

Engineering Weekly Report 5/14/2026 - 5/21/2026

<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
- Laura Chrobak
 - 800153 - Synchro and CeNCOOS
 - Reconciled april dataset class labels with the benchmark dataset
 - Training and eval on finalized dataset
 - 800163 - FathomNet
 - Kaggle competition working paper
 - Megalodon v2.0 uploaded to huggingface
 - VME v2.0 trained
 - 2024 benchmark, meglodon, and vme datasets uploaded to huggingface with attribution
 - Running SAM3 pipeline over antarctic dataset in Portal
- Danelle Cline
 - 901221 - Midwater Time Series
 - Ran 3-stage (detect-classify-track) k3s pipeline on latest dive. Data loaded to Mantis and exported to Voxel51 for review. Used a retrained classification model with mucous strings which were very abundant in this dataset but not classified correctly.
 - 901502 - Ocean Soundscape
 - Team meeting. Discussed proposal feedback which was very positive.
 - CSUMB student Gabriel completed his work on the Athena database.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Deployed latest classification model to [MBARI modelhub](#) (an easy to use model card for internal use only)
 - Added FastAPI health to cortex
 - Team meeting [update](#)
 - Discussed SAM3 few-shot with collaborator
 - 902111 - Carbon Flux Ecology
 - Working on particle detection and classification pipeline for Triton
 - Team working on evaluating model performance of classification model on ISIS mission
 - [Fixed issue 16](#)

- Discussed Planktivore High Magnification below-surface data mining with Fred Bahr. All missions, except the CFE lab planktivore mission (awaiting PRobert's time-correction on this) has been preprocessed to parquet.
 - Overhead
 - Summer intern planning
 - Travel request
 - IS request for S3 bucket to migrate mantis media
 - Out of Office
 - September 21-24 Oceans Conference, Monterey
 - May 27-28, AI DevSummit, San Francisco
 - Out of office May 25-29th.
- Duane Edgington
 - 901502 - Ocean Soundscape
 - Continued work reviewing 10 minute sound segments flagged by OrcAI with many "orca" detects.
 - Meet with John R. to review some of those sound segments – what are they? Orca? Humpback? Other??
 - Team meeting May 20.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Team meeting.
 - Overhead
 - Discuss project ideas for summer intern Sarah Williams with Danelle. Plan for a video call with Sarah Williams to present some of the ideas.
 - Out of Office
 - May 18 Medical appt. AM
 - May 21 Dental appt. AM
 - September 21-24 IEEE Oceans Conference Monterey
- Kevin Gomes
 - 300070 - DMO Support - Ventana
 - Troubleshooting UHS serial feed issues
 - 706008 - READi-net
 - Ordered different WiFi dongles to use 5GHz network (issues on the Packard)
 - 902403 - Expedition DB Modern
 - Starting to integrate BFF pattern with Quarkus API and Entra for SSO
 - Overhead
 - Catching up from a couple days off
 - Out of Office
 - May 26-28: Vacation
 - Aug 25-27: Monterey Data Conference
 - Sep 21-24: Oceans conference
- Andy Hamilton
- Kent Headley
 - Out of Office
 - n/a
- Rich Henthorn
 - Out of Office
 - May 18 to 28 - Vacation
 - June 29 to July 6 - Vacation
 - July 16 to 24 - Caress LASS cruise
 - August 10 - 13 - Vacation

- Akshay Hinduja
 - 901809 - Deep Sea Bioinspiration
 - Meetings
 - Improved lcm mjpeg support, modified helper scripts to accept mjpeg lcm messages
 - Give ~20Mbps write saving allowing about ~23hrs per TB
 - Fix INFO and FAULT bugs in communications of triton-detection to lrauv-backseat-helper
 - 902101 - LRAUV Technology Development
 - Meetings
 - Setup lrauv-application docker
 - 902204 - Scalable Robotics
 - Test recent changes for eigenvalue analysis supported ICP registration pipeline
 - Test point-cloud-accumulator
 - Survey state of the art place recognition/point feature descriptors for more robust candidate selection in SBN
 - Out of Office
 - Jun 1, 2026 - Jun 6, 2026 Vacation
- Brett Hobson
- Irene Hu
 - 901101 - Seafloor Mapping
 - Continue updating ORP board schematic following suggestions from design review
 - 901217 - Chemical Sensors
 - Minor scare on “malfunctioning” float ISUS was resolved as water droplet reflections
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Sat in on a meeting
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Troubleshooting the coral hugger for comms issues when in water. Found a ground fault in backlight between insufficiently sealed debug connector, and circuit ground accidentally connected to chassis
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Took a look at some schematics for ROVER
 - Overhead
 - Rec com budget planning meeting and follow up
 - Computer is having lots of issues. Back and forth with IS, now reinstalled Windows and setting up computer again
 - Hiring committee lunches for EEtech
- Scott Jensen
 - Out of Office
 - May 11-24 (vacation)
 - June 26-July 7 (vacation)
 - July 15 - 21 (vacation)
- Brent Jones
- Chad Keczy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - 300083 - DMO Support - LRAUV
 - Lots of operations this past week. Ahi, Daphne, Triton, Pontus
 - 901513 - Targeted Sampling by AUVs
 - Running the Synchro follow and sample deployment now
 - 902101 - LRAUV Technology Development

