

WeeklyReport

Engineering Weekly Report 3/6/2025 - 3/13/2025

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

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - 902204 - Scalable Robotics
 - MiniROV Arctic prep
 - Fixed issues with SLAM not using estimator data
 - Investigated missing estimator data from Feb 11, 2025 and Feb 12, 2025 TT days
 - Set up configurations for down
 - Tested forward camera SLAM configuration
 - Out of Office
 - Mar 14, 2025 and Mar 17, 2025 – robotics competition
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Testing PTO
 - 2-point mooring design
 - 902106 - Niobicon-Based AUV Docking Development
 - Designing high current brush
 - Mooring preparation
 - Brizo docking nose design
 - Project management
- Danelle Cline
 - Out of Office
 - Vacation 2/21, 2/28-3/7
- Duane Edgington
 - Out of Office
 - Doctor appointments early AM
 - Medical appt. Friday
- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation - MDUC
 - Adding more configuration to simulator to align with Carson to prep for Carson deployment
 - Added an MQTT bridge to navproc API to serve as a conduit for data to go to TimescaleDB
 - 902403 - Expedition DB Modern
 - Experimenting with TimescaleDB for long term combined storage of timeseries data
- Andy Hamilton
- Kent Headley
 - 902204 - Scalable Robotics
 - tank test oculus after publishing updates to support ROS and LCM configurations

- 902405 - Precision Control Technologies
 - working on TRN software documentation
- Overhead
 - hiring process planning
 - resource request
 - misc admin
- Out of Office
 - 3/24... tentative (jury duty)
 - 2-3w June? July? TBD (vacation)
- Rich Henthorn
 - 902305 - Event Detection Using the Sedimentation Event Sensor
 - Attempted comms with SES and Trigger Trap
 - SES status is consistent with expected
 - Trigger trap modem seems dead and no samples taken
 - 902306 - SINKER
 - Autonomous SINKER deployment
 - 902405 - Precision Control Technologies
 - LRAUV close-the-loop code merge
 - Out of Office
 - Mar 31 - Apr 3: WFH and PTO
- Akshay Hinduja
 - Out of Office
 - WFH Feb 27 and Feb 28
- Brett Hobson
- Irene Hu
 - 901217 - Chemical Sensors
 - Tiva1290 rB modules received, troubleshooting programming. JTAG header is wrong and one net disconnected
 - 901805 - Coastal Biogeochemical Sensing Program
 - Mini ISUS fit test reveals backwards connector
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Writing code
 - Overhead
 - Finally moved offices
 - Out of Office
 - Feb 26 - Mar 9: vacation
 - Mar 10: out sick
 - Mar 13: WFH, doctor's appt
- Scott Jensen
 - 808015 - Monitoring McCloud
 - Preparatory discussion for the upcoming McCloud Deployment
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring the build up for next deployment
 - Overhead
 - Figuring out where I left off
 - Out of Office
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- Brent Jones
 - 901502 - Ocean Soundscape

- Investigate umap clustering for clicks
 - meetings
- 901805 - Coastal Biogeochemical Sensing Program
 - Analog nonisonanofet pcb rough draft complete
 - Begin work on digital nonisonanofet pcb layout
- Out of Office
 - Dr appointments for injured hand
- Chad Key
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
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- Denis Klimov
- Eric Martin
 - 300079 - DMO Support - RV Rachel Carson
 - Project Hyperion meeting las week
 - 901101 - Seafloor Mapping
 - Lidar Meetings
 - Scoping Work for Abstracts
 - Sled bringup in Bldg G
 - Strobe debugging w/ Chad
 - 901103 - Biodiversity and Biooptics of Zooplankton (ROVVR Support)
 - Support call with students
 - Making new targets
 - Need to collect a new cal
 - 901217 - Chemical Sensor Program
 - Energy results re-review
 - Looking into some high numbers
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Repairs to vicor boards input fuses
 - Testing Top hat pre-closure
 - 902204 - Scalable Robotics
 - Blueboat mapping support
 - Project management
 - Multibeam Review
 - 902504 - Scalable Semantic Mapping
 - MiniROV Arctic prep
 - Dial upgrades meeting
 - Overhead
 - Presented MiniROV work on behalf of the Arctic effort.
 - Out of Office
 - Sick Day 3/11
- Thom Maughan
 - 300083 - DMO Support - LRAUV
 - Meeting for status and plans
 - Protocol doc update
 - 901217 - Chemical Sensors
 - Working to end of March for software and hardware handoff to UW.
 - Test infrastructure investment is paying off nicely.

