

# Engineering Weekly Report 6/27/2024 - 7/4/2024

<https://docs.mbari.org/internal/projects/Engineering/Weeklies/2024/>

## Executive Council Notes

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## Individual Activities

- Michael Anderson
- Kevin Barnard
  - Out of Office
    - Vacation Jul 5, 2024
- Francois Cazenave
  - Out of Office
    - 1 day off
- Danelle Cline
- Duane Edgington
  - Out of Office
    - June 10 - 21, 2024. Vacation UTC-8
    - June 24 - July 3 Covid :(
    - Sept 17 - 20, 2024. PyTorch Conference, San Francisco
    - Oct 21 - Nov 8, 2024. Vacation UTC+1
- Jon Erickson
- Kevin Gomes
  - Out of Office
    - Jun 21
- Andy Hamilton
- Kent Headley
  - Out of Office
    - Jun 20 (a.m. only, ETA ~10:30)
- Rich Henthorn
  - Out of Office
    - July 3 - 11: Vacation and WFH
    - July 9: SINKER test from Carson
    - Aug 26 - Sep 11: Vacation
- Brett Hobson
- Irene Hu
  - 300078 - DMO Support - AUV
    - Erik's Dorado meeting
  - 901217 - Chemical Sensors
    - Minor assistance for Thom in setting up MSC3
  - 901904 - Deep-Sea Coral-Sponge Community Observatory
    - Board turns on (not sure what has changed) but puck behavior erratic

- Tests with new optopolymer target; made new color filter, quantified intensities from lab multispec, spectrometer tests, compiled into graphs
  - Characterized spectral shift in pressure treated 370nm LED
- Overhead
  - Work on proposals
- Scott Jensen
  - Out of Office
    - June 17-21 vacation
    - July 18-23 vacation
    - July 24-29 vacation
- Brent Jones
  - 901009 - CANON
    - Wire walker final prep and deployment. Monitoring performance
  - 902111 - Carbon Flux Ecology
    - Prepping CPF for next week deployment. Fixed a bad valve controller board
  - Overhead
    - Cell package deployed on M1. Monitoring performance
- Chad Keczy
  - Out of Office
    - Out of office on Fridays
- Brian Kieft
  - Out of Office
    - 05/27-06/21 (GMT+1)
    - 07/08-07/12 (HST)
    - 07/16-07/22 (EDT)
- Denis Klimov
- Eric Martin
  - Out of Office
    - Vacation Friday June 7th
- Thom Maughan
  - 300070 - DMO Support - Ventana
    - Discussed 2025 hours with DJ, recommended 40 hrs.
  - 300083 - DMO Support - LRAUV
    - Met with Erik to discuss options for accelerating BPC2 rev2 hardware. Met with Varsha and George.
  - 300078 - DMO Support - AUV
    - Dorado emergency systems design review. Suggested use of single pair ethernet.
  - 901009 - CANON
    - Discussed HiPP eDNA 2025 with Francisco. He's indicated pressure to scale back.
    - Met with Kobun over next steps with NASA. Ran into Chris Scholin and told him about the microfluidics front end for Oxford Nanopore. Met again with Kobun and invite NASA team latter half of August. Also voiced concern about 'competitive' tone to MBARI eDNA efforts with both Francisco and Kobun.
  - 901805 - Coastal Biogeochemical Sensing Program
    - Meeting with Yui / Ken / Irene on 2025 proposal for the various carbon and nitrate efforts (Chem Sensors, Coastal biogeo, GoBGC, SOCCOM)
  - 901217 - Chemical Sensors
    - MSC3 processor and baseboard were delivered on Thursday 27 June 2024.
    - Moving from MSC2 hack board to MSC3.
    - Schedule pressure is high and balance between proposal efforts and MSC3 efforts.

- Working on MSC3 hardware bringup with Irene and hopefully Irene can help with some of the software tasks. Pushed pHFETSOS to bitbucket. Built up a portable dev setup for remote work.
  - Mooring ISUS is functioning and returning data.
- 902004 - Planktivore
  - Working on proposal. Discussions and planning for 2025 and working 2024 September deployments
- Overhead
  - Intern project meetings. Forrest is making great progress. License agreement signed! Hopefully the 3 week delay gives us enough time to work with a satellite.
- Out of Office
  - July 1-5 Vacation canceled, working on the 4th
  - July 20 to July 23 Vacation maybe
  - Aug 2nd half, maybe a week or so
  - Oct two to three weeks vacation Colorado.
- Mike McCann
  - Out of Office
    - 20 June - 19 July: Vacation
    - 22 - 25 July: ESIP Federation Summer meeting, Asheville, NC
    - 28 July - 1 August: SIGGRAPH, Denver, CO
- Rob McEwen
- Paul McGill
  - 701147.99 - MARS IV Node Upgrade
    - Reviewed new overcurrent protection circuit
  - 901904 - Deep-Sea Coral-Sponge Community Observatory
    - Got laser cable tested, rebuilt, tested again, and fabricated
    - Preparing
  - 902101 - LRAUV Technology Development
    - Helping Vartha with LRAUV sonar payload
  - 902304 - Piscivore Cam
    - Participated in 2025 proposal planning
  - 902305 - Event Detection Using the Sedimentation Event Sensor
    - Edited 2025 proposal
  - Overhead
    - Helping Justin T with LIDAR hot-water plume pumping system
- Enoch Nicholson
  - 706008 - READI-Net
    - Started working with Scott's updated valve code
  - 901007 - Benthic Biology & Ecology
    - Sent syslog to Jim
  - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
    - NB & SC surveys
  - 902306 - SINKER
    - Aligned sinking column to sediment camera
  - Out of Office
    - April 5-10 Vacation (Available via Slack & Email)
    - April 14-18 IEEE Oceans (Available via Slack & Email)
    - April 19-23 Vacation (Unavailable)
    - September 19-24 Vacation (Available via Slack & Email)
- Tom O'Reilly

