

Engineering Weekly Report 4/30/2026 - 5/7/2026

<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
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Tether preparation
 - 902106 - Niobicon-Based AUV Docking Development
 - Mock dock mooring design
 - Deployment plan
- Danelle Cline
 - Out of Office
 - 21-24 September: Oceans Conference
- Duane Edgington
 - 901502 - Ocean Soundscape
 - Processing November 2021 through Google whale-multispecies model, and through OrcAI model, mining for orca calls.
 - Submitted abstract to IEEE Oceans 2026 conference
 - Overhead
 - Preparing for summer intern Sarah Williams
 - Watching selected abstract presentations
 - Out of Office
 - May 6, 2026 Medical appt.
 - 21-24 September: IEEE Oceans Conference
- Kevin Gomes
 - 200105 - Core Navigation - MDUC
 - Implemented logger/LCM Bridge to API for Ricketts control system data so we can log and monitor turns counter and vehicle heading (from the vehicle itself)
 - 706008 - READi-net
 - Implemented fix for restart of web app interrupting running sample
 - Imaged all the rest of the RockPis for USGS and installing in FIDOs
 - Working on way to update FIDO-006 with fix which is already in Montana
 - Overhead
 - Abstract presentation on FAIR data proposal
 - Out of Office

- May 13-14: Vacation
 - May 26-28: Vacation
 - Sep 21-24: Oceans conference
- Andy Hamilton
- Kent Headley
 - Out of Office
 - n/a
- Rich Henthorn
 - 300078 - DMO Support - AUV
 - Examining i2MAP no setup operations
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - New battery comms protocol
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Wave Glider heading out to meet the SES mooring next week
 - 902401 - Geo-Sense
 - Interesting clock drift tests
 - Dead-reckon on the 1 ms oscillator
 - Out of Office
 - May 18 to 28 - Vacation
 - June 29 to July 6 - Vacation
- Akshay Hinduja
 - 901809 - Deep Sea Bioinspiration
 - Lab meeting
 - Resume setup of backup orin for Deployable AI
 - 902101 - LRAUV Technology Development
 - Setup Irauv-app and Irauv-tools for gazebo sim
 - 902204 - Scalable Robotics
 - Abstract for OCEANS poster session submitted
 - Tweaks and experimental improvements to SBN pipeline
 - Overhead
 - Attended internal proposal presentations
 - Out of Office
 - Jun 1, 2026 - Jun 6, 2026 Vacation
- Brett Hobson
- Irene Hu
 - 901101 - Seafloor Mapping
 - Procured command set manual for RBR turbidity sensor
 - Adding a power switch to circuit
 - 901805 - Coastal Biogeochemical Sensing Program
 - Mini ISUS
 - Troubleshooting for serial comms errors. Missing bits seems solved by choice of RS232-USB convertor, although also seems sensitive to various factors (eg going through bulkhead/cable) and Saleae trace looks fine
 - Cross talk on Rx/Tx happens on longer cable, Rx is already pulled to GND by receiver. As per Thom, can be improved by twisting each signal with GND.
 - Troubleshooting some lioncaps from Indtec. ADC is upside down.
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Tests in tub for focus of different LEDs, field of view, depth of field, absorbance vs distance for two LEDs
 - Overhead

- Rec com meeting
 - Proposal abstract presentation
- Scott Jensen
 - 901205 - ESP SURF Center
 - Preparing instrument for shipment
 - Monitoring Bozeman progress and support
 - Finally have knocked down all the vacuum issues, from debris in the valve to the failing pump. Hoping now true progress to use cases can begin.
 - 902106 - Niobicon-Based AUV Docking Development
 - Continued work identifying parts and transfer to EEtech
 - Purchasing parts
 - Defined custom PCB function and parts
 - Out of Office
 - May 11-24 (vacation)
 - June 26-July 7 (vacation)
 - July 15 - 21 (vacation)
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Replumbed and rebuilt sipper. Testing for MBTS run next week
 - 902004 - Planktivore
 - Meeting
 - 902111 - Carbon Flux Ecology
 - Deployed and recovered CPF + snocam
- Chad Kecz
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
- Denis Klimov
- Eric Martin
- Thom Maughan
 - 300078 - DMO Support - AUV
 - Hyperion power supply, environmental board
 - Discussions
 - 300083 - DMO Support - LRAUV
 - Battery rebuild for Ahi and Brizo
 - Adding SMBus alarm flag management to BPC2. Modifying the trickle charge behavior to add user intervention to force trickle charge on. Temporary hold on closing Galene until I've got the alarm flags managed (safety).
 - 901217 - Chemical Sensors
 - Prep'd then postponed the ISUS timing talk.
 - 901805 - Coastal Biogeochemical Sensing Program
 - MoSoS v5.2 on nanoFET. Working thru and testing the command set.
 - 902004 - Planktivore
 - Planktivore abstract and presentation
 - Finalized build of Planktivore V2 'B' for Opah. Helium leak check needed more vacuum that we were comfortable pulling. Did not fill with helium due to potential oscillator risk.
 - New plan for leak check is to put in test tank for several days while monitoring humidity

