

Engineering Weekly Report 9/24/2026 - 10/1/2026

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2026/>

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Deployed wave energy dock
- Laura Chrobak
- Danelle Cline
 - 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
 - Out of Office
 - ~~September 8-13 EGGV conference. Present UAVS Yolo26/RFDETR model performance. Have reservations. Registered. Cancelled~~ Virtual attendance only
 - 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
 - Sep 21-24: Oceans conference
 - Oct 5-9: Vacation
- Andy Hamilton
- Kent Headley
 - 701147 - MARS O&M
 - Backed up production SSDs and made duplicate for WNS (pending testing)
 - 902204 - Scalable Robotics
 - Meeting re blueboat issues and prep for Tahiti
 - Addressed various issues in Cerulean driver
 - Overhead
 - ASO Manager interview
 - Staffing stuff
 - Request for software access
 - Tailscale issue use cases
 - Attended Oceans (w/ soundscape demo at MBARI booth)

- Helping John Ryan w demo for MBA Digital Technology team
 - Finding users for CTDs
 - Misc admin
- Rich Henthorn
 - Overhead
 - Oceans
 - Tailscale
 - Out of Office
 - Sept 24 - Oceans Conference
 - Dec 21 to Dec 31 - Vacation
- Akshay Hinduja
 - Out of Office
 - Sep 24, 2026 - Oct 2, 2026 - IROS 2026
 - Sep 21, 2026 and Sep 23, 2026 - Oceans 2026
- Brett Hobson
- Irene Hu
 - 901217 - Chemical Sensors
 - Some MMS digital boards from last batch are malfunctioning. Probed a few things, gave some guidance to chem sensors lab troubleshooting.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Investigating substrate leakage on Lionix isfets by repeating experiments with resistors in line with substrate R, with two different chips (straight and serpentine gate; geometry of n+ region is different) and different temperatures
 - Spent awhile investigating bad fit, turns out there is a board-dependent variable offset in the ADC readings that then gets interpreted as significant with the lower substrate R's. It was much smaller for the board used in January tests. There's a software field for it (now set to 0) so somebody once upon a time must have noticed it too.
 - Results of leakage tests show much higher resistance for the straight gate, which is the opposite direction expected by geometry. Calculation of activation energies points against normal reverse-bias leakage. Source of leakage unknown. Possibly related to the exposed ESD pad on the lower R chips? Multimeter results point against path through solution.
 - Compiled results in a document
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Weekly meeting, will try to practice with drone next week
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Continued work with Paul on how to process data to be comparable. Looking at image average values is helpful, made some graphs w/ different kinds of normalization
 - Meeting on next steps. Steve and Paul want a GUI for old mspec.
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Meeting; several next steps to investigate for using the main camera as a fluorescence camera
 - Overhead
 - OCEANS conference last week T-Th; gave tours on Friday
- Scott Jensen
 - Out of Office
 - September 23-28 (Vacation)
- Brent Jones

- 901112 - Monterey Bay Time Series
 - Installed final tested SIPPER PIC32 on Daphne. Begin testing
 - Rode ShanaRae to evaluate for Wire Walker servicing
- Out of Office
 - 3 sick days
- 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
 - Out of Office
 - Sick 8/24-8/26
- Thom Maughan
 - 300078 - DMO Support - AUV
 - Hyperion power supply assembly, three additional boards
 - Hyperion environmental board design and layout. Housing temp, humidity, pressure, system voltage alarms, water sensor interface and alarm, ground fault scan and alarm
 - 901217 - Chemical Sensors
 - Getting close to release of MoSoS for MSC3 and tinyFS on FRAM and onboard RAM.
 - MSC3 command revision with legacy compatibility in MoSoS v5.2
 - Debugging an i2c problem that happens infrequently on some boards, 'FRAM fails probe' bug.
 - Working through the bug list filed by Jess
 - Supporting debug on the latest batch of failed MMS digital boards from Indtec.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Testing MoSoS v5.2 on nanoFET.
 - 902004 - Planktivore
 - Mod_i7c evaluation board received, stuffed and tested. Electrical load and noise testing, thermal measurements. Board design is essentially the suggested circuit in the i7c datasheet with some additional filtering and connectors. Thanks to EE-Tech Craig for the nice job on assembly.
 - Out of Office
 - Friday 9 Oct 2026
 - Monday 19 Oct 2026
- Mike McCann
 - 200109 - Core Mooring Data - MDUC
 - Ran backfill processing for all realtime data M1 data as needed by Tetra Tech
 - Making sure that <https://mooring-ssds.shore.mbari.org/deployments/m1/> is complete
 - Overhead
 - Booked travel for Web3D Conference 2026
 - Out of Office
 - Half time schedule: Generally away Mondays, Fridays, and alternate Thursdays
 - 12-16 October: Web3D Conference

