

WeeklyReport

Engineering Weekly Report 9/11/2025 - 9/18/2025

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

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Preparing new tether test
 - Monitoring buoy
 - 902106 - Niobicon-Based AUV Docking Development
 - Testing new power transfer device
 - Out of Office
 - 1 day Vacation
- Danelle Cline
- Duane Edgington
 - 901502 - Ocean Soundscape
 - Data analysis meeting with John Ryan 9/16/2025
 - Wrote python program to help analyze scores for each of the 7 species, 12 classes analyzed by the model produced by Kaggle Google Multispecies Whale model applied to MBARI PAM sound data. Modeled after the data analysis tools John Ryan uses in Matlab to look at model output (class score distribution histogram - linear and log, class score scatter plot as a Time Series, class score Box plot, class score 1 hour mean Times series, summary statistics).
 - Processed 6 months of archive data (Spring 2018, Fall 2020) and analyzed. Each month represents about 4000 audio archive files, and the model generates 0.5 million model scores per class at 5 second resolution for the month.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Team meeting
 - Overhead
 - In spare hours translated Matlab Dan Davis Laser Measure program into Python for archive and future use or maintenance. Uploaded to github.
 - Out of Office
 - Doctor appts.
- Jon Erickson
- Kevin Gomes
 - Out of Office
 - 8/29: Out of the office
 - 92-9/4: Working from home
- Andy Hamilton
- Kent Headley
 - Out of Office
 - 10/17-20 vacation

- Rich Henthorn
- Akshay Hinduja

- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - First draft code for alkalinity sensor, after discussing new code structure with Jim Davis. Doesn't work yet.
 - First draft code for ISUS fast sampling, for mini ISUS deployment on CTD
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Troubleshooting for various problems including motor controller
 - Out of Office
 - Sept 1 - 5: vacation
- Scott Jensen
 - 706008 - READI-Net
 - Support of Dock Dress and the issues it illuminates
 - 808015 - Monitoring McCloud
 - Monitoring power subsystems
 - Overhead
 - A little work on Induction motor dynamics for LARS
 - Out of Office
 - 9/26 Vacation
 - 10/(2-3) Vacation
- Brent Jones
 - Out of Office
 - vacation
- Chad Keycy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 07/23
 - 07/28-08/01 (MST)
 - 08/25-29 (PDT)
 - 9/15-30 (UTC+2)

- Denis Klimov
- Eric Martin
- Thom Maughan
 - 300078 - DMO Support - AUV
 - Hyperion detailed design review, update and pcb layout in kicad
 - 300083 - DMO Support - LRAUV
 - Batman testing. Shore power ADC not reading correctly with low voltage constant current charging and batteries in Trickle to Softstart transition.
 - Supporting LRAUV software integration
 - Status meeting, feedback on protocol
 - Misc cable harnesses, drawings
 - 901217 - Chemical Sensors
 - Argo float data is looking good on the two test floats
 - 901805 - Coastal Biogeochemical Sensing Program

- Advising on fast sampling for upcoming CTD cast. Sub-second nitrate sensing. Irene is doing the coding as I'm out of hours.
- 902004 - Planktivore
 - Working on Planktivore V2 B build, impacted by other projects.
- Out of Office
 - Sick leave 16,17th
 - Vacation 15 Oct to 24 Oct.
- Mike McCann
 - Out of Office
 - 8-13 September – Web3D & Digital Heritage Conference
 - 15-18 September – Vacation
- Paul McGill
 - Out of Office
 - I've been busy sleeping in because I'm retired!
- Enoch Nicholson
 - 706008 - READI-Net
 - Developed flipped puck detection feature using clamp travel measurement
 - Built backup RAM functions for puck tracking
 - Dock troubleshooting and vacuum leak repair
 - 901007 - Benthic Biology & Ecology
 - Discussed instrument preparations for October cruise
 - Identified cable assembly ordering issues
 - Overhead
 - LRAUV variable buoyancy system kickoff meeting
 - SINKER project interview
 - SNOCam baffle
 - Out of Office
 - Thursdays at MLML
- Tom O'Reilly
- Mike Risi
 - 300062 - DMO Support - Doc Ricketts
 - Miscellaneous navproc support of the current Ricketts test dive
 - 901101 - Seafloor Mapping
 - GOB power can stack firmware completed and installed on power can.
 - Power can GUI completed and installed on TCU.
 - Working on a process to send navigation data to Phins INS using the ixblue standard messaging protocol.
 - 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
- Paul Roberts
- Brent Roman
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - Looking into enabling a new use case for [mbari-pbp](#).
 - 901809 - Deep Sea Bioinspiration

- Advancing the [Fathomnet Bulk Review UI](#).
 - Overhead
 - IE group meeting
- Karen Salamy
 - Out of Office
 - See Overhead comments above.
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - Out of Office
 - Aug 18, 2025 - Aug 21, 2025 - Vacation
 - Sep 3, 2025 - Sep 17, 2025 - Out of Office
- Alana Sherman
 - 902208 - Mini ROV Operations
 - Was bequeathed the motors from FOCE and will try to take what is compatible with the mini thrusters to use as spares
 - 902401 - Geo-Sense
 - Spent a lot of time trying to piece together the various options for deploying Geo-Sense from the Gaia Blu. I think by the end we had a clear plan of first and second choice, although much depends on the availability of shared resources.
 - Got quotes for pop up buoys and learned more details about these
 - Communicated with ship on winch options
 - Thinking about elevator and ROV contingencies
 - Going to start working on paper
 - Purchased Mathematica software so Paul and others can continue to do analysis
 - Writing up system description for manuscript
 - Overhead
 - Looking into project management software options at MBARI
 - Doing some online trainings for MS Planner and Project
 - Out of Office
 - Tentatively planning to be on the Packard 9/19-9/22
- George Stern
 - 902204 - Scalable Robotics
 - Setup a ros2 node publishing 3d depth and image data from a luxonis camera on a raspberrypi
 - Assembled the Mola Docking Camera can and mostly wired it
 - Began reviewing ArduPilot IOMCU code for potential modification for a mola thruster control board; bare metal development might be easier
 - Discovered MOLA ESCs are one software version off from supporting a really simple uart communication based bus but can't be upgraded because of ukraine war.
 - 902304 - Piscivore Cam
 - Reviewed some gen3 canon video and extracted gen2 files for ai processing
- Justin Tucker
 - Out of Office
 - Out 8/29 and 9/3
- Johann Voigtlander
 - Out of Office
 - Dec 16th - Jan 10th - Vacation
 - May 30th - June 5th