

Engineering Weekly Report 4/16/2026 - 4/23/2026

<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
 - Buoy assembly
 - Buoy deck cable layout
 - 902504 - Scalable Semantic Mapping
 - Instrument plate assembly
 - DQ2445 - NOWRDC Uncrewed Systems
 - Project budget planning
- Danelle Cline
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Summer intern project planning
 - Assisting UCSC student with Velella project
 - 901221 - Midwater Time Series
 - Finalizing RF-DETR k3s (kubernetes) track pipeline. Loaded latest dive to mantis.shore.
 - 901502 - Ocean Soundscape
 - Running parameter stm sweep optimization for Perch2 model. Embeddings look promising with this model. Evaluating both [perplexity](#) and [ARI](#) metrics.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Some work on a React web application to visualize mission results
 - Loaded last three missions and running processing pipeline
 - Deployed Voxel51 sync service to drone.mbari annotation server to support faster review of results. Many thanks to Adriana and Peter in IS for their assistance with this.
 - 902111 - Carbon Flux Ecology
 - Helping team with SINKER processing pipeline.
 - Overhead
 - Proposals and OCEANS abstract
- Duane Edgington
- Kevin Gomes
- Andy Hamilton
- Kent Headley
 - Out of Office

- Apr 17 - Rachel Carson Caress/Troni LASS cruise
 - Apr 20-24 (personal travel, available by phone/online)
- Rich Henthorn
 - 300062 - DMO Support - Doc Ricketts
 - LASS support on Carson
 - 300078 - DMO Support - AUV
 - LRAUV TRN - closing the loop on TRN
 - 902401 - Geo-Sense
 - More clock drift tests
 - Out of Office
 - May 18 to 28 - Vacation
 - June 29 to July 6 - Vacation
- Akshay Hinduja
 - 901809 - Deep Sea Bioinspiration
 - TritonCAM backseat computer backup system being prepared
 - Also making a new version with latest deepstream version with intent to update all eventually
 - 902101 - LRAUV Technology Development
 - Write scripts to control holoocean simulator to keep constant altitude using dvl + sonar inputs
 - 902204 - Scalable Robotics
 - Test data from LASS cruise with parameter tuning.
 - Focus on quality matches rather than quantity
 - Look at possibility of very densely packed reference databases
 - Overhead
 - Proposal abstracts
 - OCEANS abstract
- Brett Hobson
- Irene Hu
 - 901101 - Seafloor Mapping
 - Working draft of main ORP board completed
 - 901217 - Chemical Sensors
 - Looked into some LEDs for wastewater ISUS
 - 901805 - Coastal Biogeochemical Sensing Program
 - Alkalinity
 - Ordered some electrode polish
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Revisited motor controller manual and did a bunch of tests and calculations to figure out how it works. Two point calibration reduced to single point calibration and implemented into GUI
 - Slightly reworked structure of motor controller driver in GUI to clean things up, implemented position polling while motor is moving
 - Overhead
 - Some work on project proposal abstract
- 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
 - Coding alert system for power consumption on M1 in anticipation of installation of wave energy sensor
 - 901502 - Ocean Soundscape
 - mtg
 - 901805 - Coastal Biogeochemical Sensing Program
 - Received first mechanical pressure case parts. Initial build
 - 902004 - Planktivore
 - mtg
 - 902111 - Carbon Flux Ecology
 - Clean up after Packard cruise
 - Overhead
 - Trip to Mt Toro to install new Viper radio power supplies.
- Chad Kecz
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
- Denis Klimov
- Eric Martin
- Thom Maughan
 - 300078 - DMO Support - AUV
 - Project proposal abstract / presentation
 - Wrapping up modular power supply board, preparing for fab and assembly
 - 300083 - DMO Support - LRAUV
 - Battery testing on Ahi. 25% of the batteries are not reporting due to SMBus hang on two banks of 8. 25% of the batteries that are reporting are bad. Bad being defined as not charging to at least 80% of capacity.
 - Various meetings to determine a plan for Ahi. Conservative plan is to use BPC1 battery packs from Galene. Charge, Discharge, connector cycle on a couple sticks. All 62 sticks are reporting and charging as expected, delivered to LRAUV lab. Ahi rebuild is planned this week.
 - 901217 - Chemical Sensors
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 - Overhead
 - MBARI Tour for MLML, Tom Connolly's python class. Thanks to Jess Metter and Logan Grady for helping.
 - 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
 - Continuing to work on [Perl script replacements in mooring-ssds](#)
 - Turned off nightly drop/reload of SSDS_Metadata database on foggy for more testing
 - 901101 - Seafloor Mapping
 - Reloaded SMDB's production database mid-week to test Karen's new filtering additions
 - Setup hourly emails for M1 sound speed profile for current Packard mapping cruise

