules modeled after Polulu. Preparing for fab and assembly.
  - 300083 - DMO Support - LRAUV
    - Ahi has two of the banks of 8 sticks not reporting. Ahi finished the science mission but ran out of battery on the transit home from the CFE deployment. Running battery diagnostics show 25% are bad of the sticks that are reporting.
    - Discussed plans with DMO and LRAUV team and then consensus is to fly Ahi next week for MBTS and then immediately afterwards swap in two BPC1 packs. Working on the BPC1 packs removed from Galene to make sure they are tested and ready for swap into Ahi.
  - 901217 - Chemical Sensors
    - Wahoo! MSC3 based GoBGC floats are now being deployed. This after nearly a year long four float engineering test.
    - Working on MMS interface v2.
  - 901805 - Coastal Biogeochemical Sensing Program
    - MoSoS v5.2 is being requested for test and validation and then use on the Spray2.
  - 902004 - Planktivore
    - Weekly meeting. No progress on Planktivore v2 B build
    - Working on the Planktivore proposal. Meetings with Monique, Steve H, Francisco, Colleen have all surfaced the need an institutional plankton image data pipeline. Met with Kevin who recommended adding the pipeline effort to the Planktivore proposal
  - Out of Office
    - A week vacation in second half of April (TBD)
    - Ten days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.
- Mike McCann
  - 200109 - Core Mooring Data - MDUC
    - Working on [replacing perl mooring data processing scripts](#) running on elvis
  - 901101 - Seafloor Mapping
    - Advising capstone students on reaching a good milestone to wrap up their project
    - Writing a new mbmesh Issue for the summer term capstone team
    - Writing abstract with Prof. Su from CSUMB for an Oceans poster submission
  - 901910 - Plankton Taxonomic Groups from AUVs
    - Wrapping up provenance tracking recording in mooring-ssds
    - Creating LRAUV [full deployment Quick Look Plots and email notification](#)
  - Out of Office
    - 19 April: Serving as a judge for a CSUMB hackathon
    - 19 June - 10 July: Vacation
    - 18-24 July: SIGGRAPH in LA
- Enoch Nicholson
  - 706008 - READI-Net
    - Delivered FIDO vacuum-check fix to Montana; installed and running on FIDO 6
    - Established revised vacuum sensor limits
  - 901007 - Benthic Biology & Ecology
    - Initiated pump tubing replacement and fluid swap from fluorinert to silicone oil; baselined dry current draw on 7 NF10 injection pumps

- Rebuilt first injection pump with EPDM tubing and verified operation in housing
  - Ordered Cole Palmer hardware for 1/4-28 fill port conversion
  - Handed off updated pump drawing to Ray for NPT port machining and Uniontech reprint
- 902101 - LRAUV Technology Development
  - Set up lifting bail structural analysis framework and completed hand calculations for base vehicle; ready for FEA
- 902111 - Carbon Flux Ecology
  - Supported SINKER deployment off Packard
- Tom O'Reilly
- Mike Risi
  - Out of Office
    - Offsite on Tuesday and Friday
    - January 2, 2026 - vacation
    - January 19, 2026 - January 30, 2026 - vacation
    - March 4-5, 2026 - vacation
    - March 16, 2026 - vacation
    - March 30, 2026 - vacation
- Paul Roberts
  - Out of Office
    - June 13 - June 20, 2026 MidSEC, Sweeden
- Brent Roman
- Carlos Rueda
  - 901502 - Ocean Soundscape
    - Experimentation with AVES, UMAP, and clustering toward characterization of humpback whale song units. [Presented results](#) to the team last week, and here's the [code repo](#).
    - Using [sonus](#) to continue the experimentation while taking advantage of GPU.
  - 902101 - LRAUV Technology Development
    - On 2026-04-10 afternoon, incoming email handling in TethysDash got broken due to the expiration of the M365 client secret. Thanks again to all of you who helped diagnose and fix the issue, in particular, Andrew M., for setting up a fresh secret. To help prevent this from happening again, TethysDash [4.99.47](#), implements a mechanism to notify admins when the client secret is nearing expiration. Andrew tells me he will also be implementing "a script that will query applications in M365 for tokens or certs that are expiring and send notifications".
    - Dash4 is now [4.98.7](#). (Thanks, Steve, for the suggestion.)
  - 902504 - Scalable Semantic Mapping
    - Dial: Various versions during that last several days, now [2.2.5](#). Enhancements / fixes include: auto sync of markers across multiple frontend instances; file browser adjustments; simplified view (to facilitate use by non-operator users, while still allowing some functions like creating/editing markers); dependabot updates; Quasar upgrade.
  - Overhead
    - Internship candidate interviews, selection.
    - Moved to my new OFFICE: A115.
- Karen Salamy
  - Out of Office
    - On-campus 3 days/week ( **T, W, TH**). New OFFICE - G106.
- Brian Schlining
  - Out of Office
    - April 6 - April 24: Vacation

- Jun 11 - Jun 19: Midwater Science and Engineering Community Conference, Sweden.
  - Jun 22 - Jun 26: Vacation
- Quinn Shemet
  - 300062 - DMO Support - Doc Ricketts
    - Presets first cut finished and merged, waiting on ROV availability for testing
  - 300083 - DMO Support - LRAUV
    - Lots of on-call for CFE lab deployment
  - 902101 - LRAUV Technology Development
    - Iridium race condition debug
    - Docking comms testing
  - DQ2445 - NOWRDC Uncrewed Systems
    - Ops planning
  - Overhead
    - LRAUV SE candidate feedback
    - AI/ML advisory group meeting
    - Proposal workshop
    - Staff Council
- Alana Sherman
- George Stern
  - 902106 - Niobicon-Based AUV Docking Development
    - More tank testing with the long rod
    - Final down selection to 2 possible coms techs
    - Subsea bottle testing with controlled loads to better understand what initially appeared to be odd losses
  - 902204 - Scalable Robotics
    - Final PoE housing #1 mods completed and initially tested
    - Worked with Etechs to begin modifying PoE housing #2 to match 1st
    - Identified and worked on a fix for half a ground fault in the PoE can
    - Ordered parts and completed chassis wiring for isolation triggering on the 2nd Oak1500M
  - 902304 - Piscivore Cam
    - Camera focusing and final makai testing in prep for deployment this week
- Justin Tucker
  - 901405 - Wave-Energy Conversion for Oceanographic Applications
    - Continued work on subsea housing, and battery housing endcap
  - 902204 - Scalable Robotics
    - Continued work on VN100 housing
  - 902606 - Low Altitude Survey AUV
    - Work on thruster orientation
      - Thruster spec sheet curve digitization script
  - Overhead
    - Continued work on compute node configuration and job scheduling for CFD workflows.
      - DeepRip2 CPU heat generation and fan noise investigation
    - Passive eDNA sample holder for ROV deployment
- Johann Voigtlander
  - 902208 - Mini ROV Operations
    - Refurbishing MiniROV cables
    - Working with Susan to record a time-lapse of the miniROV rebuild
    - Cleaned connectors, changed O-rings, and general maintenance
  - 902312 - Seafloor Processes

- Working with Matt and Mandy to finalize CSEM shipment paperwork