

WeeklyReport

Engineering Weekly Report 10/2/2025 - 10/9/2025

<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
 - Oct 13, 2025 - Oct 15, 2025
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - New PTO tether termination design
 - Planning recovery of buoy
 - 902106 - Niobicon-Based AUV Docking Development
 - Assembling power transfer device
- Danelle Cline
 - 901221 - Midwater Time Series
 - Exported i2MAP training data to VOC+COCO format to share with video lab model training
 - Retrained i2MAP ViTS classifier
 - 901502 - Ocean Soundscape
 - Zoom with Franny to discuss progress on unit labeling and topic modeling
 - Working on near realtime ML pipeline, some PBP support
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Generated random testset from drone.mbari.org
 - Trained ViTS classifier model with added classes for Seacliff site and improved Egregia localizations
 - Working on exploring Cursor+React web app with [uavscope](https://uavscope.org)
 - Zoom with Tim on [KelpCoverage](#)
 - 902111 - Carbon Flux Ecology
 - Supporting team validation of ISIIS model. Increasing CPU/memory on mantis.shore as needed for more users
 - Working on data mining aggregates for planktivore low-mag training data
 - 902306 - SINKER
 - Addressed [schema prune issue](#) although not resolved until today, thanks to K.Salamy help.
 - Overhead
 - SINKER project scicom interview
 - Seminar
- Duane Edgington
 - 901502 - Ocean Soundscape
 - Team meeting Oct. 9.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach

- Built [updated yolo11x detector](#) (single class, all objects) with verified localizations from ~all classes and survey sites. Dataset archived to google drive.
 - Working on creating [RF-DETR](#) detector with the same dataset to see if performance improved with the state of the art transformer architecture.
 - Teleconference with Tim on Kelp coverage tool progress
- Out of Office
 - Doctor appts.
 - Oct 20 - 24, 2025. Pytorch Conference, San Francisco.
- Jon Erickson
- Kevin Gomes
 - 300062 - DMO Support - Doc Ricketts
 - Working on setup of Dive Log application
 - 300070 - DMO Support - Ventana
 - Debugging GSS time sync issue
 - 706008 - READI-Net
 - Debugged several issues with networking, threading, cloud, VPN, serial, etc. and feel like we are close to being ready for deployment. Delay due to shutdown, but in a good spot.
 - Overhead
 - Omics PI interviews
 - Working with IS on AI Usage Policy for MBARI
- Andy Hamilton
- Kent Headley
 - 902204 - Scalable Robotics
 - pre-deployment updates/test of Oculus sonar driver
 - investigating oculus driver crashes reported during arctic cruise (multiple times, after several hours of operation). No smoking gun; this one's likely going to be tricky to trap...
 - 902405 - Precision Control Technologies
 - Made a number of updates to the TRN documentation; added an installer script for the reference application.
 - Gave Steve a copy of trn-player, a TRN reference application that can do TRN processing on log files and CSV data.
 - Generating relocatable MacOS binaries for Steve Rock to test turned out to be a bit of a rabbit hole. The issue had to do with the linkage of third-party libraries (netcdf), which are in different locations and have different versions on the build and target machines. In addition, the library ID in the netcdf shared lib is set to an absolute (build machine) path that contains a versioned library name. The path used is baked in to the libnetcdf build, which in turn is built by MacPorts. Even when building from source, it isn't exposed in a way I could find.
Came up with a solution using rpaths, but ultimately had to resort to post-build changing the netcdf LC_LOAD_DYLIB using install_name_tool, as I couldn't find a way to set/change it in cmake or in the netcdf build.
 - Overhead
 - omics candidate interviews and input
 - SE hiring
 - Hyperion meeting
 - misc admin
 - Out of Office
 - 10/17-20 vacation
- Rich Henthorn
 - 902305 - Event Detection Using the Sedimentation Event Sensor

- Recent SES data analysis
 - Post SES recovery plan
- 902401 - Geo-Sense
 - RAID drive enumeration
- 902405 - Precision Control Technologies
 - Hello, TRN app
 - Carson day with LASS system intro to Ventana precision control ops
- Out of Office
 - Wed Oct 8: Rachel Carson
 - Thu Oct 9: WFH
 - Mon Oct 20 - Tue Oct 21: Sick leave
- Akshay Hinduja
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Chasing down inaccuracies in reported current of alkalinity circuit in ranges we care about, may need to switch circuit design
 - Tests of mini ISUS in seawater lab chilled line: show some temperature effects in raw data, but processed nitrate seems ok
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Helped with various tests of assembled system in air and tub, things look pretty good
 - Out of Office
 - Oct 7: dr appt
 - Nov 5-6: WFH / vacation
- Scott Jensen
 - 706008 - READI-Net
 - Due to shutdown Boseman trip is most likely canceled.
 - To maintain momentum the project is shifting for another dock deployment. With all the lessons learned from the first and work to correct, a second chance will hopefully be just as successful with less learning and more completions.
 - 808015 - Monitoring McCloud
 - Continued monitoring
 - Planning towards recovery at end of October
- Brent Jones
 - Out of Office
 - vacation
- Chad Keczy
 - 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
 - Out of Office
 - Doctors' appointments Monday and Wednesday.

