

Engineering Weekly Report 4/23/2026 - 4/30/2026

<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
 - 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
- Duane Edgington
 - 901502 - Ocean Soundscape
 - Completing abstract on orca call detection with ML for IEEE Oceans conference 2026
 - Identifying and collecting annotations / clips of orca and dolphin calls recorded in pacific ocean sound recordings.
 - Ran job resampling 256 kHz audio recordings 2020 October to 24kHz, 322kHz, 48kHz as required by different models (Google multi-species whale, orcAI, Perch2.0)
 - Plan to resample March 2026, March 2019, late December 2024 when pods of orcas were reported by California Killer Whale Project to see if models can detect their vocalizations.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Team meetings
- Kevin Gomes
- Andy Hamilton
- Kent Headley
 - 300078 - DMO Support - AUV
 - prepping layered control tests for next week
 - 901101 - Seafloor Mapping
 - meet w/ Tom O re MB-Systems graphics architecture
 - Overhead
 - working with John Ryan on ocean sound demo
 - budget, proposal process
 - review process
 - misc admin
 - Out of Office
 - n/a
- Rich Henthorn
 - Out of Office
 - May 18 to 28 - Vacation

- June 29 to July 6 - Vacation
- Akshay Hinduja
 - 901809 - Deep Sea Bioinspiration
 - LRAUV-DSBI meeting
 - Setup Orin clone for TritonCAM. Working well.
 - Testing archival code to find delete bug seen in deployed version, but none found
 - Made improvements and bugfixes
 - Wrote lcm logger to use instead of image saving and archival.
 - Push some updates to Triton and test
 - 902101 - LRAUV Technology Development
 - Wrote and tested terrain following and awareness module in holoocean sim
 - Ready to port into gazebo for tuning, need to first setup plugins and example scenarios
 - 902204 - Scalable Robotics
 - Test portuguese ledge data for SBN
 - Write abstract for Oceans for SBN, assist abstract for ASV shallow surveys
- Brett Hobson
- Irene Hu
 - 901101 - Seafloor Mapping
 - Updated ORP board for new choice of microprocessor. Using uP directly instead of a module requires more attention
 - Packaged materials for design review and wrote a readme
 - Ordered turbidity sensor
 - 901805 - Coastal Biogeochemical Sensing Program
 - Mini ISUS
 - Looking into some serial comms errors that seem specific to mini ISUS (intermittent junk characters upon wakeup). Seems to be a timing thing, playing with crystal capacitance. Some cables also seem to cause issues, may need a pulldown.
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Made an alternate version of GUI code with previous motor control structure, as using potentiometer as encoder seems to slow it down a lot
 - Overhead
 - Proposal abstract
- Scott Jensen
 - 901205 - ESP SURF Center
 - Ran into a number “bugs” with FIDO that needed some attention
 - One was a logic bug that left the instrument in a loop that required manual control to break
 - Another was a leaking intake value which turns out it had a foreign object inside.
 - A mysterious vacuum leak was traced to a stick slip problem with the puck lid. A solution was devised for that as well.
 - Finally a method to program new firmware was implemented and tested
 - 902106 - Niobicon-Based AUV Docking Development
 - Much work and discussion with the group about the “new” subsea bottle electronics and a desire to support autonomous recharging.
 - After much searching for COTS parts to support this autonomy a solution was reached
 - Now selling the idea and detailing out the concept of operation.
 - Reached consensus it was a reasonable path forward
 - Starting to test prospective parts
 - Beginning to pull together schematic for fabrication and for housing layout design.