- Working on PRs and bug fixes mostly.
 - TRN work continues in GZ sim.
- 902304 - Piscivore Cam
 - Assisting with B&T for next deployment
- Overhead
 - Working with WHOI a bunch in preparation for the Bermuda LRAUV deployment
- Denis Klimov
 - 902004 - Planktivore
 - We assembled the instrument and looking into leak testing.
 - Need to order some parts as it turned out, some O-ring information in the assembly drawings was missing.
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Post-deployment discussions and looking at the previous design data for the imaging sensor.
 - 902401 - Geo-Sense
 - Testing clock drift in the environmental chamber.
 - Recycled old batteries after the deployment, looking into the way of storing/ securing glass spheres in the lab.
- Eric Martin
- Thom Maughan
 - 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
 - Had a snafu with the postgres database being removed with a docker engine change
 - Trying to get back on this project, but still dealing with LRAUV plotting fixes
 - 901101 - Seafloor Mapping
 - Debugged a mission track not being computed from a set of .inf files
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Wrote plotting code for realtime sbd data similar to the LRAUV deployment plots
 - Made special cbit_amphousused realtime plot for the pyxis trip to Bermuda
 - Overhead
 - Attended & Gave keynote speech at CSUMB SCD Capstone festival last Friday
 - 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
 - 706008 - READI-Net
 - Investigated puck metadata for Brazil deployment
 - Provided troubleshooting support to USGS
 - 901007 - Benthic Biology & Ecology
 - Completed hydraulic pump assembly and resolved priming issue
 - Installed injection pumps and finished pump checkout
 - Coordinated elevator setup for BRS
 - 902609 - TIDE OMICS
 - Received quote for Nanoliter pump and scoped FMI pump alternatives

- 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Completed SUAS recurrent exam
 - Submitted flight request for Carson cruise
 - Conducted Matrice test flight off the Carson
 - Started consolidated flight request, ops, and risk-management form
 - Onboarded Karen on Matrice for test flights
- Overhead
 - Intern Mentoring agreement
- Tom O'Reilly
- Mike Risi
 - 300062 - DMO Support - Doc Ricketts
 - Changed winch input to delta calculation
 - Updated soft stops on main camera pan and tilt
 - 300070 - DMO Support - Ventana
 - Adding calibration storage to 4K camera lapbox firmware
 - 901101 - Seafloor Mapping
 - Finished work with Chad on strobe tilter clean up
 - Working with Doug C. on event time stamping with Microchip timeserver 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
 - May 18, 2026 - vacation
- Paul Roberts
 - Out of Office
 - June 13 - June 20, 2026 MidSEC, Sweeden
- Brent Roman
- Carlos Rueda
 - Out of Office
 - May 19 AM: Drs appt.
 - May 22: vacation
 - June 29-30 vacation
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Working with Jared F. to prepare new M1 mooring deployment in June (20260606).
Spent a bit of time testing settings and scripts for him.
 - 902101 - LRAUV Technology Development
 - May 18-20, 2026
 - Features
 - Preserved open accordion tab across vehicle switches — Issue #278, PR #642
 - Added Dash4 log color syntax highlighting — Issue #640, PR #641
 - Showed deployment start date below deployment title in toolbar — Issue #217, PR #645