- 901910 - Plankton Taxonomic Groups from AUVs
 - auv-python's LRAUV deployment plots now being sent to the *lrauv-data* Slack channel
- Overhead
 - Served as a judge for CSUMB's "Kelp Your Neighbor" Hackathon – lots of creativity!
 - Tech talk about Planktivore data processing
- Out of Office
 - 19 June - 10 July: Vacation
 - 18-24 July: SIGGRAPH in LA
- Enoch Nicholson
 - 706008 - READI-Net
 - Merged code branches into test-ready sampler firmware version
 - Reinstalled vacuum pump valve with new hardware. Showed able the process
 - 901007 - Benthic Biology & Ecology
 - Filled BRS compensator and injection pump; tested pressure configurations
 - Installed QDC fittings on pump manifold and validated low-pressure regulator
 - Finalized compensator configuration
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Created flight requests for Matrice test flight and state parks surveys
 - 902101 - LRAUV Technology Development
 - Scoped lifting bail FEA approach and set up ANSYS analysis from SolidWorks exports
 - Completed first MECHTECH candidate interview
 - Overhead
 - Discussed apprenticeship program scope: one candidate, September start, drawing-focused role
 - Completed Dive First Aid Pro certification course
- Tom O'Reilly
- Mike Risi
 - 200105 - Core Navigation - MDUC
 - Process documentation
 - Added timeout to tcp-input process
 - Synced navproc-dpkd spare and verified change over procedure
 - 300062 - DMO Support - Doc Ricketts
 - Reviewed pt-preset code and pulled into navproc-process, coordinating with ROV pilots for testing
 - 901101 - Seafloor Mapping
 - MOB for LASS cruise series
 - Tested lass-control on LASS cruise series
 - Looking into event timing with Microchip s650 timeserver with Doug C.
 - Working on Ricketts interface 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, Sweeden
- Brent Roman

- Carlos Rueda
 - 901502 - Ocean Soundscape
 - Group discussion and prepping Oceans 2026 abstracts.
 - A fix to the daily humpback whale detection cronjob.
 - 902101 - LRAUV Technology Development
 - Dash4 [4.98.8](#), including fix to regression reported by Monique.
 - Looking into expanding the TethysAI prototype a bit, while also incorporating preliminary MCP services in the TethysDash backend.
 - Assisted Karen to fix docker compose issues and diagnosing email notification problems related to dash5.
 - 902504 - Scalable Semantic Mapping
 - New Dial versions [2.2.6](#), [2.2.7](#), with various enhancements, in particular with a significantly improved backend-frontend async notification mechanism.
 - Overhead
 - Dependabot alerts/PR merges in a few projects.
 - Out of Office
 - May 8, 22: vacation
 - June 29-30 (tentative) - vacation (family reunion in Miami)
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Weekly maintenance and download stability verification.
 - Attended a ZOOM meeting regarding the new SatLink updates for Mooring data downloads. Things are looking good. There are only one to two dropouts daily anymore which is a huge improvement in data download stability.
 - 901101 - Seafloor Mapping
 - Discussed updates on sinkerdev with Jenny Paduan. She has expressed that she is happy with the recent updates tested there.
 - Requested Mike M. to update the production server database and surveyTally.xlsx imports.
 - I have completed my time on SMDB for the year resolving all of the requested issues and outstanding PR's for the team.
 - Deployed final SMDB updates/merges to the production server (all is working well):
 - #299 Filter panel: reactive hover/click feedback on Filter and Clear buttons (#297)
 - #302 Sidebar filter: Citation search fields in sidebar UI (Home & Missions pages) (#301)
 - #301. feat: citation search in Missions sidebar and tally load (#301)
 - #297 ux: Filter/Clear sidebar button hover & click (#297)
 - 902101 - LRAUV Technology Development
 - Fixed the compose.yml for both production and development servers for the Dash5 on tethysdash2. The reboot of the server on April 10th for the LRAUV group (tethysdash2) caused a major dash5-staging error as the compose.yml did not have the "restart: unless stopped" in it. That has now been added and should not occur again.
 - Performed code reviews and merged the following Dash5 code updates for Zack Lyon (last week was his final week on the project):
 - #533 Remove Data Events from Logs by Default
 - #540 Fix Incorrect Vehicle Status Icon / Comms Indicator

