

Engineering Weekly Report 8/27/2026 - 9/3/2026

<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
 - Preparing PTO and buoy for deployment
 - 902106 - Niobicon-Based AUV Docking Development
 - Deployment solar dock
- Laura Chrobak
- Danelle Cline
 - 901221 - Midwater Time Series
 - Finished processing and report for agile labeling of detect-track and detect-classify-track processing using SSL models. Rob S to review suggestions. ONNX models working well.
 - 901502 - Ocean Soundscape
 - Oceans poster preparations
 - Trying linear classifier unit assignment
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Finished Matrice UAV media loader to support images and video loads
 - Added ONNX SAHI support to argo-workflows in prep for migrating processing
 - Moved uaprocessing code from Bitbucket to github
 - 902111 - Carbon Flux Ecology
 - Working on data ingest of image mosaic data for ML processing
 - Helping setup Voxel51 pro for ISIIS dataset. Very large 2.9 million ISIIS ROI too slow to render point cloud so some filtering is needed.
 - Overhead
 - Phase 2 proposal feedback discussion
 - Out of Office
 - September 21-24 Oceans Conference, Monterey
 - October 18th, SMM 2026 pre-conference Workshop: Evolving AI Applications in Modern Marine Mammal Science: From Computer Vision to Generic and Agentic AI, Puerto Rico
- Duane Edgington
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach

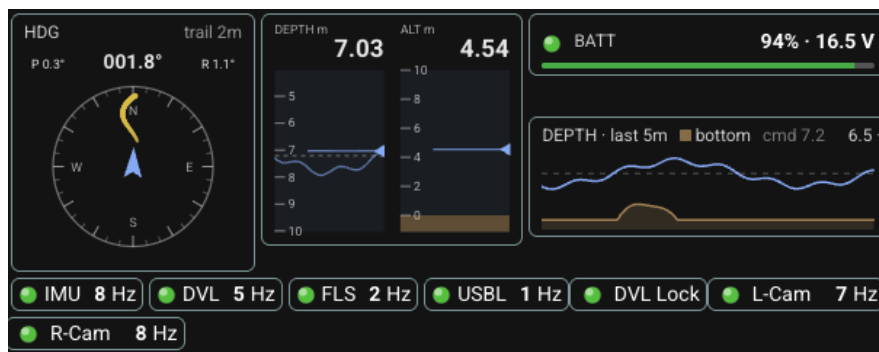
- The organizers of the MARINE26 workshop have invited us to prepare a full paper, for review and publication in Springer special issue, of the work Sarah and the team did this summer with rf-detr and background image augmentation during training. We are deciding whether to go that route, or seek another venue for publication.
- 901502 - Ocean Soundscape
 - IEEE Oceans Poster draft signed off by team. Melissa is working on the poster for production.
 - Starting the 11 year archive processing by v4 and v10 perch-hoplite linear classifiers. One month at a time. 2015 already yielding some really interesting preliminary results
 - Need to work on the PyTorch conference poster and public repo.
- Out of Office
 - ~~September 8-13 ECGV conference. Present UAVS Yolo26/RFDETR model performance. Have reservations. Registered. cancelled~~
 - Doctor Appt ~noon Weds Sept 2.
 - September 21-24 IEEE Oceans Conference, Monterey. Present poster on Perch-hoplite. Registered.
 - October 19-24 Pytorch Conference, San Jose. Present poster on Perch2.0 port to pytorch. Registered. Have reservations.
- Kevin Gomes
 - Out of Office
 - Aug 25-27: Monterey Data Conference
 - Sep 21-24: Oceans conference
- Andy Hamilton
- Kent Headley
 - 901221 - Midwater Time Series
 - Committed updates addressing macro timeout and abortOnTimeout for Dorado layered control; pending on test window to do scaled down I2MAP mission to exercise the required behaviors.
 - 902204 - Scalable Robotics
 - Worked towards recovering Cerulean sonar data from the blueboat deployment last week - unsuccessful, so far. There were two major issues: the GPS data was invalid, and the sonar UTC timestamps were missing. I found a way to restore a version of the GPS data, and tried setting sonar timestamps using an estimated start time and the available offsets from systems start. In the process, have developed (w AI) some useful tools to manipulate various log file formats needed.
So far, it hasn't produced a gridable output, but there may be some other things to try.
 - Overhead
 - Prep for Ocean Soundscape demo for the Packard Foundation board meeting next week
 - Hyperion update meeting
 - Phase 2 budget, proposal feedback
 - Misc Admin
 - Out of Office
 - Sep 21-24: Oceans conference
- Rich Henthorn
 - Out of Office
 - August 28 - Dr appt, WFH
 - August 31 to Sept 3 - Vacation
 - Sept 14 to 18 - Durkin Cruise
- Akshay Hinduja
 - 902101 - LRAUV Technology Development

