

WeeklyReport

Engineering Weekly Report 12/25/2025 - 1/1/2026

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2025/>

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - Out of Office
 - Nov 26 - Dec 2: vacation
- Francois Cazenave
- Danelle Cline
 - Out of Office
 - Dec 22 - Jan 2: Vacation
- Duane Edgington
- Jon Erickson
- Kevin Gomes
 - Out of Office
 - Dec 22 - Jan 2: Vacation
- Andy Hamilton
- Kent Headley
 - 701147 - DMO Support - MARS O&M
 - Cloned MARS PC104 stack drive and sent copies to UW
 - 901101 - Seafloor Mapping
 - Searching for root cause of a baffling bug, which appears to be some form of memory corruption. A member object is fine when accessed via one method, but not from another when accessed in exactly the same way.
 - Out of Office
 - 12/22-1/2 vacation
- Rich Henthorn
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - A few more changes and fixes
 - 902401 - Geo-Sense
 - Cold room RTC clock drift test (4 C)
 - Results show significant drift (10x) compared to room temp
 - Not really surprising
 - Out of Office
 - Jan 1 - Holiday
 - Jan 12 to 16 - Vacation
- Akshay Hinduja
 - 901809 - Deep Sea Bioinspiration
 - Finished maintenance and clean up of titanCAM repo
 - Completed new feature requests

- Looked up cloning for CT BSP for Jetson Orin, seems a bit involved and requires opening up the bulkhead, will wait for next week.
 - 902204 - Scalable Robotics
 - Cleaned up uncertainty estimation and base values for factor graph in SBN
 - Fixed localization matching with better method from above and verified performance is unaffected
 - Made modifications to loop closures, pending test
 - Out of Office
 - 12/31 1:30-4:30, dropping family off at SFO
- Brett Hobson
- Irene Hu
 - Out of Office
 - Dec 25 - Jan 2: vacation
- Scott Jensen
 - Out of Office
 - Vacation December 22- January 2
- Brent Jones
- Chad Key
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 12/05 (MST)
 - 12/08 (MST)
 - 12/20-01/02 (various)
- Denis Klimov
- Eric Martin
 - Out of Office
 - Vacation 12/22-1/2
- Thom Maughan
 - 300078 - DMO Support - AUV
 - Reviewed Hyperion power supply design with Erik. Addressed the feedback and the layout and BOM for parts ordering is nearly finished.
 - 300083 - DMO Support - LRAUV
 - BPC2 battery packs assembled and tested and installed into Galene after Degaussing by Denis.
 - Charged using tether and LRAUV lab power supplies
 - Demo'd the firmware interface to Varsha and Brian
 - 901009 - CANON
 - Configured, reviewed with science users, and ordered a new \$70K bioinformatics high performance computer, DeepEdna3
 - Received feedback on DeepEdna1 and 2 regarding the need for larger local storage. Ordered 2x 60TB SSD drives for the upgrade.
 - Very much appreciate working with IS on the model where security patches and backups are provided by IS with software installation and setup are managed by science users with sudo privileges.
 - 901217 - Chemical Sensors
 - Finished bug fixes and manual testing for MoSoS v5.1.8. Jess ran the test vectors.