- Out of Office
 - May 11-24 (vacation)
 - June 26-July 7 (vacation)
 - July 15 - 21 (vacation)
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Rebuilding clogged SIPPER sampler
 - 901805 - Coastal Biogeochemical Sensing Program
 - Diagnosing non verbal CF2 controller
 - 902004 - Planktivore
 - mtgs
 - 902111 - Carbon Flux Ecology
 - Prepping CPF for deployment
 - Overhead
 - EE tech interviews
- Chad Kechy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - 300082 - DMO Support - Wave Glider
 - Recovery last week and today for a candidate
 - 300083 - DMO Support - LRAUV
 - Supported Makai deployment last week/weekend. Had some issues with a broken pole that I repaired offshore and also some rudder issues due to rubbing on the fairing. The deployment was able to continue and was successful.
 - 901513 - Targeted Sampling by AUVs
 - Basic concept work for Synchro mission. Assisted with an initial test last week that demonstrated intra vehicle comms triggering a water sample.
 - 902101 - LRAUV Technology Development
 - Makai DVL testing for PDO
 - Makai DVL debug for navigation error and bottoming incident (vendor sent incorrect rotation)
 - Very first DAS deployment went well. Demonstrated L&R with 100m of fiber off the tail along with wide radius turns. Underway recovery went smoothly. Some work needed to avoid porpoising in our default mission.
 - Issue found with Tidante sensor on Opah. Vendor sent a custom output with no addendum to the manual. Fixing this output issue and running comparison tests with Bill to compare to our existing pucks.
 - Fixed up battery configuration on Ahi, helped close, and tested.
 - Testing on Brizo for depth outlier rejection
 - Merged in Glider FET code. Now an operational payload currently on Opah.
 - Met to discuss dash 5 progress and future steps to encourage user participation
 - 902607 - Autonomous Surface Vessel Replacement
 - Multiple comms with SeaSats to get a new quote and get up to speed on their latest accomplishments
 - DQ2445 - NOWRDC Uncrewed Systems
 - Attended team huddle
 - Overhead

- Interviewing another candidate today
- Denis Klimov
- Eric Martin
- Thom Maughan
 - 300078 - DMO Support - AUV
 - Review, discussions regarding backplane, etc.
 - Helped with Hyperion proposal abstract
 - Signed up for project manager
 - 300083 - DMO Support - LRAUV
 - Evaluation of Ahi battery pack
 - Rebuild of Ahi battery pack using BPC1 / Oceanserver with help from BPC2, delivered to DMO ASO
 - Rebuild of Brizo battery pack using BPC1 / Oceanserver with help from BPC2, delivered to DMO ASO
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 - 901217 - Chemical Sensors
 - ISUS sample timing presentation prep for science meeting. Postponed until May
 - 901805 - Coastal Biogeochemical Sensing Program
 - Started command eval of MoSoS v5.2 on nanoFET, interrupted by LRAUV battery needs
 - 902004 - Planktivore
 - Final assembly is finished on Planktivore V2B for Opah. Helium leak test was not conclusive due to limits on vacuum inside Planktivore.
 - Revised leak test is to put on bottom of test tank for a few days while monitoring humidity.
 - Met with planktivore users, met with Alana, submitted 3 year Planktivore abstract
 - Overhead
 - Project proposal season
 - Out of Office
 - A week vacation in May (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
 - Continuing to work on [Perl script replacements in mooring-ssds](#)
 - Debugged problem with the M1's download info virtual instrument data stream containing garbled data following thalassa move, we think
 - 901101 - Seafloor Mapping
 - Wrapping up capstone project with meeting on Saturday and MBARI tour on 8 May
 - 901910 - Plankton Taxonomic Groups from AUVs
 - More quick look plot and web page improvements designed for Slack channel sharing
 - Processed Dorado/Gulper mission 2026.113.00 - no more Matlab, it's all auv-python now
 - Out of Office
 - 19 June - 10 July: Vacation
 - 18-24 July: SIGGRAPH in LA
 - 21-24 September: Oceans Conference
- Enoch Nicholson
- 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
 - 708184 - ESP Monitoring PNW
 - Steph's lab deploys for La Push, WA on May 5, 2026
 - 901205 - ESP SURF Center
 - Colleagues in Denmark have deployed ESP on a creek in Iceland
 - Doing in-situ PCR every other day for a few months
 - Patched the MBARI Ruby interpreter to (hopefully) fix a very rare garbage collection bug.
 - Found 20 year old post on the Ruby issue tracker that looked like a good match
 - In case this bug bites again, modified Ruby to soldier on rather than bailing.
 - 902204 - Scalable Robotics
 - Worked with George Stern to determine that camera CPU was overloaded
 - By 3 sensors running >12fps
 - Added a driver feature decimate frames from a stream
 - Sebastian added important logic to it to keep stereo cameras synchronized.
 - Recommended testing new generation cameras that offer faster processor and network
 - 902304 - Piscivore Cam
 - Testing lots of alternative lenses in the hopes of finding one with greater depth of focus.
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - OCEANS 2026 abstract/coordination with co-authors
 - Looking into exercising the clustering pipeline I recently put together also on various "olive" datasets provided by Franny O. and Jim D.
 - 902101 - LRAUV Technology Development
 - TethysAI: Started adding MCP capability to the prototype, and is looking very good.
 - TethysDash [4.99.50](#): Fixed a regression revealed with the WHOI instance upon upgrading to the latest version. The regression was related to the traditional user authentication system. Also coordinated with Karen as that's the system dash5 uses.
 - TethysL now [4.9.4](#), bringing resiliency, in particular for the VS Code extension, when trying to parse C++ sources with errors like a missing `#include`'d header, as recently noted by Yanwu.
 - 902504 - Scalable Semantic Mapping
 - Dial [2.2.8](#).
 - Out of Office
 - May 8, 22: vacation
 - June 29-30 (tentative) - vacation (family reunion in Florida)
- Karen Salamy
 - Out of Office
 - Currently dealing with a family relative's health issue in hospital and will be working from home until that status has been determined.
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.