- Updated abort behavior for LRAUV terrain awareness module
 - Redid sim tests for hardening calibration
 - Tested reverse abort mechanism, unclear if it will work on real LRAUV, using surfacing as abort behavior as default.
 - Prepare porting lrauv-terrain-awareness and imagenx lcm driver on to Galene backseat
- 902204 - Scalable Robotics
 - Finished SBL tests using SVGP PF for sponge ridge and portuguese ledge LASS dives, and it performed well in the 1.5-2m RMSE range vs corrected Navlib trajectories.
 - Prepared fusion pipeline which ingests localization updates and optimized to provide 0.8-2m RMSE range trajectories along with a quick pointcloud map of survey
- Overhead
 - Submitted abstract for IROS marine robotics workshop
- Out of Office
 - Sep 24, 2026 - Oct 2, 2026 - IROS 2026
 - Sep 21, 2026 and Sep 23, 2026 - Oceans 2026
- Brett Hobson
- Irene Hu
 - 901101 - Seafloor Mapping
 - ORP board - tests to characterize both channels' response to common mode noise, involving using a function generator to inject an amplitude-modulated high frequency signal to the "ground" of the coin cell. Long back-and-forth with Claude to understand this circuit model and decide where to stick resistors and what real-world situation is being modeled. Result is that both channels are ok, the in amp is slightly better than the single-ended op amp though it doesn't handle source impedance as well. But the single-ended op amp doesn't handle a catastrophic failure with DC leakage well.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Alkalinity
 - Taped samples to SEM stubs and painted the silver paint to ground the pad of the one relevant sample. Silver paint kept flaking off the next morning, took three tries
 - Marked up images of the sample to bring to the session. Scheduled for next Wednesday
 - Nanofet
 - rD with new circuit for toggling bias battery on and off has been on hold pending decision on a board house. Finally decided to pay extra for US board houses rather than work through rules related to export regulation.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Completed Part 107 test this morning, passed with 83%
- Scott Jensen
 - 901205 - ESP SURF Center
 - Supported fido deployment on Packard
 - Supported on going USGS deployment in Montana and NY
 - Working to update build image with addition of puckscan
 - Modification across platform of puck metadata
 - 901405 - Wave-Energy Conversion for Oceanographic Application
 - Getting ready for deployment
 - Out of Office
 - September 23-28 (Vacation)
- Brent Jones

- 901112 - Monterey Bay Time Series
 - Packard cruise
 - Spinning new SIPPER pic32 board for NOWRDC
- Overhead
 - Successfully compiled and ran new modem drivers for OASIS on the persistor.
- Chad Keczy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 07/17-07/22 (GMT -4)
 - 07/26-08/07 (GMT +9)
 - 08/26-08/28 (GMT -4)
 - 08/29-09/02 (GMT -5)
- Denis Klimov
- Eric Martin
 - 300079 - DMO Support - RV Rachel Carson
 - Some debugging on Docker logs for livelink
 - 901101 - Seafloor Mapping
 - Proposal feedback
 - 902204 - Scalable Robotics
 - Proposal Feedback
 - Mola Testing
 - Depressor Weight planning
 - Phins Housing bench testing and housing requirements
 - 902606 - Low Altitude Survey AUV
 - Concept development
 - Overhead
 - Proposal feedback
 - Out of Office
 - Sick 8/24-8/26
- Thom Maughan
 - 300078 - DMO Support - AUV
 - Attended Hyperion meeting. Discussions with Erik on fab options, etc.
 - 300083 - DMO Support - LRAUV
 - Testing BPC2 Batman, no crashes after over a week of stress testing serial and i2c. I2C timeouts are seen during charging and this is either a) inspired energy sticks have infrequent long timing delays during charging or noise on the i2c bus during charging. Further analysis is planned.
 - Release BatMan v1.0.7 and loaded on Galene.
 - Varsha and team are building two more BPC2 packs intended for Ahi.
 - Evaluating PCB and assembly vendors for next run of BPC2 for export controlled hardware.
 - 901217 - Chemical Sensors
 - Looking at FPGA options and footprint. Discussing use of MMSv2 with wastewater effort.
 - Working on tinyFS for MSC3 with Jim
 - Starting on MoSoS v5.2 bug list.
 - 901805 - Coastal Biogeochemical Sensing Program

