

Engineering Weekly Report 10/15/2026 - 10/22/2026

<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
 - Oct 22, 2026 – Oct 23, 2026 : Meta Open Source AI for Science Summit
 - Oct 26, 2026 – Oct 30, 2026 : Vacation
 - Dec 21, 2026 – Jan 1, 2027 : Vacation
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Organizing equipment. Ordering components.
 - 902106 - Niobicon-Based AUV Docking Development
 - Working on documentation for NG
- Laura Chrobak
- Danelle Cline
 - Out of Office
 - 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
 - 901502 - Ocean Soundscape
 - Presented poster at PyTorch Conference Tuesday evening. Well attended, with a lot of deep interest in our work. We even got an Institutional mention during the opening

plenary talk.

GLOBAL COMMUNITY

Look around this room.

Every kind of builder in AI from **1,200+ orgs, 44 countries**

Industry-defining organizations shaping open source AI hardware, software, and research are here today.

AI & Tech Leaders: Meta, Google, OpenAI, Apple, Amazon, AWS, IBM, LinkedIn, Adobe, TikTok, Netflix, Uber, Shopify, Canva, Roblox

Compute & Hardware: NVIDIA, AMD, Intel, Qualcomm, Arm, Samsung, Cisco, Tenstorrent, Nebius, Nscale

AI Research & Platforms: Hugging Face, Anyscale, Cohere, Lightning AI, Datadog, Red Hat, Baseten, Modal, Modular

Institutions & Labs: Stanford, Harvard, UC Berkeley, Argonne National Laboratory, ETH Zurich, BAAI, California State University, Monterey Bay Aquarium Research Institute

+ many more



PyTorch Foundation

- Out of Office
 - October 18. Virtual. Evolving AI Applications in Marine Mammal Science Workshop. Puerto Rico Convention Center.
 - October 19-24 Pytorch Conference, San Jose. Present poster on Perch2.0 port to pytorch. Registered. Have reservations.
 - October 26. Medical tests.
- Kevin Gomes
- Andy Hamilton
- Kent Headley
 - 901101 - Seafloor Mapping
 - Working on MSVC port of libtrnav (and mframe)
 - Setting up build environment for Windows 11. For now using a Win laptop, since spinning up a VM is less efficient/more complicated.
 - Getting a data set for comparison across builds
 - 901221 - Midwater Time Series
 - May meet with Tad to go over a mini-i2map mission
 - 902204 - Scalable Robotics
 - Cerulean configuration and test on blue boat
 - Overhead
 - Working w/ Peter W to set up web site for Ocean Soundscape. He thought it may be possible to serve it from our FTP site directory; I'm testing this to see if there are any gotchas; the content seems to work, though everything is wide open. Studying to see if there are any show stoppers..
 - Misc admin
- Rich Henthorn
 - Out of Office
 - Dec 21 to Dec 31 - Vacation
- Akshay Hinduja
 - 901809 - Deep Sea Bioinspiration
 - Triton deployable AI deployment: coordinate, pilot and support deployment, run through virtual and real test dives, debug issues and push updates as needed.

- Met with Joost to discuss 3DR using DeepPIV data, look at testing against unseen model and evaluation against luminance filters.
- 902101 - LRAUV Technology Development
 - Tethystales updates: Added scaling for trajectory visualization, added monterey25 tiled sea floor support, added custom grid support, added water effects in visualizations, added prop and rudder animation plugin.
 - Lrauv-lcmypes added to lcm-spy-term
- Out of Office
 - Jan 18, 2027 - Feb 5, 2027 : Vacation
- Brett Hobson
- Irene Hu
 - 901101 - Seafloor Mapping
 - Continued work on understanding electrodes
 - 901217 - Chemical Sensors
 - Issue with digital MMS boards was previously traced to new version of part (vs previous legacy, confirmed by swapping parts). Changed a capacitor and measured a much faster ramp-up which would solve the problem.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Nanofet
 - Nanofet rD boards received with bias power control circuitry. Modified firmware to add the new feature, and various troubleshooting of board build issues to get them to work (solder shorts etc).
 - Now have one working board and the new circuit seems to work well. Undergoing current draw tests w/ Yokogawa
 - Alkalinity
 - pHAt rC boards received. Various troubleshooting of board build issues (solder blobs etc) along with a part I forgot to update to the correct one
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Tested camera interface to laptop. Issue appears to be a broken connector
 - Opened the housing with Paul and hopefully cleared our ground fault for good
 - Troubleshot the camera interface code I wrote months ago. Worked with camera emulator.
 - Revisited motor controller issue of massively slowing down in feedback mode. With help from Claude, found the commands to control the speed. It seems the motor controller just randomly divides its speed by three when the encoder is changed (the units are otherwise consistent)
 - Had Claude make a mockup of the new hugger GUI and talked about it in meeting
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Helped Crissy prep some trigger trap samples for TOC/TIC/eDNA
- Scott Jensen
 - 901205 - ESP SURF Center
 - Finishing up the last few changes to what will hopefully be v2.0.0
 - Preparing instruments for demonstration and deployment
 - Packing for deployment on Sallety Ride
 - Out of Office
 - October 29-30
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Service SIPPER