- Handed off MoSoS v5.1.8 to Dana Swift at UW with the month long regression test cycle starting on Jan 2nd.
 - The four 'engineering test' floats are profiling daily and successfully returning data with the exception of one which has experienced a known hardware failure of the Heraeus Fiberlight UV lamp power supply.
- 901805 - Coastal Biogeochemical Sensing Program
 - Jim Davis has finished his contract and has preliminary support for MoSoS v5.2 command line on nanoFET, MFET and MpHOX. I've got several weeks of implementation and test before releasing v5.2 for use in Yui's projects.
 - Support Alkalinity sensor has been mostly handled by Jim.
- 902004 - Planktivore
 - Finished test and debug of the camera controller hardware
 - Assembly into housing and prep for Denis to do his magic on final assembly for second build of Planktivore V2 for the Deep LRAUV.
- Out of Office
 - Vacation Jan 5 - 9
 - Photonics West, 1 day, likely Jan 20
- Mike McCann
 - Out of Office
 - 22 December - 2 January: Vacation
 - 5-19 January: Remote work
 - 20-23 January: ESIP Winter Meeting - remote attendance
- Paul McGill
 - Out of Office
 - I've been busy sleeping in because I'm retired!
- Enoch Nicholson
 - Out of Office
 - Thursdays at MLML
- Tom O'Reilly
- Mike Risi
 - Out of Office
 - Offsite on Tuesday and Friday
 - March 3 - March 6, 2025 - vacation
 - June 2 - June 6, 2025 - vacation
 - June 16, 2025 - vacation
 - July 2, 2025 - vacation
 - July 29 - August 1st - vacation
 - November 10 - November 14 - vacation
 - December 1 - vacation
 - December 31 - vacation
 - January 2, 2026 - vacation
 - January 19, 2026 - January 30, 2026 - vacation
- Paul Roberts
 - Out of Office
 - Nov 22 through Nov 30, Scotland
 - Dec 26 through Jan 4, San Diego
- Brent Roman
- Carlos Rueda
 - 901502 - Ocean Soundscape

- Adjusted release workflow with a final step to [delete uploaded](#) artifacts; as a safety net, also set [retention-days: 1](#) for the upload step.
- 902101 - LRAUV Technology Development
 - TethysL: simplified release workflows, including the removal of the long-unused graalvm-based binary releases. Also added a step to delete uploaded artifacts. Addressed dependabot alerts.
 - TethysDash [4.99.21](#).
- Overhead
 - More work toward completing [tethysdash2](#) migration to ubuntu.
 - With Peter, troubleshooting and fixed network share read/write access to [/LRAUV](#).
 - All TethysDash related services and UIs seem to be in place and functional. Final verification when LRAUV operations resume.
 - General revision and update of <https://docs.mbari.org/internal/tethysdash-ops-doc/>.
 - Related to the updated release workflows mentioned above, some investigation about the storage quotas for the mbari-org organization at GitHub.
- Out of Office
 - Dec 19, 23–30: vacation
 - Jan 2–5: vacation

● Karen Salamy

<http://smdb-dev.shore.mbari.org:8001/> and is built for full development tests before creating pull requests (github repo) and deployment to the production server.
<http://sinker.shore.mbari.org/sinker/>

There is a significant vulnerability in [React Server Components](#). CISA has added it to their Known Exploited Vulnerabilities (KEV) catalog which indicates they have evidence of active exploitation in the wild.

This impacts React Server Components specifically, not React as a whole. Unfortunately for us, that includes downstream frameworks including [next.js when using App Router](#). Based on a cursory GitHub scan, this appears to impact the following repos:

*Dash5: next version **15.2.3**, fixed in **15.2.6***

*Sinker-Dash: next version **15.3.3**, fixed in **15.3.6***

- Out of Office
 - On Vacation for Christmas Holidays: Mon. Dec. 22, 2025 - Fri. Jan 9, 2026. Back in the office on Jan 12th. I will be online and available to help during this time, albeit intermittently.
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - 902111 - Carbon Flux Ecology
 - Working with Crissy on [migrating image annotations](#) from a very old VARS system in the current one.
 - Overhead
 - Fixed issues with [DARC's](#) VARS Knowledgebase
 - Out of Office
 - Dec 22, 2025 - Dec 24, 2025 - Vacation
 - Apr 6, 2026 - Apr 24, 2026 - Vacation
 - May 18, 2026 - May 22, 2026 - Marine Imaging Workshop, Gibraltar
- Alana Sherman
- George Stern
 - 902204 - Scalable Robotics
 - Tested and integrated 3 new cap boards

- Tested 2 new led boards
 - Built up 1st HSI light RevB; unfortunately discovered ponoko web entry form has a dangerous feature I missed; updated parts and re-ordered
 - Continued debugging motor controller software
- Justin Tucker
 - 901101 - Seafloor Mapping
 - AUV design trade studies
 - Out of Office
 - Fridays through March 2026
- Johann Voigtlander
 - Out of Office
 - Dec 16th - Jan 10th - Vacation
 - May 30th - June 5th
 - Oct 9-13th