- #547 GH262 — Docs Section Defaults to This Vehicle
 - #532 GH459 — Frequent Mission Parameters
 - #552 Argos Battery Indicator
- Performed the following LRAUV Dash5 Code merges into the development server: dash5-staging.mbari.org:
 - #537 Enhancement — Add Polygons, TILE Layers, and KML Layers to the Add Layers dropdown; search/filter modal matching TrackDB
 - #531 Fix: improve schedule running-status accuracy and matching safety
 - #543 Fix: Overview Map partial render and React warning on refresh
 - #554 Feat: add Center Map On button to TrackDB platform list
 - #551 Fix: recovery display + ship TrackDB 7-day window for SPOT trackers
 - #549 Feat: Quick-Access Resources dropdown near PIC section (#545)
 - #528 Fix: show full document name and docType in Docs section (#514)
 - #530 Feat: add schedule history details modal quick view
- 902111 - Carbon Flux Ecology
 - Fixed SINKER production build issue regarding Redis: The stock backend logic had a systematic decode bug for power_status; config was not the culprit. What's on disk now is compose + a patched redis_ts.py overlay until Danelle lands the same fix in fastapi-sinker and you deploy a proper image tag instead of (or in addition to) the mount.
 - Attended SINKER Meeting last Wednesday regarding data and graph presentation within the UI
 - Will begin focusing more on SINKER now that SMDB work is complete.
 - Addressed the following PR's:
 - PR #55 fix(api): graceful offline handling for ADCP-absent deployment
 - Issue #54 fix: v1.8 API regressions — ADCP-absent deployment...
 - PR #57 fix: Health UI, toolbar camera status, Data page connection state
 - Issue #56 fix: Health dashboard accuracy, toolbar camera status...
- Overhead
 - Director's Dialogue on April 7th.
- 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
- George Stern
 - 902106 - Niobicon-Based AUV Docking Development
 - Coms testing with the short rod
 - Prep for testing

- 902204 - Scalable Robotics
 - Updated spare PoE can and spare OakD1500M with changes
 - Primary can spread bench testing and system integration
 - Found magic values for strobe light/camera delay
- 902304 - Piscivore Cam
 - Updated cots board rework instructions for new boards and continued electrical planning for gen4
- Justin Tucker
 - 300078 - DMO Support - AUV
 - DP AUV capture head, continued work
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Battery endcap and Docking subsea housing design, continued work
 - 902004 - Planktivore
 - General CFD scaling setup see Overhead
 - 902101 - LRAUV Technology Development
 - Coordinate system exports for Gazebo Sim
 - 902204 - Scalable Robotics
 - Heading housing design, continued
 - 902606 - Low Altitude Survey AUV
 - Continued work automating thrust curve ingestion into simulator.
 - General CFD scaling setup, see overhead
 - Overhead
 - General CFD workflow and server setup. Ongoing work with DeepRip2 and secondary servers. SLURM job submission now working correctly
 - Optimizing the CFD workflow for container investigation.
- Johann Voigtlander
 - 902208 - Mini ROV Operations
 - Replaced cracked manipulator arm manifolds
 - Rebuilt one USBL
 - Rebuilding the MiniROV
 - Potted cables that were damaged/cracked