

Engineering Weekly Report 1/15/2026 - 1/22/2026

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

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
- Francois Cazenave
 - 901221 - Midwater Time Series
 - Help replace camera in housing
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Working in new mooring design
 - 902106 - Niobicon-Based AUV Docking Development
 - Project management
 - 902204 - Scalable Robotics
 - Met with Eric to discuss Subastian sled
- Danelle Cline
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Processing all of 2018 DocRickets dives with Argo workflow on kubernetes cluster. Roughly 2800 video files. When processing is complete, a report with associated metadata will be generated for closer inspection.
 - 901221 - Midwater Time Series
 - Processed 2018 dive with Argo RF-DETR Boostrack workflow and loaded to i2map.shore for analysis
 - 901502 - Ocean Soundscape
 - Realtime-time workflow review with John. Triton inference server deployed and working well on new VM; 10 minute audio processes in less than 40 seconds.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Team meeting
 - Working on issue [23](#) to replace current YOLOv11 detector with better performing RF-DETR. Processed latest Trinity Pro mission in Seacliff on 20260114 with new RF-DETR model.
 - Review with collaborator, Tim of mission mosaic processing with Kelp coverage; some issues with edge artifacts confounding SAM algorithm. Setup Kelp segmentation test project on [drone.mbari.org](https://docs.mbari.org) anticipating test segmentation map loads.
 - 902111 - Carbon Flux Ecology
 - Ongoing work with Voxel51. Working on associating depth missing from ROIs which needs to be loaded.
 - Updated planktivore documentation on first iteration of labeling.
 - Overhead
 - Performance review input
- Duane Edgington
 - 901103 - Biodiversity and Biooptics of Zooplankton

- Project discussion with Danelle.
- 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Team meeting.
 - Plan to work on running our benchmark dataset through the RF-DETR detector to establish benchmark performance metrics.
- Overhead
 - Annual performance appraisal work.
- Kevin Gomes
 - 200105 - Core Navigation - MDUC
 - Revamping the Packard simulator to use real data files from the Packard since it's been at sea now
 - 300057 - Mooring Maintenance
 - Troubleshooting some mooring instability issues
 - 300070 - DMO Support - Ventana
 - Monitored Ventana's first dive to make sure everything worked after all the networking changes
 - 901205 - ESP SURF Center
 - Incorporating Brent's changes to try and make the SD card images more robust to power cycling
 - Overhead
 - Performance review preparation
 - My performance review material prep
 - Sending feedback for reviews
- Andy Hamilton
- Kent Headley
 - 901101 - Seafloor Mapping
 - Refactoring LCM TRN front end (TRN for ROV); in progress
 - Checked in change set to libtrnav and MB-System affecting TRN particle filter noise floor and drift std deviation, per Steve Rock
 - Overhead
 - Review prep, mostly
- Rich Henthorn
 - Out of Office
 - Jan 12 to 16 - Vacation next week
- Akshay Hinduja
 - 901809 - Deep Sea Bioinspiration
 - OceanShot Bigelow Meetings
 - Prepare tool to use SAM3 for segmentation with presegmented image prompts
 - 902204 - Scalable Robotics
 - Found that databases for the submaps store the point cloud in local coordinates, which may create issues when trying to match up against grd file conversions to db
 - Looking at sponge ridge data over multiple days to test SBN with.
 - Out of Office
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- Brett Hobson
- Irene Hu
 - 901217 - Chemical Sensors
 - Updated samfast code for ISUS fast sampling to match a better format for MSC3; incorporated into main code
 - 901805 - Coastal Biogeochemical Sensing Program
 - Alkalinity: Massive redesign of floating anode flowcell, lid, and mounts. To be made out of clear acrylic. 3D printed a mockup, needs some more modifications

- Out of Office
 - 1/20/26: Photonics West
- Scott Jensen
 - 901205 - ESP SURF Center
 - Finalized puck potting protocol
 - Transferred potting task to The Rosal Group
 - Supporting design of the rebuild of the USV platform interface
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 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Search for powerline technologies
 - Located [G.Hn](#) which looks like a strong contender
 - Preparing for Dolphin visit.
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 - Out of Office
 - March 23-31 (estimate)
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Investigating why SPI is not working on new PIC32 design
 - 901502 - Ocean Soundscape
 - Recover, clean, de mob wire walker
 - Wire Walker data retrieval
 - 901805 - Coastal Biogeochemical Sensing Program
 - Stuffing NanoFETv2 batt and digital board
 - Cable drawings for NanoFETv2
- Chad Kecz
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
- Denis Klimov
- Eric Martin
 - 300079 - DMO Support - RV Rachel Carson
 - Completed UDP video streaming to the new CCTV box, follow up is to document and get Todd the information.
- Thom Maughan
 - 300083 - DMO Support - LRAUV
 - BPC2 Batteries packs are installed in Galene. There are resistors in series with the RS232 ground and we are seeing an occasional garbage character, likely a termination problem with the multidrop transceiver.
 - 901217 - Chemical Sensors
 - Merged and reviewed Irene's changes for the sampfast command. Advised modifying the arguments to make MoSoS v5.2 table driven command processing easier. Merged and tested the update.
 - Making good progress on the new MMS2 Analog and Digital board designs.
 - Overhead
 - Photonics West Jan 20
 - Employee feedback and Review prep
 - Out of Office
 - Vacation Feb 16 to 20
 - OSM Feb 19 to 23
- Mike McCann