- Overhead
 - May 5 Proposals, May 6 Proposals
- 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
 - QC'ed data for M1 - July 2024 added to the combined hourly and daily Averaged NetCDF
 - Making more progress on [replacing Perl mooring data processing pipeline](#)
 - Documented how to [record data set in SSDS](#) - a good first step for good metadata
 - 901101 - Seafloor Mapping
 - Debugging why recent R/V Sonne missions aren't loading into SMDb
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Wrote some STOQS user documentation, starting with a [FAQ](#) page
 - Improved LRAUV plot labels & composing an allhands about *lrauv-data* Slack channel
 - Out of Office
 - 15 May: Giving keynote speech at CSUMB SCD Capstone festival
 - 19 June - 10 July: Vacation
 - 18-24 July: SIGGRAPH in LA
 - 21-24 September: Oceans Conference
- Enoch Nicholson
- Tom O'Reilly
- Mike Risi
 - 200105 - Core Navigation - MDUC
 - Process documentation
 - Updates to navproc-dpkd before AMP expedition
 - 300062 - DMO Support - Doc Ricketts
 - Worked with Quinn and Drew to test pt-presets
 - 901101 - Seafloor Mapping
 - Debugging and software changes for LASS strobe-tilters
 - Working with Doug C. on event time stamping with Microchip timeserver for July expedition
 - Completed Ricketts interface for July, waiting for opportunity to test on ROV
 - Added octans_pub to lass-services for July expedition
 - 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, Sweden
- Brent Roman
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - Poster abstract submitted to OCEANS 2026
 - Clustering pipeline exercised on "olive" datasets; no definitive conclusions yet.

- Meetings
 - 901513 - Targeted Sampling by AUVs
 - Possibly looking into a tracking exercise in the near future
 - 902101 - LRAUV Technology Development
 - TethysDash: Again exercising two modernized endpoints that are still pending to declare as fully completed (some issues manifested a few weeks ago, but probably for unrelated reasons).
 - TethysDash [API](#): new OpenAPI spec (completely auto generated) is now almost complete, that is, wrt legacy version; but still with several possible future enhancements.
 - 902504 - Scalable Semantic Mapping
 - Some assistance to Dial users.
 - Overhead
 - Attended some abstract presentations.
 - Started modernizing our [docs](#) service by allowing (for now, in an opt-in fashion) the use of [Zensical](#) as documentation generator instead of MkDocs. Initial testing, no documentation yet; stay tuned.
 - Out of Office
 - May 8, 22: vacation
 - June 29-30 vacation
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Update the O2 flags on EXPD for the ROV this week.
 - 300057 - Mooring Maintenance
 - Weekly maintenance and verification of data downloads
 - 901101 - Seafloor Mapping
 - Finished my work on this project for 2026 proposal work.
 - 902101 - LRAUV Technology Development
 - Tuesday, April 22
 - Opened / built #563 UI polish work: Email Notifications modal — blue header/table headers, title alignment, then Copilot review follow-ups (items-center on header container, darker close button for contrast).
 - Sunday, April 27
 - Production: release PR #565 (develop → main, v5.1.13) merged per GitHub history.
 - #567 merged — operator-cancelled missions show “Cancelled” in Schedule; Copilot/review fixes.
 - #566 — backport / review fixes after develop→main.
 - #569 ground work: “Delete from Queue” renamed to “Cancel this Directive”
 - Monday, April 28
 - #564 merged — Email Notifications modal stylization (tracker #563).
 - #563 — deployment lifecycle labels in VehicleHeader / OverviewToolbar; pre-launch wording iteration, tests, epoch fallback guard; revert + docs locking in final pre-launch wording.
 - #569 — Cancel this Directive - feature merged.
 - #571 — invalidate event queries after cancel so UI updates immediately.
 - Tuesday, April 29
 - #572 — Schedule History search/filter row stays visible when search has no matches.
 - #573 — distinguish mission param updates vs vehicle configSet in labeling.

