

Engineering Weekly Report 1/1/2026 - 1/8/2026

<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
 - Troubleshooting the laser
 - 902106 - Niobicon-Based AUV Docking Development
 - Project management
 - Out of Office
 - Vacation
- Danelle Cline
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Finished Argo ONNX based workflow <https://github.com/mbari-org/argo-workflows> with optional vector database integration
 - Training new RF DETR megadetector model with targeted depth range 200-2000 meters
 - 901221 - Midwater Time Series
 - The RF DETR model trained with pseudo labels did not perform well. Removing generic classes like “marine organism” improved classification performance ~10%.
 - Loaded training data into Voxel51 Community. Check out a [demo on exploring i2MAP training data in Voxel51 Community](#). It's very intuitive and fast to interact with embeddings through lasso queries around clusters - one can see where the lines blur between annotations, where outliers are, and mistakes are made. This is a better way to interact with our data than a grid-only view in my opinion.
 - 901502 - Ocean Soundscape
 - Realtime workflow modifications to handle OOM errors for hourly processing.
 - Deployed Triton inference server on new VM sonus.shore.mbari.org
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Migrated image loader to new Trinity3 platform. Some minor continued exploration of a web dashboard.
 - Team meeting
 - 902111 - Carbon Flux Ecology
 - Working with L. Chrobrak on Voxel51 enterprise evaluation.
 - Loaded planktivore high mag into Voxel51 Enterprise and entire ISIIS video deployment into Voxel51 Community for Colleen to validate.
- Duane Edgington
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Project discussion with Danelle.
 - 901502 - Ocean Soundscape

- Analyzing output of OrcAI model for MARS soundscape archive month of April 2018. Trying to resolve confusion of Orca sounds with sounds from Dolphins and Baleen whales.
- 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Team meeting
 - Starting work on Poster for OSM March 2026.
- Out of Office
 - January 8, 2026. Thursday. Personal Day
- Kevin Gomes
 - 200105 - Core Navigation - MDUC
 - Updated loggers to use new SMD implemented power flags
 - 300059 - DMO Support - RV David Packard
 - Bring up after being down over the holidays
 - Overhead
 - Performance reviews starting up
 - Cleaned up 2025 weekly reports and did a clean run to summarize the year. Then overhauled the weekly report to reflect 2026 project assignments and updated code to move to new year.
- Andy Hamilton
- Kent Headley
- Rich Henthorn
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Focusing on upcoming Deep-Canyon deployment scheduled in 13 weeks
 - 902401 - Geo-Sense
 - Analyzing DAS system clock drift measurements made while the ambient temperature in the cold room changed from 4 C to 20 C
 - Comparing drift data to correlated current-draw and temperature measurements
 - Out of Office
 - Jan 12 to 16 - Vacation next week
- Akshay Hinduja
 - 901809 - Deep Sea Bioinspiration
 - Meeting with CVision, Joost and Emily to track progress for DeepPIV pipeline automation
 - Look at NNInteractive plugin in Slicer, tryout with deepPIV data
 - 902204 - Scalable Robotics
 - Made sweeping changes towards handling constraint addition to graph, unified to be std dev instead mishmash of std dev and covariances.
 - Bug fixes and cleanup
 - Unified logic for reference match and loop closure match checks to be the same workflow
 - Use std dev to weaken or strengthen constraint type.
 - Out of Office
 - Thursday 8th, daughter's dr's appointment in Palo Alto.
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Revised version of floating anode electrode holder to move it more towards center of flowcell. Started on a little lid.
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Image correction for reflectance images, assembled RGB versions
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Meeting; measuring some battery voltages
 - Overhead
 - Reccom 2026 budget

- Scott Jensen
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Our Laser range finder still seems to be failing and the mode or means is eluding the team
 - Overhead
 - Catching up on where I left off
 - Out of Office
 - March 23-31 (estimate)
- Brent Jones
- Chad Kecz
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
- Denis Klimov
- Eric Martin
 - 901217 - Chemical Sensors
 - Setting up production server
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - LRF power review, only advising right now.
 - 902204 - Scalable Robotics
 - Start of year organization
 - Team meetings and prep
 - 902504 - Scalable Semantic Mapping
 - Cruise planning for a busy year.
 - 902606 - Low Altitude Survey AUV
 - Organizing the kickoff
- Thom Maughan
 - Out of Office
 - Vacation Jan 5 - 9
 - Photonics West, 1 day, likely Jan 20
- Mike McCann
 - 901101 - Seafloor Mapping
 - Wrapped up the [refine mbgrd2gltf C++ code Issue](#) that the CSUMB capstone team worked on
 - More cleanup of the mbgrd2gltf code following years of capstone team contributions
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Reprocessed/reloaded [stogs_all_dorado](#) data using a better fluo_bl_threshold value
 - Out of Office
 - 5-19 January: Remote work
 - 20-23 January: ESIP Winter Meeting - remote attendance
- Enoch Nicholson
 - Out of Office
 - Thursdays at MLML
- 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
 - Controller PCB design