- 901502 - Ocean Soundscape
 - Recovered then deployed TEO hydrophone mooring
 - Designing better system for Wire Walker transport/deployment/recovery
- 901805 - Coastal Biogeochemical Sensing Program
 - Investigating why pH intermittently failed on last spray deployment. Bench tests commenced.
- Chad Key
 - 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 mods, raising 3.3v to 3.4v to account for or'ing diode and measurement drops.
 - Hyperion environmental board. Design complete, reviewed, discussed with Erik. Parts placement is done, routing started.
 - 901217 - Chemical Sensors
 - MMSv2 discussion.
 - 901805 - Coastal Biogeochemical Sensing Program
 - MoSoS v5.2 merge. Working on bug list.
 - 902004 - Planktivore
 - Weekly engineering meeting. Inventory and prep for spares build. Denis available starting next week so prepping and kitting, workspace setup in building G.
 - Out of Office
 - Out sick (car accident) 6 Oct to 16 Oct
 - Wed 28 Oct 2026
- Mike McCann
 - 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
 - Out of Office
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- Tom O'Reilly
- Mike Risi
 - 200105 - Core Navigation - MDUC
 - Performing navproc updates on Rachel Carson during maintenance period.
 - Working on updating bitbucket ssh url before November deadline.
 - 300062 - DMO Support - Doc Ricketts

- Support of pan tilt system during the most recent cruise.
- 300070 - DMO Support - Ventana
 - Working on integrating new GPS and backup Novatel into navproc via UDP.
- 902606 - Low Altitude Survey AUV
 - Meeting with Erik T. and Chad to discuss LASAUV trigger board requirements.
 - Looking into microcontrollers for trigger board.
- 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
 - November 30, 2026 - December 4, 2026 - vacation
- Paul Roberts
 - 901221 - Midwater Time Series
 - I2MAP camera conversion for 4k
 - 901513 - Targeted Sampling by AUVs
 - Triton deployment support
 - 901809 - Deep Sea Bioinspiration
 - Triton deployment support
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - SWIR camera software requirements
 - 902004 - Planktivore
 - Opah data offload and ingest into viewer
 - 902111 - Carbon Flux Ecology
 - Project update materials
 - 902204 - Scalable Robotics
 - PoMS strobe design
 - PoMS camera/lens selection
 - 902603 - Miniature 4K Subsea Optics
 - Lens design goals review with Gemini
- Brent Roman
 - 901205 - ESP SURF Center
 - Continuing to work with Danish lab to help them repair their rust damaged ESP
 - Fixed a race condition observed once in ESP 3G sampler during recent deployments
 - 902304 - Piscivore Cam
 - Working with George on bringing up a 2" "gen4" Piscivore camera
 - Creating scripts to ease camera deployments
 - Out of Office
 - Sept 8 - Oct 16 (vacation)
- Carlos Rueda
 - 901502 - Ocean Soundscape

- Group meeting.
 - Reviewing (with Claude and John) bug reports submitted by an AI agent for PBP.
- 901513 - Targeted Sampling by AUVs
 - Tracking software: Some code revision/cleanup
- 901809 - Deep Sea Bioinspiration
 - Quick review of the many dependabot alerts for cms-uim and a preliminary chat with Joost/Kakani toward planning the end of year.
- 902101 - LRAUV Technology Development
 - TethysDash: more [versions](#) with fixes/enhancements in the last few days.
 - Dash4: various [versions](#) in the last few days.
 - SMS text messages outage - see overhead below.
- Overhead
 - For the MBARI TethysDash instance, put in a request in AWS to increase our monthly quota for SMS text messages, which was exceeded on Oct 15. To try to expedite their response, changed the support plan to a paid one and created a new case with "production system impaired" severity. Fingers crossed they act very soon.
- Out of Office
 - Oct 26 - Nov 12: vacation (out of the country)
 - Dec 9-10: vacation
 - Dec 22-Jan 7: vacation
 - Jan 15-21: vacation (tentative)
- 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
 - Spinning up a Deep-sea Guide test platform on calypso-test.shore.mbari.org. As part of this, working with IS for better solutions to accessing thalassa shares from docker containers.
 - New release of [Oni](#) deployed.
 - Updated the [Deep-sea Guide](#) to layout correctly on phones.
 - Sleuthing out issues with the video registration in the video asset manager. TL;dr videos were written to thalassa/M3 with incorrect access permissions.
 - 901809 - Deep Sea Bioinspiration
 - Work on NSF proposal for FathomNet.
 - Review Kevin's changes to fathomnet-cli to migrate full coverage annotations from VARS to FathomNet.
 - 901221 - Midwater Time Series
 - Updated the midwater transects app with feature requests from Rob Sherlock.
 - 902403 - Expedition DB Modern
 - Working on [pre-cruise entry form](#) for new EXPD.
 - Adding support for [adding ordered waypoints](#) to expeditions and dives.
 - Added support for [clean ROV Nav data ingest](#).
 - Added support for ROV CTD Configuration ingest. Also added support for ROV CTD Data ingest. ([PR 22](#))
 - Overhead
 - Working on a paper of FAIR image annotation standards (primary author is Jennifer Durden).
 - Meeting w/ University of Norway to discuss opportunities for collaboration re: image ML.

- Out of Office
 - Nov 12 - Vacation
- Quinn Shemet
 - Out of Office
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- Alana Sherman
 - Out of Office
 - In the field 10/19-11/7
- George Stern
 - 300078 - DMO Support - AUV
 - More parts are no longer available in reasonable lead times, updated schematic to facilitate build in early Nov; started ordering the BOM
 - Continued poking at TE setup for testing
 - 902304 - Piscivore Cam
 - Camera can harnessing completed and checked out; finally looks deployable; still need to integrate the light switch/fault detection with linux
 - Started working on nose cone mounting for the lights, working with curved surfaces in solidworks sucks.
 - Out of Office
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- Justin Tucker
 - Out of Office
 - Oceans: September 21-24
 - Vacation: September 25th
 - Stanford Project team: September 29th
 - Vacation: October 13th-23rd
- Johann Voigtlander
- Emme Wiederhold
 - Out of Office
 - November 25th - December 8th