- Wednesday, April 30
 - #575 — Overview map: stale ResizeObserver + rAF / invalidateSize guards.
 - #576 — Overview map partial render after client-side navigation (offsetWidth poller).
- Sunday, May 4
 - #581 — preserve newlines in log events.
 - #582 — ESRI tile URL + env interpolation fixes.
 - #583 — Comms Queue count shows only un-acked commands (ties to #474).
- Monday, May 5
 - #588 — remove stray } in sched timestamp (makeCommand).
 - #589 — hide parameter summary for non-mission commands.
 - #590 — comms lookup for mission rows stuck on pending.
 - #591 — MTMSN / MOMSN in Schedule History popup for sat-ACKed commands.
 - #593 — all command segments green on Schedule History row.
 - #595 — timed-out directives demoted to Previous Vehicle Directives.
 - #599 — timeout excluded from Comms Queue count (#598).
- 902111 - Carbon Flux Ecology
 - Awaiting team images to add to UI
- Out of Office
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - [Added a new automated task](#) to adjust the media start time and duration for all real-time media.
 - 901809 - Deep Sea Bioinspiration
 - [Preparing archival package of FathomNet data](#) to submit to NCEI for long-term archiving. The package is a CSV dump of a subset of the database, a DDL to recreate a mini-fathomnet, and a script to rebuild a mini-database from the package contents.
 - 902403 - Expedition DB Modern
 - Adding [additional migrations](#) and improvements to the [REST API](#).
 - Added support for uploading and association arbitrary files to expeditions, dives, and people.
 - Added support for creating points-of-interest and associating them to expeditions, dives, and devices.
 - Working with Kevin Gomes and IS on moving from Duo to Entra for authentication.
 - Overhead
 - Updates to [vars-cli](#) code that [merges piscivore annotations with position and CTD to accommodate recent changes in STOQS](#)
 - Out of Office
 - May 14: Vacation
 - Jun 11 - Jun 19: Midwater Science and Engineering Community Conference, Sweden.
 - Jun 22 - Jun 26: Vacation
- Quinn Shemet
 - 300062 - DMO Support - Doc Ricketts
 - Test presets on vehicle, sort out device enumeration and coordinate system, approximately working and ready for more exhaustive test at next opportunity
 - 902101 - LRAUV Technology Development
 - Fix NAL tracking mode bug, Galene backseat network, Brizo docking arm
 - Users' meeting and prep/followup

- Overhead
 - MechaTech feedback and hiring meeting
 - Abstract presentations, A2LARS presentation prep
- Out of Office
 - Jun 26 - Jul 5: Vacation
- Alana Sherman
 - 902401 - Geo-Sense
 - Continued planning for Hydrosense
 - Overhead
 - Abstract presentations
 - R/V Packard planning
 - MT meetings
 - DOEST planning
- George Stern
 - 300078 - DMO Support - AUV
 - Troubleshooting failed pressure test
 - 902204 - Scalable Robotics
 - Finished updating docs for the now cancelled SuBastian cruise
 - 902304 - Piscivore Cam
 - Reverse engineering camera interfaces - hardware synchronization of cameras/lights failed but we have user space access to kernel controlled i2c interfaces and the hardware default is probably being overwritten by driver binaries we might be able to re-overwrite after they are initialized
 - Interface board architecture and parts selection started
- Justin Tucker
 - 300078 - DMO Support - AUV
 - Capture Head design support
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Battery housing endcap and subsea housing support
 - 902101 - LRAUV Technology Development
 - Propeller optimization setup
 - 902204 - Scalable Robotics
 - VN100 housing support
 - 902606 - Low Altitude Survey AUV
 - Drag and added mass simulation setup
 - Overhead
 - General CFD benchmarking
 - Continued work on DARPA's SUBOFF geometry generation and validation
 - Out of Office
 - Tentative 6/1-6/12
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Completed Oceans 2026 blueboat poster abstract "A Compact ASV for High Resolution Bathymetric Mapping in Shallow Water"
 - 902208 - Mini ROV Operations
 - 3D printed CCW thruster for the MiniROV to try counter rotating props
 - Repaired some of the oil compensation lines
 - Rebuilt the benthic expansion can after it was re-anodized
 - Ordered new tubing/zip ties
 - Made a deployment document to share with Italy

- Frank and I ballasted and investigated ground faults in the tank. The only ground faults on the vehicle are from the thrusters which are coming from multiple thrusters but are small, ~200 all together.