

WeeklyReport

Engineering Weekly Report 6/26/2025 - 7/3/2025

<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
 - Jun 23, 2025 - Jun 26, 2025 – HPE Discover
 - Aug 7, 2025 – vacation
 - Aug 11, 2025 - Aug 12, 2025 – vacation
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring buoy
 - 902106 - Niobicon-Based AUV Docking Development
 - Brizo assembly
 - Writing proposal
- Danelle Cline
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Performance improvements to FastAPI to vector database to improve similarity search with VSS on large collections.
 - 901221 - Midwater Time Series
 - Proposal work
 - Downloading i2MAP training data for Kris to Ultralytics format
 - 901502 - Ocean Soundscape
 - Team meeting & proposal work
 - Intern mentoring meeting and support for Humpback olive phrase work
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Intern mentoring and arranging upcoming meeting with collaborators to discuss shark/otter/kelp research
 - 902111 - Carbon Flux Ecology
 - Loaded ~128K clustered ROIs for Hawaii ISIIS mission
 - Trying to nail down a challenging bug in cluster merge code.
 - 902306 - SINKER
 - Working on backend design and development - mostly infrastructure
- Duane Edgington
 - Out of Office
 - Dentist appt Jul 2, 2025
- Jon Erickson
- Kevin Gomes
- Andy Hamilton
- Kent Headley

- 300057 - Mooring Maintenance
 - checked on mooring data streams - so far so good.
- 300078 - DMO Support - AUV
 - testing macro-enabled i2map towout mission in simulation. These are long missions, so take hours to run in full; when issues occur late in the process, there is an exercise to isolate the issue in a reasonable amount of time before testing the full sim again. Even short runs have quite a bit of overhead, since the compile time is fairly long.
- Overhead
 - hiring process
 - proposals/planning
 - job description review
 - misc admin
- Out of Office
 - Jul 14-31 (vacation)
- Rich Henthorn
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Reviewing full SES dataset and logs from 6 month deployment
 - Some issue with interval between images especially in the later stages of the deployment
 - Suspect the data backup function causing the power control board to timeout
 - Developing a more efficient data backup scheme
 - Out of Office
 - June 30 - July 7: Vacation, email contact
 - Aug 7 - Aug 11: Vacation, email contact
- Akshay Hinduja
 - 901809 - Deep Sea Bioinspiration
 - Implementation of LCM broadcasting into Triton camera driver
 - 902204 - Scalable Robotics
 - Testing localization system with older logs from LASS,
 - Testing new reference database generated from MBSsystem grids
 - Out of Office
 - July 3 - July 7 Vacation
- Brett Hobson
- Irene Hu
 - 901217 - Chemical Sensors
 - Trained Luke and Josh to program chips for MMS boards
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Turnaround SES for MARS - modifying SIIM can for new MARS without 48V
 - Troubleshooting modem
 - Out of Office
 - 6/27-7/4: vacation
- Scott Jensen
 - 706008 - READI-Net
 - Continued work configuring the code for the production unit
 - Running instrument and testing for typos
 - 901205 - ESP SURF Center
 - Supporting upcoming deployments
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Battery meetings and specification reviews
 - Out of Office
 - 7/(3-7)/2025 vacation

- 7/(17-22)/2025 vacation
- Brent Jones
 - Out of Office
 - Vacation
- Chad Keczy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - 300083 - DMO Support - LRAUV
 - Piloted Galene for tollgate survey at 250 m to observe possible Siphonophore diel vertical migration (DVM).
 - Supporting ongoing Pontus deployment with docking.
 - 902101 - LRAUV Technology Development
 - Integrating GliderFET ph sensor
 - Identified ground fault on Galene (which was unfortunately the antenna)
 - Docking system checkout and debugging on Brizo.
 - Overhead
 - Met with LOC-NESS team to discuss deployment plans
 - Finalizing plans for OSHEN testing during CANON experiment
 - Got to run the Paragon for a crew transfer to the Packard (highlight of the week!)
 - Hiring committee work
 - MBA tour support 7/2
 - Out of Office
 - 9/15-30 (UTC+2)
- Denis Klimov
 - Out of Office
 - Vacation 6/11/2025-6/16/2025
- Eric Martin
 - 901101 - Seafloor Mapping
 - Proposal writing
 - 902204 - Scalable Robotics
 - Proposal writing
 - 902504 - Scalable Semantic Mapping
 - Proposal writing
 - Went offshore this week
 - Out of Office
 - Jun 10, 2025 - Jun 22, 2025 : Vacation
- Thom Maughan
 - Out of Office
 - Vacation: June 16 to July 8
- Mike McCann
 - 200109 - Core Mooring Data - MDUC
 - Working on next year's proposal
 - 901101 - Seafloor Mapping
 - Addressing reviewers comments on paper submitted to the Web 3D Conference
 - Working on poster for ESIP Summer Meeting
 - Working on next year's proposal
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Reprocessed and reloaded the entire Dorado data archive into [stogs_all_dorado](#)