- Brian Schlining
 - Out of Office
 - April 6 - April 24: Completed the Camino Portuguese - 260km walk from Porto to Santiago de Compostella
 - Jun 11 - Jun 19: Midwater Science and Engineering Community Conference, Sweden.
 - Jun 22 - Jun 26: Vacation
- Quinn Shemet
- Alana Sherman
 - 902208 - Mini ROV Operations
 - Submitted abstract
 - Working on documentation for *R/V Gaia Blu* cruise
 - 902401 - Geo-Sense
 - Trying to get operational plans worked out for the *R/V Gaia Blu* operations
 - Worked with Bryan to untangle and evaluate the fiber cabled used on our February GeoSense deployment, used OTDR and DAS to evaluate damage
 - Got James going on last bit of cabling needed for integrating the Ti battery sphere
 - Overhead
 - Advised on abstracts
 - Worked on job classifications,
- George Stern
 - 300078 - DMO Support - AUV
 - Support pressure testing and tried to get the strip chart recorder replacement working; unfortunately the old PID controller died and the spare we are lucky enough to have does not appear to have retransmission cards loaded. Hopefully the dead controller's retransmission cards still function and can be successfully swapped in after testing completes; 30 year old controller parts were not available on fleabay.
 - 902106 - Niobicon-Based AUV Docking Development
 - Tested power consumption and communication speeds with two potential modems to downselect to one; unspooled 1000ft of cat6a cable through buildings A and B to run a 1hr test and then respoiled it - not recommended...
 - 902204 - Scalable Robotics
 - Final integration, and bench testing of the PoE cans with lights, tank testing - everything appears to work finally but the luxonis hardware just can't keep up
 - updated trigger board software to allow triggering stereo cameras at a submultiple of the color camera frame rate to support laser scanning mode. Looks like it works but once again luxonis software needs lots of tweaking to find regions of stability.
 - Tested the trigger board at -20C to see if oscillator performance might explain the poor camera/light sync seen on mola at -2C in the Arctic; trigger board output looked good so the problem is possibly in luxonis hardware or temperature was just a coincidence.
 - 902304 - Piscivore Cam
 - Continued working on gen4 design
- Justin Tucker
- Johann Voigtlander
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Studying for Part 107 license
 - 902204 - Scalable Robotics
 - Writing BlueBoat Oceans poster abstract
 - 902208 - Mini ROV Operations
 - MiniROV has been rebuilt. Frank and I placed it in the test tank and we have some thruster ground faults that we are addressing

- Working with Justin for the new heading sensor housing
- 902312 - Seafloor Processes
 - Booking flights to Italy