

Engineering Weekly Report 10/26/2023 - 11/2/2023

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2023/>

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - Out of Office
 - LASS on Ventana/Rachel Carson cruise: Oct 10, 2023 – Oct 12, 2023
 - CSIRO: Oct 20, 2023 – Nov 5, 2023
 - MiniROV/Fulmar cruise: Nov 6, 2023 – Nov 7, 2023
- Francois Cazenave
 - Out of Office
 - 2 sick days
- Danelle Cline
 - Out of Office
 - Vacation October 30th - November 3rd
- Duane Edgington
 - 500055 - VARS, M3/RS, DSG
 - Development and testing of deepsea-ai docker image on VM DORIS continues. Testing with production-level dive video Ventana 2023. Issues being worked on.
 - MBARI GPU meeting Nov 1 with IS team.
- Jon Erickson
- Kevin Gomes
 - Out of Office
 - Nov 20-22: Vacation
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Processing Sponge ridge ROV TRN dataset
 - 902204 - Scalable Robotics
 - debugging new range and gain controls on the libgemini driver/app
 - debugging new logger feature
 - won't be deployed on sponge ridge cruise 11/B, since test and debug requires tank test
- Rich Henthorn
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Aux r&b emitter for LRAUV sim
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Next gen SES controller
 - 902306 - SINKER
 - Camera controller dev
 - Out of Office

- Nov 2: Scheduled sick day
 - Dec 18 - 28: Holidays
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Troubleshoot low iDS issues for LioniX isfet
 - Circuit worked out for n-channel nanofet
 - Coordinating next steps for recently arrived nanofet, mfet, mcap boards
 - 901904 - Deep-Sea Coral Community Observatory
 - Set up tub in seawater lab and ran some imaging tests
 - Design review and meeting
 - Overhead
 - Rec comm meeting
- Scott Jensen
 - Out of Office
 - Family leave
- Brent Jones
 - 901502 - Passive Acoustic Sensing
 - Meeting
 - Determined cause of loss of AOS serial data was due to config error in SIMRAD software
 - 902004 - Planktivore
 - Supported planktivore LRAUV deployment. ROI's were received onshore!!! Diagnosing possible outages somewhere in the slate or LCM arenas.
 - 902311 - Wire-Walker Power Generation
 - Installed new motor+gearbox on test apparatus and am performing bench tests. Looks like its about 25% efficient at the moment
- Chad Key
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 10/23-10/31 vacation (PDT)
 - 11/06-11/09? Phoenix (MST)
 - 11/20-11/24 vacation (PDT)
- Denis Klimov
- Eric Martin
 - Out of Office
 - Vacation 10/16 & 10/17
- Thom Maughan
 - Out of Office
 - Vacation in Nov. TBD, Colorado
 - Jan 9 - 12 CES
 - Feb 18 - 23 OSM24
- Mike McCann
 - 300078 - DMO Divisional Support - AUV
 - Quick look plotting from auv-python on hold to work on i2map O2 calibration
 - 901221 - Midwater Time Series
 - Writing code to walk DMO share's "Calibration Files" folder to get correct i2map O2 calibration
 - Overhead
 - Arranged MBARI tour for current capstone students at noon on 1 December, an off Friday

- Met with seminar speaker to discuss Hacking for Impact and student mentoring
- Rob McEwen
- Paul McGill
 - 300070 - DMO Divisional Support - Ventana
 - Met with Greensea's programmer to explain Ventana ground fault sampling protocol
 - 701147 - MARS O&M IV
 - Participated (via telepresence) in Thu's dive to recover main node
 - Trying to figure out how to set up Meinberg PTP timing hardware
 - 901700 - Acoustical Ocean Ecology
 - Achieved partial success in storing AOS PIC24 constants to EEPROM, needs more work
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Still struggling with radio connection between antenna aiming system and ground control station
 - 901904 - Deep-Sea Coral Community Observatory
 - Looked up lens specs for Aaron so we can design focus motor drive
 - Attended review of Multi-spectral Camera system
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Finally got PO submitted for Gen3 controller
 - Overhead
 - Had another meeting with Jason A about electrical design of his mooring
- Enoch Nicholson
 - 706008 - READI-net
 - Completed mechanical assembly of the second sampler, awaiting wiring & testing.
 - 902306 - SINKER
 - Completed Sinker deployment frame assembly
 - Began finalizing Chassis design for I-Face & Sed-Cam housings
 - Finished deep wiper assembly
 - Ordered acrylic test ports
 - 901205 - ESP SURF Center
 - Reassembled single board calibration fixture & returned to Brent
 - Overhead
 - UAV Flight Ops (Last Week)
- Tom O'Reilly
- Mike Risi
 - Out of Office
 - Out of office on Fridays
 - May 30 - June 6
 - August 21
 - September 5 - September 7
 - March 4 - March 8, 2024
- Paul Roberts
 - Out of Office
 - 10/19-10/21
- Brent Roman
 - 901205 - ESP SURF Center
 - Supporting Nadia in her struggle to debug updated ESPkoa with modified parts
 - 901913 - Wet Wifi
 - More reliable video streaming between Waveglider and Galene in test tank
 - Switching H.265 encoder from omc to nvidia proprietary module helps a lot.
 - H150 moved to hang below the Waveglider's sub section
- Carlos Rueda

- Out of Office
 - Nov 15: (virtual) Generative AI (AI Barcelona)
 - Nov 20–22: vacation
- Karen Salamy
 - Out of Office
 - On-campus 3 days/week (**T, W, TH**).
 - **JURY DUTY (until first week of Dec).**
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Create apps to view ML localizations directly in Sharktopoda for different use cases including: view all, filter by confidence, view as loaded into vars. Source code is at:
 - <https://github.com/mbari-org/m3-support/tree/main/src/main/scala/org/mbari/m3/support/apps/mlviz>
 - <https://github.com/mbari-org/m3-support/tree/main/src/main/scala/org/mbari/m3/support/etc/yolo>
 - DQ2209 - Ocean AI 2
 - Investigating a [bug](#), introduced during an upgrade, that broke the endpoint for modifying image data. This is a blocker for generating local training sets for ML.
 - Bug is fixed.
 - Running `validate-images` to populate width and height on images with missing dimensions.
 - Added support for [integration testing against SQL Server on M1 macs](#). (tl;dr SQL Server does not run native on M1 via docker, but Azure SQL Edge does)
 - Out of Office
 - Oct 30 - ??? - **Jury duty**
- Alana Sherman
 - Out of Office
 - Vacation day Monday 10/9
- George Stern