- 20-29 October: Remote/Comp time for conferences
- Enoch Nicholson
 - 901205 - ESP SURF Center
 - FIDO update support
 - 902609 - TIDE OMICS
 - Biolink support
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Flight request system update
 - 902101 - LRAUV Technology Development
 - Finished recovery hook manufacturing
 - Connected VB hydraulic test bench
 - 902111 - Carbon Flux Ecology
 - Evaluating UVC antifouling options
 - Overhead
 - MARS MVC Housing Inspection Report
 - ME hiring committee
 - Out of Office
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- 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
 - 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
 - October 12, 2026 as vacation
- Paul Roberts
- Brent Roman
 - Out of Office
 - Sept 8 - Oct 16 (vacation)
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - Very well attended posters during OCEANS.
 - 902101 - LRAUV Technology Development
 - TethysDash [4.99.137](#), Dash4 [4.99.60](#), with fixes (thanks Monique for reporting) and more auto async update of resources (documents, deployments, stations, polygons) across multiple dash4 sessions. Documentation updated, in particular API (for dash5).
 - TethysL [4.9.83](#) with compiler fixes.
 - 902504 - Scalable Semantic Mapping
 - Dial: Ongoing adjustments and fixes, and documentation updates.
 - Assistance to Diego G. regarding integration of his Rerun application into Dial.
 - Overhead

- OCEANS conference
 - IE group meeting
- Out of Office
 - Sept 22-24: IEEE Oceans Conference
 - End of Oct–Beg of Nov: vacation (dates TBD)
 - Nov 12: vacation
 - Dec 9-10: vacation
- Karen Salamy
 - Out of Office
 - March 15-24, 2027 - Vacation
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Fix [vars-cli docs](#) (caused by a bug in [Scala 3.9.0](#))
 - Addressed VARS Annotation issues: [#14](#), [#53](#), [#337](#), [#194](#), [#182](#), [#141](#), [#195](#), [#161](#), [#196](#), [#162](#), [#184](#), [#174](#).
 - Fixes to Sharktopoda related to hanging on to open but unused UDP connections.
 - Release [VARS Annotation 2.5.1](#), [Sharktopoda 2.2.2](#). One major change is to [adjust Sharktopoda's idea of time to align exactly with ffmpeg](#). Localizations from ML tools often use opencv, which in turn, uses ffmpeg to extract video frames. (Ffmpeg has an [odd notion of time](#), given a time between frames, it will grab the next frame (i.e.the future))
 - Worked with IS to migrate all VARS related databases to cassiopeia (production), rigel (public), and fogged (development).
 - 901809 - Deep Sea Bioinspiration
 - Created a [doc](#) to inform Stanford Digital Repository on how we could work with them to become a FathomNet archive.
 - Worked with IS to migrate FathomNet databases to rigel (public) and fogged (development)
 - 902403 - Expedition DB Modern
 - We had a meeting to kick off the [next round of work](#). The near-term focus will be implementing data streams processing (Ship Nav, ROV Nav, ROV CTD).
 - Continued work on the new [EXPD front end](#).
 - Overhead
 - Attended Oceans.
 - Tour guide at MBARI for Ocean's attendees.
 - Out of Office
 - Sep 9 - Vacation
 - Oct 21 - 24 - Oceans Conference, Monterey
 - Nov 12 - Vacation
- Quinn Shemet
 - Out of Office
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- Alana Sherman
 - Out of Office
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- George Stern
- Justin Tucker
 - Out of Office
 - Oceans: September 21-24
 - Vacation: September 25th

- Stanford Project team: September 29th
- Vacation: October 13th-23rd
- Johann Voigtlander
 - 902208 - Mini ROV Operations
 - Coordinating with Frank and Pietro for winch bolting safety on the Gaia Blu
 - 902312 - Seafloor Processes
 - Bubblecam had a successful soak test in the tank, some minor CAD redesign was required to stop light from reflecting off the acrylic
 - Coordinating with Aaron the logistics for shipping everything to Tahiti
 - 902504 - Scalable Semantic Mapping
 - Had a blueboat meeting with the team to discuss the changes that need to be made for Tahiti
- Emme Wiederhold
 - 902101 - LRAUV Technology Development
 - attended OCEANS Monterey
 - developed & tested new profile_station_slowyo mission for bioacoustics
 - continued documentation of dash5 bugs
 - brainstormed initial ConOps for a persistent gazebo sim
 - Out of Office
 - November 25th - December 8th