- Merged in Jim's changes for tinyFS on NanoFET.
 - Discussed datastreaming requirements with Yui
 - Working on MoSoS v5.2 bug list.
- 902004 - Planktivore
 - Planktivore V2B is on Opah and has dove to 700m. Excited to see the data...
 - Phase 1 proposal feedback
 - I7C power module eval module design and layout. Plan is to build several for test and evaluation as possible replacement for BoostR and share design with other projects.
- Overhead
 - Expense report
- Out of Office
 - Vacation Sep 8,9,10
- Mike McCann
 - 200109 - Core Mooring Data - MDUC
 - Working on the mooring-ssds Deployments Dashboard to expose all varieties of data
 - 901101 - Seafloor Mapping
 - Continuing to assemble swath file datalists and images for Earthstruct contract work
 - Overhead
 - Advised Lonny on modifying vfcbydive to process Mini ROV frame grab images
 - Out of Office
 - Half time schedule: Generally away Mondays, Fridays, and alternate Thursdays
 - 7-8 September: Vacation
 - 21-24 September: Oceans Conference
 - 12-16 October: Web3D Conference
- Enoch Nicholson
 - 901205 - ESP SURF Center
 - Supporting various FIDO deployments
 - OCEANS Poster
 - 902101 - LRAUV Technology Development
 - Reconfiguring test bench for new VB system design
 - 902111 - Carbon Flux Ecology
 - Snocam weight and clevis design
 - Out of Office
 - June 26 to July 6th
 - July 30 to Aug 10
- Tom O'Reilly
- Mike Risi
 - 200105 - Core Navigation - MDUC
 - Working on CTD WebApp development
 - Added positioner feedback to lapbox-mio process
 - 300070 - DMO Support - Ventana
 - Working on CTD WebApp development
 - Added positioner feedback to lapbox-mio process
 - 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
- June 22, 2026 - vacation
- June 29, 2026 - July 1, 2026 - vacation
- August 17, 2026 - vacation
- September 8, 2026 - September 10, 2026 - vacation
- Paul Roberts
 - 901221 - Midwater Time Series
 - 4k recorder build planning
 - 901513 - Targeted Sampling by AUVs
 - JOE article support
 - 901809 - Deep Sea Bioinspiration
 - Camera controller work
 - 902004 - Planktivore
 - Opah deployment support
 - 902111 - Carbon Flux Ecology
 - SINKER data products
 - Overhead
 - Phase 2 responses
- Brent Roman
 - Out of Office
 - Sept 8 - Oct 16 (vacation)
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - Preparing OCEANS 2026 poster.
 - 902101 - LRAUV Technology Development
 - TethysDash: Versions 4.99.119 to [4.99.120](#) with more fixes/enhancements.
 - Dash4 [4.99.41](#).
 - Updated <https://docs.mbari.org/tethysdash/git/>
 - TethysL: Yanwu has started using and testing the string concatenation recently allowed by the compiler.
 - 902504 - Scalable Semantic Mapping
 - Dial versions 2.4.{93,94,95} with general revision of and addition of status widgets for the “left panel” ([notion](#)). Added a route with a catalog of [widgets](#) to facilitate discussions.



- Overhead
 - With Andrew, preliminary exchanges to change TethysDash configuration to switch to using Entra ID instead of Duo (which involves adjustments in Firebase config).
- Out of Office
 - Sept 8-11: vacation
 - Sept 21-24: IEEE Oceans Conference. Along with our Soundscape intern, Ariel Raizman, will present a poster about humpback whale song structure.