- Showed last comms elapsed time in the vehicle log toolbar — Issue #270, PR #646
- Bug Fixes
 - Fixed compact log label wrapping to 2 rows instead of truncating — PR #647
 - Prevented React state-after-unmount warnings in async useEffect hooks — Issue #557, PR #644
 - Expanded Jest testMatch to discover tests in components/ and lib/ — Issue #560, PR #643
 - Hidden operator attribution for automatic Default missions in Schedule History — PR #648
 - Removed "Vehicle (automatic)" name from Default mission schedule cells — PR #648
 - Fixed blank line in schedule cell when name is empty — PR #648
 - Used isDefaultMission flag instead of label matching to detect Default missions — PR #648
- Investigation/Research
 - Assessed feasibility of SST and HYCOM ocean model map overlays for the Bermuda LRAUV Pyxis deployment
- 902111 - Carbon Flux Ecology
 - May 19-20, 2026
 - Diagnosed sinkerdev outage — all containers were healthy but the site was unreachable due to a Docker network/iptables issue; resolved by bringing the stack fully down and back up
 - Pulled production watchdog fix (commit c438114) — run_stream.py patch now restarts dead camera worker processes (PlanktivoreHM, PlanktivoreLM, Shadowgraph) automatically; sinker-stream now requires ≥6 live Python processes to pass health checks
 - Silenced all browser console logging — commented out console.log calls across 31 frontend source files (components, hooks, API client)
 - Fixed recurring Controls & Environs breakage — 9 API proxy route files were constructing the wrong FastAPI URL (appending /api which FastAPI doesn't use); all 9 files corrected
 - Prevented the bug from recurring — added a shared lib/backendUrl.js utility, a pre-build URL check script (check-backend-urls.sh), and a canonical build.sh that blocks the Docker build if the pattern reappears
 - Updated health test suite — rewrote test_sinker_health.py for the new per-camera-container architecture; now passing 59/59. Noted environment difference: sinkerdev uses Redis on port 6380 while production uses 6379 — the test now correctly targets the proper port on the server it runs on.
 - Pushed all fixes upstream — rebased and pushed corrected source code to mbari-org/sinker-dash on GitHub and updated mbari/sinker-dash:latest on Docker Hub so future deploys and image pulls are clean
 - Tagged builds v1.0.9 through v1.0.13 throughout the day as fixes were validated
- Out of Office
 - May 26-28, 2026 - Vacation
 - March 22-24, 2027 - Vacation
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG

- Working on [MidSEC](#) presentation
- 901809 - Deep Sea Bioinspiration
 - Writing loader to migrate [full coverage annotations from VARS to FathomNet](#)
- Out of Office
 - May 14, 18: Vacation
 - Jun 11 - Jun 19: Midwater Science and Engineering Community Conference, Sweden.
 - Jun 22 - Jun 26: Vacation
- Quinn Shemet
 - Out of Office
 - Jun 26 - Jul 5: Vacation
- Alana Sherman
 - 902208 - Mini ROV Operations
 - Read over Johann's procedures manual
 - Trying to still come up with an emergency recovery plan that both sides like
 - 902401 - Geo-Sense
 - Preparing for June 3 deployment
 - Working with Bryan to untangle FO cable
 - Going to instrument prep- tested new cables, new batteries
 - Filled in precruise
 - 902600 - Davidson Seamount Hot Spot
 - With Crissy's and Chris L's help we found almost all the components of the old Smith tripods, the search continues for the cables.
 - Overhead
 - Abstract responses
 - DOEST planning
- George Stern
 - 300078 - DMO Support - AUV
 - Looked at external pressuring testing suppliers and requested quotes
 - 902106 - Niobicon-Based AUV Docking Development
 - Found a 3 phase ideal diode development board which looks promising
 - Reviewed specs for the victron system and inverter trying to eliminate a mysterious 50W DC load reported by the Victron GUI when the inverter was started with very light AC loads; finally located current probes large enough to fit around the large buoy conductors and discovered once again that the GUI is very inaccurate despite it having access to sensors with specs that suggest they should be very accurate
 - 902204 - Scalable Robotics
 - Trouble shot a nonresponsive oakd500m on mola, a broken solder joint on mashed connector in mola was repaired and it is now communicating again
 - 902304 - Piscivore Cam
 - Continued working on gen4 schematic and mechanical design. Rough mechanical design is now in review.
- Justin Tucker
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Continued work on Subsea housing endcap mod
 - Continued work on Subsea housing chassis design
 - Endcap PRV test fixture design
 - 902101 - LRAUV Technology Development
 - CG/CB separation measurement test plan
 - 902606 - Low Altitude Survey AUV
 - Gazebo Sim Basic setup

- Prep for Sim handoff to Vicente
- Out of Office
 - out 5/22
 - Tentative 6/1-6/12
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Improved documentation for the blueboat
 - 902208 - Mini ROV Operations
 - Rewiring the MiniROV with improvements to simplify breaking down/setting up the server racks
 - Working on deployment document for Gaia Blu
 - 902101 - LRAUV Tech Dev & Fleet Ops
 - Refurbished LRAUV battery bank