- Next Friday 10/10
- Thom Maughan
 - Out of Office
 - Vacation 15 Oct to 24 Oct.
- Mike McCann
 - 901009 - CANON
 - Fixed STOQS code to understand slightly different responses from the new services on elvis2
 - Attempting to mask out bad data values so that all data properly display in [stoqs_lrauv_sep2025](#)
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Discussions about incorporating planktivore data into the auv-python/STOQS pipeline
 - Started LRAUV dev branch in auv-python for the code to be transferred there from STOQS
 - Trying to find time to work on the 2025 revamp of the STOQS code
 - Overhead
 - Rolled out replacement for elvis web services with [docker stack](#) running on elvis2
 - Out of Office
 - 27-30 October – Remote work
- Paul McGill
 - Out of Office
 - I've been busy sleeping in because I'm retired!
- Enoch Nicholson
 - 706008 - READI-Net
 - Troubleshoot puck orientation detection
 - Developed restock sampler code implementation
 - 901007 - Benthic Biology & Ecology
 - Started Instrument MOB
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
 - Drafted public comment for Part 108 NPRM
 - Overhead
 - Rigging Training
 - Out of Office
 - Thursdays at MLML
- Tom O'Reilly
- Mike Risi
 - 901101 - Seafloor Mapping
 - LASS deployment cruise series
 - 902405 - Precision Control Technologies
 - Continuing work on mid-water tracking controller
 - 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
 - January 19, 2026 - January 30, 2026 - vacation
- Paul Roberts
- Brent Roman
 - 708184 - ESP Monitoring PNW

- ESPfriday finally seems to have dropped a sampling puck due to a gripper failure. Not recoverable, but only after processing 170ish of 192 pucks. Not bad.
 - 901205 - ESP SURF Center
 - Enhanced ESP Elf motor controller firmware to support continuous reseeking of carousel position when it slips. Was needed due to added friction in newest builds. Seems to work great.
 - Helped FIDO group get RockPI-S WiFi working reliably again.
 - Working with APL to prepare a deckbox for comparing different cell modems for use off La Push.
 - 902304 - Piscivore Cam
 - Added a bunch of new command line switches to facilitate adjusting video parameters during deployments.
 - Switched to h.264 encoding because h.265 encoded video was jerky
- Carlos Rueda
 - 901502 - Ocean Soundscape
 - Meetings
 - PBP: GitHub workflow for basic installation verification on macOS, Linux, Windows.
 - 901809 - Deep Sea Bioinspiration
 - Bulk review UI
 - 902101 - LRAUV Technology Development
 - TethysDash/LRAUV: One more attempt to make the /dataLink endpoint (used by the LRAUV) work as a JAX-RS resource, unfortunately still unsuccessful, likely because of more strict HTTP protocol handling under Quarkus. So, this endpoint will need to continue being a servlet, which has been working with no issues. Submitted PRs in lrauv-application to improve the logging of HTTP(s) interactions on the vehicle side, intended to help with diagnostics in the future.
 - Overhead
 - CentOS 7 EOL migrations (docs-u, tethystest-u, tethysdash2-u (soon))
 - Out of Office
 - Oct 13 - Drs. appointment
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Weekly maintenance and management of coredata8 data downloads.
 - 902306 - SINKER
 - Battling production deployment issues for the SINKER App on the sinker production server. It is running well on the dev server but just not working on the production. I need to discuss this with Danelle and determine next steps.
 - Overhead
 - Issues with the SVN and CVS web apps following the upgrade from CENTOS to ROCKY. Will work on it when I have a few minutes.
 - Out of Office
 - Working from home today due to a sinus infection
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - Out of Office
 - Oct 2, 2025 - Oct 7, 2025 - Vacation
- Alana Sherman
 - 902208 - Mini ROV Operations
 - Working with Justin on plans for new thruster, my time was spent mostly looking at new controllers/feedback sensors and getting parts to test on the bench.
 - 902401 - Geo-Sense

- Thanks to DMO the missing sheave was found. Contacted Smith Berger to dig up the details on the line counter sensor. Sent to Aaron to see if AGO can work with what we already have to make a complete system.
 - Working with Aaron on details for the external proposal for ship time- lots more information related to the Mini and to the Macartney winch
 - Trying to run down details on winter deployment with the elevator.
- Overhead
 - Follow up meeting on Project Management training
 - Two PI 'Omics interviews this week
 - Rigging class Weds afternoon
- Out of Office
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- George Stern
- Justin Tucker
 - Out of Office
 - Out 10/27-11/7
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Designed housing for event camera. Mounted components and built electrical harness
 - Improved event camera code, fixed ERC, added record button, added buttons to change FPS, added a timestamp to the filename.
 - Calculated camera FOV in seawater
 - Improved blueboat Norbit mount
 - Fixed blueboat Tailscale networking issues
 - 902208 - Mini ROV Operations
 - Had meeting regarding new thruster design
 - 902402 - CSEM
 - Figuring out Antarctic shipping logistics
 - Completed Antarctic treaty training course
 - Overhead
 - Rigging training
 - Out of Office
 - Dec 16th - Jan 10th - Vacation
 - May 30th - June 5th