- End of Oct–Beg of Nov: vacation (dates TBD)
- Nov 12: vacation
- Dec 9-10: vacation
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Weekly Maintenance and download status checks
 - 902101 - LRAUV Technology Development
 - **Current Code Sprint:**
 - **In Review**
 - [#799](#) — Mission modal & Schedule log polish — PR [#814](#) (ready)
 - [#788](#) — Gate map marker edits behind login — PR [#790](#) (changes requested)
 - **In Progress**
 - [#779](#) — Display mission ID in Schedule — PR [#805](#) (draft)
 - [#801](#) — Sparkline gone after >8h underwater — PR [#810](#) (draft)
 - [#823](#) — Schedule shows “Unknown” operator — PR [#825](#) (draft; unassigned on the board)
 - **Sprint Backlog**
 - [#719](#) — Science charts reload on every scroll
 - [#285](#) — Send mission on launch event
 - 902111 - Carbon Flux Ecology
 - **Features Deployed On *sinkerdev***
 - Data Viz Phase 1 from Durkin_Data — tabs, VARS-style detail, video + ROI (landed on develop) ([#80](#)) (Aug 26–27)
 - Rename Charting nav to Data Viz (landed on develop) ([#85](#)) (Aug 27)
 - Shadowgraph tab, contours, mosaics (HM/LM), and Detection Videos (landed on develop) (Aug 27)
 - ADCP live SSE updates and expanded VARS-style polar chart (landed on develop) (Aug 27)
 - New review gate process before sinkerdev — merged ([#88](#)) (Aug 28)
 - Shadowgraph particle tracking plots and flow PTV outputs — merged ([#97](#)) (Aug 31)
 - Sediment Flux tab, UI section hierarchy, and Shadowgraph cleanup — merged ([#99](#)) (Sep 1)
 - **Bug Fixes**
 - Durkin NFS / docker uid-gid, SSE CORS proxy, ADCP Redis paging for ~24h (landed on develop) (Aug 27–28)
 - Home grid uses **cameraTab** so enlarge matches live vs stills — merged ([#91](#)) (Aug 28)
 - Copilot leftovers from review-only pass — merged ([#93](#)) (Aug 28)
 - **“Done” this sprint**
 - Static image display from Durkin_Data — Phase 1 sprint ([#80](#)) (Aug 26)
 - Rename Charting nav to Data Viz ([#85](#)) (Aug 27)
 - Home grid enlarge matches live vs stills — via PR #91 ([#90](#)) (Aug 28)
 - Copilot leftovers from review-only pass — via PR #93 ([#92](#)) (Aug 28)
 - Shadowgraph particle tracking plots and data files — via PR #97 ([#94](#)) (Aug 31)
 - Shadowgraph background flow and PTV videos — via PR #97 ([#95](#)) (Aug 31)
 - Sediment camera detection images and flux analysis plots — via PR #99 ([#98](#)) (Sep 1)
 - **Issues filed (open / next)**
 - ROI viewer — VARS-style grid + OpenSeadragon + metadata ([#81](#)) (Aug 26)
 - Threshold alerts for science data staleness and plot values ([#82](#)) (Aug 26)
 - Time range selector + CSV download with on-screen preview ([#83](#)) (Aug 26)
 - Add Tailwind CSS to sinker-dash Next.js app ([#84](#)) (Aug 26)

- Verify ADCP charting-data field mapping when real ADCP is back online ([#86](#)) (Aug 27)
 - Serve large science files via nginx static path instead of Next.js API route ([#87](#)) (Aug 27)
 - Side-by-side hourly comparison view ([#96](#)) (Aug 31)
 - Overhead
 - Meetings....
 - Out of Office
 - March 15-24, 2027 - Vacation
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - 901809 - Deep Sea Bioinspiration
 - Released FathomNet REST API [v2.5.1](#) and [v2.5.2](#)
 - [Work on adding granular licensing to FathomNet](#)
 - Overhead
 - Applied to the Board of Directors at [Marine Debris Foundation](#).
 - Address project proposal feedback.
 - Out of Office
 - Sep 9 - Vacation
 - Oct 21 - 24 - Oceans Conference, Monterey
 - Nov 12 - Vacation
- Quinn Shemet
 - Out of Office
 -
- Alana Sherman
 - 902401 - Geo-Sense
 - PLanning for Milos and travel for the trips
 - Overhead
 - Cleaning out the Rover lab after 20 year. Lots of dust and lots of organizing
 - Phase 2 responses
 - Out of Office
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- George Stern
 - 902106 - Niobicon-Based AUV Docking Development
 - Analyzed power data for the new solar panels; output increased by almost 2x
 - 902204 - Scalable Robotics
 - Finally got the mola ESC Controller board - last minute scramble to have it tested/installed/system tested before the lab arrived the next day to use it. After programming and testing; I discovered software built for the 144pin package wouldn't just port to the 64 pin package even though it used a hal layer and GPIO numbers were the same, only the bond wire to the physical pin changed - nope. Updating the package in the hal layer also failed, scramble to fix code/test/install and then fighting with the mola console for hours to finally run system tests before people arrived; everything finally worked but a mola orin NX bridge driver likely isn't so it won't be used and effort wasted
 - 902304 - Piscivore Cam
 - Finished mechanical assembly and completed all but the final fit check
 - Finally got all the boards, checked out and integrated all the boards, completed harness design, made internal harnesses and test harnesses, completed Oclea board mod documentation and checked out Etechs mods
 - Lot of time trying to debug some odd problems where the Oclea boards aren't seeing a camera, no resolution in sight and Brent leaves for 1.5mths possibly pushing deployment to Nov or Dec.

- Justin Tucker
 - 902606 - Low Altitude Survey AUV
 - Concept development
 - Out of Office
 - October 13th-23rd
- Johann Voigtlander
 - 902208 - Mini ROV Operations
 - Finished phase 2 proposal responses
- Emme Wiederhold
 - 902101 - LRAUV Technology Development
 - set up dash5 GitHub project to support scrum process
 - first sprint is underway!
 - working on modernization of lab inventory system
 - Out of Office
 - November 25th - December 8th