- 901101 - Seafloor Mapping
 - Opened [new "mbmesh" Issue](#) for MB-System for 2 capstone teams to work on this semester
 - Added [computation of area mapped](#) for each mission in SMDB
 - Reloaded SMDB to test new area results added to the web site and *_survey_tally.csv files
- 901910 - Plankton Taxonomic Groups from AUVs
 - Reloaded all 2025 LRAUV STOQS databases on tethysviz with auv-python processed data
- Overhead
 - Attending ESIP Winter Meeting
- Out of Office
 - 20-23 January: ESIP Winter Meeting - remote attendance
- Enoch Nicholson
 - 706008 - READI-Net
 - Completed nitrogen sensor install on FIDO 8
 - Pushed nitrogen sensor firmware feature
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - First UAV Flight with Trinity Pro outside of Moss Landing
 - 902111 - Carbon Flux Ecology
 - Planned fabrication tasks for upcoming SINKER deployment
 - Overhead
 - Completed annual review training
 - Created gcode signing script for Prusa slicer exports
 - Trained on Prusa 3D printing system
 - Set up new team member with PDM vault access
- Tom O'Reilly
- Mike Risi
 - Out of Office
 - Offsite on Tuesday and Friday
 - January 2, 2026 - vacation
 - January 19, 2026 - January 30, 2026 - vacation
- Paul Roberts
 - 901221 - Midwater Time Series
 - Swapping back to F5 camera in i2MAP for testing
 - 901513 - Targeted Sampling by AUVs
 - Review of Krill detection video
 - 901809 - Deep Sea Bioinspiration
 - Scuba-EyeRIS build
 - Raytrix software contract
 - UWA support
 - 902111 - Carbon Flux Ecology
 - SINKER March 5 deployment planning
 - 902603 - Miniature 4K Subsea Optics
 - project coordination and IP discussions
 - 902606 - Low Altitude Survey AUV
 - strobe and camera design
 - Overhead
 - Preparing for NOWRDC meeting
 - Out of Office
 - Jan 22 - Photonics West (SF)
 - Feb 21 - Feb 27: OSM 2026, Glasgow
 - Feb 28 - Mar 8: Vacation, Scotland

- Mar 9 - Mar 13: OI 2026, London
 - April 13 - May 1: Falkor (too) Bioinspiration Lab
- Brent Roman
- Carlos Rueda
 - 902101 - LRAUV Technology Development
 - TethysL [4.8.4](#).
 - 902504 - Scalable Semantic Mapping
 - Check-in with Sebastián to delineate overall plans and some next tasks.
 - More Dial internal code cleanup/upgrades.
 - Overhead
 - Performance review tasks
 - Out of Office
 - Jan 16: vacation
- Karen Salamy
 - 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
 - 500055 - VARS, M3/RS, DSG
 - [Investigate issues with merging Mini ROV annotations with navigation and CTD](#)
 - Added `change-password` command to the [vars-cli](#)
 - Adding [code to standardize bounding box JSON](#) that's generated by the various tools.
 - Various fixes to the [oni-java-sdk](#) and [annosaurus-java-sdk](#)
 - Published first "official" release of the knowledgebase editor for the video lab to use.
 - 901809 - Deep Sea Bioinspiration
 - Fixed issues with merging branches from the VARS knowledgebase with WoRMS data in the [worms-server](#)
 - Overhead
 - Meeting w/ Tobias Ferreira (NOC) to discuss annotation strategies for the British Oceanographic Data Centre.
 - Updated <https://miw2026.org/>
 - Completed materials for annual reviews.
 - Updated my github repos to be compliant with various open-source licenses.
 - Out of Office
 - April 6 - April 24: Vacation
 - May 18 - May 22: Marine Imaging Workshop, Gibraltar
- Quinn Shemet
 - Out of Office
 - Jan 16th - Vacation
 - Jan 19th - Jan 22nd - Offsite
 - Feb 17th - Feb 19th - Vacation
 - Feb 23rd - Feb 28th - OSM, Glasgow
- Alana Sherman
- George Stern
- Justin Tucker
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Mooring design analysis
 - Overhead
 - LARS test weight design

- LARS sim updates
- Out of Office
 - Fridays through March 2026
- Johann Voigtlander
 - 902504 - Scalable Semantic Mapping
 - Csem Antarctica Jan 17 to Feb 6th