- Working on next year's proposal
- Out of Office
 - 21-25 July – ESIP Summer Meeting
 - 28 July - 8 August – Remote work
 - 10-14 August – SIGGRAPH
 - 18 August - 5 September – Vacation
 - 8-13 September – Web3D & Digital Heritage Conference
- Paul McGill
 - Out of Office
 - Medical appts all day Tue
- Enoch Nicholson
- 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
- Paul Roberts
 - Out of Office
 - June 20 - June 29, Whistler, BC
- Brent Roman
 - Out of Office
 - May 30 – June 23
- Carlos Rueda
 - Out of Office
 - June 30–July 2: vacation
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Will update new ROV O2 flags within the EXPD for Rob S.
 - 300057 - Mooring Maintenance
 - Set up testing directories for Jared for the upcoming M1 turn deployment at the end of July.
 - 901101 - Seafloor Mapping
 - Met briefly with Jenny P. about when my time will be needed this year to address various issues for the SMDDB (October, 2025) and how many hours may be needed for next year in the current proposal process.
 - 902101 - LRAUV Technology Development
 - Sat in a ZOOM meeting with the LRAUV team and indicated my time is on the SINKER until mid-July's deployment. I was asked to add three Github issues for the team late last week which were user-comments using the new Dash5 UI. The team is shifting to the new Dash5 full time as needed/possible.
 - 902306 - SINKER
 - The main focus of my work this week is building and testing the new SINKER UI.
 - Met with Danelle yesterday to discuss the backend development for SINKER and what alerts and alarms may be included in the API. We also discussed the UI grabbing live RT images from the sinker server using nginx.
 - The new illustrator for the SINKER team has created a system diagram that will be included with an overlay for alerts and visual updates in the UI. Working on that today.
 - 902403 - Expedition DB Modern

- No meeting this week.
- Overhead
 - Attended various talks and performed other overhead tasks throughout the week.
- Out of Office
 - July 30-August 5, 2025 - Personal vacation time
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - investigating importing ML detections for Coral Cam images into VARS.
 - Upgrading M3 services to Hibernate 7
 - This upgrade requires minor tweaks to the database schemas. In order to avoid breaking external users databases, Brian is adding [flyway migrations](#) to the M3 services to automate database migration to new versions.
 - 902002 - FathomNet
 - Test coverage for the FathomNet API [port from Micronaut to Quarkus](#) is done. Starting work on integration testing with the FathomNet UI [migration from Vue 2 to Vue 3](#).
 - Overhead
 - Investigated an issue where our [GitHub Team repos](#) were not able to trigger GitHub actions. It turns out that we have a time limit of (apparently) 4900 minutes per month for actions. Two projects were consuming very large portions of our time allocation and the project owners were notified. Please be mindful of your project's usage as it affects other MBARians.
 - Writing and reviewing 2026 proposals.
 - Out of Office
 - Jun 12 - Vacation
 - Jul 21 - 24 - Vacation
 - Aug 11 - 12 - Vacation
 - Aug 18 - 21 - Vacation
 - Aug 26 - Sep 9 - Out of Office
- Alana Sherman
 - Out of Office
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- George Stern
 - 701147 - MARS O&M IV
 - Began reviewing MARS documentation
 - 902204 - Scalable Robotics
 - Tested Luxonis's minimal code for external camera sync; it works much better when jitter is kept to less than a microsecond
 - Reworking current mola microcontroller software to eliminate IRQs which add too much jitter
 - 902208 - Mini ROV Operations
 - Reviewed brightloop power supply datasheet+manual and requested a quote/NDA form to continue
 - 902304 - Piscivore Cam
 - Began integrating 1GbE interface
- Justin Tucker
 - 901101 - Seafloor Mapping
 - LASS orientation plate modification design
 - Proposal support
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Weekly HDS meetings
 - 902010 - Mesopelagic LRAUV

- OpenProp propeller design investigation
- 902208 - Mini ROV Operations
 - Thruster motor replacement search
- Overhead
 - ANSYS licensing comparison
 - Miscellaneous proposal support
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Mobilized & demobilized Ventana mapping drawer
 - Blueboat improvements
 - Base station bulkheads installed
 - Cart stands designed and 3D printed to protect Norbit WBMS
 - Updated software
 - Purchased waterproof camera
 - 902208 - Mini ROV Operations
 - Worked out MiniROV 4k camera upgrade budget and video map
 - 902402 - CSEM
 - Wrote proposal activities and budget
 - 902505 - 2025 Arctic Expedition
 - Met with the Arctic team to go over AUV/ROV operations
 - Out of Office
 - Dec 16th - Jan 10th - Vacation
 - May 30th - June 5th