- 901809 - Deep Sea Bioinspiration
 - Scuba-EyeRIS assembly and testing
- 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Planning for Feb 10 deployment
- 902111 - Carbon Flux Ecology
 - Controller PCB design (shared with MWT)
- 902603 - Miniature 4K Subsea Optics
 - Collaboration planning with DeepSea and Gemini
- Brent Roman
 - 901205 - ESP SURF Center
 - Debugging cell modem connection script for the troublesome SIM7672G
 - Writing and testing generalized GPS enable/disable scripts for GPS equipped modems
 - Working with Andrea on determining why ESP WiFi cannot connect to the Parkard's network.
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - Jupyter@gizo now uses a persistent access token.
 - Running Google/NOAA humpback whale song detection model to complete the regular scores for 2025. Also doing some maintenance of the code and providing assistance to run the core scoring logic in the realtime workflow that Danelle is setting up.
 - 902101 - LRAUV Technology Development
 - TethysL [4.8.2](#), Dash4 [4.97.1](#), TethysDash [4.99.22](#).
 - Submitted [PR in Irauv-application](#) to install tethysl from the linux standalone release instead of the release that requires java on the system.
 - Overhead
 - Migration of tethysdash2 from CentOS 7 to Ubuntu completed, and all should be in place for when LRAUV operations resume.
 - Updated various entries at <https://docs.mbari.org/internal/se-ie-doc/systems/se-ie-servers/>
 - Out of Office
 - Jan 2–5: vacation
 - 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
 - Updates to [annosuarus-java-sdk](#), [oni-java-sdk](#), [raziel-java-sdk](#), and [vampire-squid-java-sdk](#) to make them compatible with Java's module system so that they can be used in [Mondrian](#).
 - 902111 - Carbon Flux Ecology
 - [The migration code is nearly complete](#). Did a test run for migrating the annotations from old vars on perseus:VARS_IMAGES database to the new one on venus:M3_ANNOTATIONS. Modified the code to be able to run in batches so it can be run in off hours so as to not impact the video lab.
 - Dusting off the [Mondrian](#) code to verify that the data migration worked and is compatible with our current tools. Working through changes required by latest [JDK](#) and [Gradle](#) tools
 - Out of Office
 - April 6 - April 14: 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
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Prepping Coral Macro for deployment in two weeks.
 - Ran 2-week test of the system over the holidays
 - Got deepsea connect up and running and swapped out batteries
 - Set focal length based on the expected target
 - 902401 - Geo-Sense
 - Frantically preparing for our deployment next week
 - Testing the DAS with batteries
 - Tested Deepsea Connect
 - Successfully fusion-spliced a test cable to use while we prep for deployment
 - Sealed up some of the pressure housings
- George Stern
 - 902204 - Scalable Robotics
 - Tested remaining 2 HSI light electronics stacks
 - Designed a new baffle for the new camera module which needs to be installed in the Mola Docking Camera
 - Identified the problem with the mola ESC controller code: some of the registers advance when read so the debugger was wreaking havoc and the initial problem was merely forgetting what channel coms was attached to.
 - 902304 - Piscivore Cam
 - Identified framos camera hardware to order and begged them to send me a quote.
- Justin Tucker
 - 902101 - LRAUV Technology Development
 - Carbon tube coupon test follow up
 - 902208 - Mini ROV Operations
 - Thruster, combo ring, first parts fit tests
 - Overhead
 - New project planning
 - Out of Office
 - Fridays through March 2026
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Working with Craig from Boxfish to repair Mola 2 batteries
 - 902208 - Mini ROV Operations
 - Upgraded the new NUCs to Labview 2025 32 bit.
 - Removed Datalogging and supervisory control module from copilot
 - Working on a new LabVIEW program to integrate the VN100 IMU
 - Out of Office
 - Dec 16th - Jan 10th - Vacation
 - May 30th - June 5th
 - Oct 9-13th