- Mike Risi
  - Out of Office
    - Offsite on Tuesday and Friday
    - January 16 - January 19, 2024
    - February 22, 2024
    - March 4 - March 8, 2024 - vacation
    - April 24, 2024 - vacation
    - May 20 - May 24, 2024 - vacation
    - June 17 - June 18, 2024 - vacation
- Paul Roberts
  - 901221 - Midwater Time Series
    - i2MAP 4k recording planning
  - 901809 - Deep Sea Bioinspiration
    - Scuba-eyeris CXP 2.0 testing
  - 901904 - Deep-Sea Coral-Sponge Community Observatory
    - Phase 1 proposal
    - ROV camera fabrication planning
  - 902204 - Scalable Robotics
    - Mola stereo cameras
    - PoE interface testing on Ventana
  - 902306 - SINKER
    - Tank testing for July cruise
    - Phase 1 Proposal
  - Overhead
    - Intern Mentoring
- Brent Roman
  - Out of Office
    - June 20 - June 31 (gunkholing in the Sacramento Delta)
    - July 1 - Aug 31 (Vacation in Japan)
- Carlos Rueda
  - Out of Office
    - July 2–3, 22–25: vacation
- Karen Salamy
  - 200103 - Core CTD Data - MDUC
    - Updated ROV CTD O2 QC for various Ventana dives in the EXPD.
  - 300057 - Mooring Maintenance
    - Worked with Jared and Kevin G. on June 27 to successfully deploy the new M1 2024 into the bay.
  - 901101 - Seafloor Mapping
    - Sent a PR request for a dash update.
  - 902101 - LRAUV Technology Development
    - Spent more time this week on updates to the LRAUV Dash5 UI working with Jim Jeffers.
    - Planning to check in some code updates this week.
  - Overhead
    - Looking into attending the React Summit US conference in NYC Nov. 2024.
  - Out of Office
    - Working from home this week to care for pup recovering from surgery.
    - On-campus 3 days/week ( **T**, **W**, **TH**).
- Brian Schlining
  - 500055 - VARS, M3/RS, DSG

- Completed [first phase of development](#) of the new knowledgebase service, [Oni](#). It's been tested as a drop-in replacement for the vars-user and vars-kb services. This will allow us to drop the 25 year old vars kb application and replace it with a more modern app. We're pulling together requirements for an external contractor to work on a new web interface for managing the knowledgebase data. It's been integrated into a portable vars web stack at <https://github.com/mbari-org/m3-quickstart/tree/feature/oni> for the external contractors use.
  - Addressed UI issues in vars annotation. ([#173](#), [#179](#)). Investigating issue [#174](#). Published [new VARS annotation releases](#)
  - Working on migrating the external deep-sea guide from ione (Centos 7) to klaia (ubuntu).
  - Updated [pythia](#) with Lonny's latest yolov8 model
- 902404 - 5th Marine Imaging Workshop
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- Overhead
  - Working on 2025 proposals
- Out of Office
  - Jul 8-11 - Updating video lab at DARC
  - Jul 15-24 - Vacation
  - Aug 19-22 Vacation
  - Sep 5-9 - Vacation
  - Oct 7-10 - 5th Marine Imaging Workshop in Monterey
- Alana Sherman
- George Stern
  - 902204 - Scalable Robotics
    - Fixed broken bulkhead and worked on an anode for the sonar
    - Began detailed design for CTD and lights
  - 902304 - Piscivore Cam
    - Research TI Jacinto platform for machine vision
    - Working with camera vendors to identify optimal sensor test platform
    - Proposal meeting
- Justin Tucker
  - 901101 - Seafloor Mapping
    - LASS sled revised orientation plate and tolerances.
    - Thermal experiment - Started on motor/pump and heater design.
  - Overhead
    - Structural Analysis for ROV crane lifting assembly
- Johann Voigtlander
  - 902204 - Scalable Robotics
    - Created a datalogger to record VN300 data on a raspberry pi and integrated it onto the BlueBoat
  - 902208 - Mini ROV Operations
    - Relocated 20' container to the end of the island
    - Rebuilt manipulator control console
    - Obtained a quote for the ranger 2 system
    - Obtained a quote for Focal 907-Serial expansion
    - Integrated the VN100 & VN300 with labview
  - 902402 - CSEM
    - Refurbished the transmitting antenna
  - Out of Office
    - April 16th - May 7th Germany CSEM
    - May 8th - May 12th Vacation