- 'Find fix' sessions have been working great. K0 pH Cal test case is passing. N03 Cal test case is passing, working on Profile test case.
 - Flagged Numerical Recipes in C license to Ken and Yui. Excluding NR content in next release.
 - 902004 - Planktivore
 - Weekly meeting
 - Out of Office
 - Vacation / Working remote 15 Mar to 26 Mar
- Mike McCann
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Tracked down a regression in LOPC processing – got to learn about using “git bisect”!
 - Working on GitHub Issues in preparation an archive reprocessing & stoqs_all_dorado reloading
 - 902403 - Expedition DB Modern
 - Regular bi-weekly project meeting
 - Trying to make the sharable postcruise results link more user friendly
 - Overhead
 - Trying to not get too involved with planning the Web3D 2025 Conference
 - Out of Office
 - 11 March: Vacation
- Paul McGill
- Enoch Nicholson
 - 706008 - READI-Net
 - On hold awaiting funding decisions
 - 901007 - Benthic Biology & Ecology
 - Ordered 3d printed chamber parts
 - 901205 - ESP SURF Center
 - Finished prototyping board mount
 - 902306 - SINKER
 - Deployed SINKER on the elevator
 - Starting to redesign the frame for July
 - Overhead
 - PDM Class
- Tom O'Reilly
- Mike Risi
 - 200105 - Core Navigation - MDUC
 - Preparing for navproc 2.0 deployment next week
 - Prototyping upgrade to navproc configuration files
 - 300062 - DMO Support - Doc Ricketts
 - Meeting with SMD to review scope of work for May ROV integration
 - 901101 - Seafloor Mapping
 - Starting work on deployed LASS board firmware
 - Replaced Euler with Loon in TCU and starting work on LASS prep for April
 - 902405 - Precision Control Technologies
 - Continuing RovLib development
 - Working on midwater tracking code for April cruise
 - Out of Office
 - Offsite on Tuesday and Friday
 - March 3 - March 6, 2025 - vacation
 - June 2 - June 6, 2025 - vacation
- Paul Roberts
 - 702108 - Deployable AI

- Hardware procurement
 - Planning for chassis assembly
- 901221 - Midwater Time Series
 - Testing 12G sdi through seacon coax
- 901904 - Deep-Sea Coral-Sponge Community Observatory
 - SWIR camera concept review
- 902111 - Carbon Flux Ecology
 - Scuba-isiis batteries
- 902306 - SINKER
 - Deployed for 1 week of autonomous recording on March 10
- 902405 - Precision Control Technologies
 - Planning for April 15 deployment
- Brent Roman
 - 708184 - ESP Monitoring PNW
 - Testing, debugging and enhancing Certus/Cell comms mooring
 - 901205 - ESP SURF Center
 - Working with Enoch on water bath based 3G heater board calibration fixture
 - 902304 - Piscivore Cam
 - Design meetings
- Carlos Rueda
- Karen Salamy
 - Out of Office
 - Vacation March 3-11, 2025 - Holiday Vacation
 - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Security updates to [Pythia](#). V0.1.3 was released
 - 902002 - FathomNet
 - Updates to NGINX proxy server
 - 902403 - Expedition DB Modern
 - Continuing to work on cleaning up and updating the database schema.
 - Testing database has been set up at EXPD_NEXT on foggy.shore.mbari.org
 - Overhead
 - Brian was interviewed by <https://foojay.io/> about a few of MBARI's JavaFX-based apps.
 - Meeting with University of South Florida to discuss video data management.
 - Out of Office
 - Mar 28 - Apr 2 - Vacation
- Alana Sherman
 - 902208 - Mini ROV Operations
 - Tried more tests on the thruster tuning but still not solved
 - 902401 - Geo-Sense
 - Got new DAS unit running in lab
 - Out of Office
 - Out sick Monday and Tuesday and last Thursday
- George Stern
 - 300078 - DMO Support - AUV
 - First pressure test to 6km completed, one cap visually changed but still works, all other parts look good
 - Attempting to bring up the board for a powered pressure test
 - 902204 - Scalable Robotics

- Completed reassembling mola with light and laser control can
- 902304 - Piscivore Cam
 - Alternative architecture meetings
- 902306 - SINKER
 - Final battery charging and prep for the cruise last monday
- 902106 - Niobicon-Based AUV Docking Development
 - literature review of path loss/impedance of sea water and looked into SDR transceivers/amplifier options
 - Meeting to review test results and next steps
- Justin Tucker
 - 901007 - Benthic Biology & Ecology
 - Continuing work to get quotes and lead times on parts for manufacturing
 - Testing volute shape for pump
 - Continuing design on lid assembly
 - 901101 - Seafloor Mapping
 - AUV concept 3D mock ups
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Working through 2 point mooring simulations
 - Improvements to post processing scripts
 - Working through design of experiment automation setup. Investigating use of DAKOTA (<https://dakota.sandia.gov/>)
 - Out of Office
 - Expected leave April 1st - 30th
- Johann Voigtlander
 - 902204 - Scalable Robotics
 - Enabled RTK on the BlueBoat
 - 902208 - Mini ROV Operations
 - Moved essential electronics into MiniROV lab and reconnected for test tank days
 - Ordered subsea fiber bulkheads and patch cables
 - Debugging the control van input power issues
 - Fixed issues with manip probe, CT, temp probe, and alt/depth in LabView.
 - Problem was with file structure for logging on the co-pilot PC
 - 902402 - CSEM
 - Cruise planning and logistics
 - Rewired winch to 240V 3-phase for Fulmar
 - Getting CTD ready for deployment
 - Out of Office
 - Dec 16th - Jan 10th - Vacation