Engineering Weekly Report 11/12/2026 - 11/19/2026

https://docs.mbari.org/internal/projects/Engineering/Weeklies/2026/

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
  - Out of Office
    - Oct 22, 2026 – Oct 23, 2026 : Meta Open Source AI for Science Summit
    - Oct 26, 2026 – Oct 30, 2026 : Vacation
    - Dec 21, 2026 – Jan 1, 2027 : Vacation
- Francois Cazenave
  - 901405 - Wave-Energy Conversion for Oceanographic Applications
    - Monitoring buoy
    - Designing and ordering new float
    - Organizing equipment
  - 902106 - Niobicon-Based AUV Docking Development
    - Ordering parts in new materials
  - Overhead
    - Machinist interviews
- Laura Chrobak
- Danelle Cline
  - 901221 - Midwater Time Series
    - Run nMDS on each transect with different measures.
  - 901502 - Ocean Soundscape
    - Setup Qdrant Vector database in AWS and populated with 2026 Perch2 embeddings, dates & preparations for unit/phrase/theme pseudo labels. Used to successfully search for echolocations alone and echolocations within humpback songs.
    - Waiting for Google Gemini trusted developer access to eval Gemini
  - 902111 - Carbon Flux Ecology
    - Fixed bug in the Voxel51 bulk edit plugin in verifiedStatus/verified logic
    - Team meeting to discuss data validation and publication roadmap
    - Helping Lee Miller navigate Voxel51. They have successfully trained several classification models in the tool and uncovered a bug in the bulk edit plugin.
  - Overhead
    - Expense reports and year end purchases. Presentation prep.
  - Out of Office
    - Nov. 12 Keynote speaker, Julian Morgan School For Girls, Berkeley CA
- Duane Edgington
  - 901502 - Ocean Soundscape
    - Continued analysis. Reviewing results of 2015 through 2023 orca detections. Staged to add 2024 - 2026 next.

        - Created proof of concept livestream orca detection dashboard. Very cool. Will present to the team Nov 18.
        - May pivot briefly to add Sperm Whale detector to perch-hoplite model to support Will in his quest to tag sperm whales (alert when sperm whale clicks detected ~real-time)
    - Out of Office
        - Nov 24. Medical.
- Kevin Gomes
- Andy Hamilton
- Kent Headley
    - 902204 - Scalable Robotics
        - ROS and standalone builds working, along with ROS2 support in sen_bp_oculus.
        - The change set for btable metadata and raw image PNG saves is complete
        - Reviewing the new publishing decimation option added by Javi.
        - Blueboat deployment (test cerulean)
    - Overhead
        - Hyperion term SOW
        - misc admin
    - Out of Office
        - WFH Thu 11/19
        - Arr ~1200 Tue 11/24
- Rich Henthorn
    - Out of Office
        - Dec 21 to Dec 31 - Vacation
- Akshay Hinduja
    - 901809 - Deep Sea Bioinspiration
        - Logging improvements for deployable AI backseat adaptive module
        - Setup debrief meeting for deployable AI
        - Documentation for meeting
        - Coordinate with Korneel on developments
    - 902101 - LRAUV Technology Development
        - Deployment for terrain avoidance
        - Parameter tuning in field
        - Closed loop runs successful
        - Work on improvements and switch to pitch commands instead of depth for faster react
        - Test in sim
    - 902204 - Scalable Robotics
        - Worked on auto ranging feature for sen_norbit
        - Tested auto ranging, works so far
        - Make and setup new lightweight realtime bathy mapping tool for ASV
    - Out of Office
        - Jan 18, 2027 - Feb 5, 2027 : Vacation Mumbai

- Brett Hobson
- Irene Hu
    - 901101 - Seafloor Mapping
        - Planning out chemistry tests and solutions to make
    - 901217 - Chemical Sensors
        - Random support work
    - 901805 - Coastal Biogeochemical Sensing Program
        - Alkalinity

            - Call with Lionix regarding platinum coverage and substrate leakage
    - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
        - Submitted application for Part 107…
    - Out of Office
        - Nov 23-27
- Scott Jensen
    - Out of Office
        - October 29-30
- Brent Jones
    - 901502 - Ocean Soundscape
        - Monitoring deployed WW
    - 901805 - Coastal Biogeochemical Sensing Program
        - Testing SBE5P pump for spray
        - Design SBE5P pump board for spray
    - 902004 - Planktivore
        - Investigated mariscope uv gizmo
        - Designing uBlaster LED driver board and power board
- Chad Kecy
    - Out of Office
        - Out of office on Fridays
- Brian Kieft
    - Out of Office
        - 07/17-07/22 (GMT -4)
        - 07/26-08/07 (GMT +9)
        - 08/26-08/28 (GMT -4)
        - 08/29-09/02 (GMT -5)

- Denis Klimov
- Eric Martin
    - Out of Office
        - Sick 8/24-8/26
- Thom Maughan
    - Out of Office
        - Wed 28 Oct 2026
        - Thur 12 Nov 2026
        - Wed 2 - 4 Dec 2026
- Mike McCann
    - 901101 - Seafloor Mapping
        - MB-System mbpy_3dtiles and supporting programs merged into master
        - Milestone 1 of X3DOM contract work with Earthstruct has been completed
    - 901221 - Midwater Time Series
        - Reviewing correction method for O2 calibration config files on i2MAP
    - 901910 - Plankton Taxonomic Groups from AUVs
        - Reviewing new Issue for integrating Planktivore data into STOQS
    - Out of Office
        - Half time schedule: Generally away Mondays, Fridays, and alternate Thursdays
        - 24 Nov - 2 Dec: Remote/Comp time
        - 12 Jan - 4 Feb: Remote/Comp time
- Enoch Nicholson
    - 901007 - Benthic Biology & Ecology

        - Barb Fitting Design
    - 901205 - ESP SURF Center
        - FIDO Support
    - 901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach
        - Sanctuary Report and permit renewal
    - 902101 - LRAUV Technology Development
        - Hydraulic test bench
    - Out of Office
        -
- Tom O'Reilly
- Mike Risi
    - 200105 - Core Navigation - MDUC
        - Working on UDP interface for 4K lapbox
    - 300062 - DMO Support - Doc Ricketts
        - Met with Drew discuss navproc virtualization plan
        - Looking into auto-head loop to help with vibration testing on Ricketts
    - 300070 - DMO Support - Ventana
        - Completed pan and tilt control for Ventana, working with pilots on testing and deployment
    - 902606 - Low Altitude Survey AUV
        - Working with Chad on LASAUV trigger board
        - LASAUV meeting to discuss end year goals and 2027 LASS work
    - Out of Office
        - Offsite on Tuesday and Friday
        - January 2, 2026 - vacation
        - January 19, 2026 - January 30, 2026 - vacation
        - March 4-5, 2026 - vacation
        - March 16, 2026 - vacation
        - March 30, 2026 - vacation
        - May 18, 2026 - vacation
        - June 22, 2026 - vacation
        - June 29, 2026 - July 1, 2026 - vacation
        - August 17, 2026 - vacation
        - September 8, 2026 - September 10, 2026 - vacation
        - October 12, 2026 as vacation
        - November 2, 2026 as vacation
        - November 30, 2026 - December 4, 2026 - vacation
- Paul Roberts
    - 901221 - Midwater Time Series
        - 4k video updates to i2map
    - 901809 - Deep Sea Bioinspiration
        - Triton62 data review
        - Triton-cam repair and calibration
    - 901904 - Deep-Sea Coral-Sponge Community Observatory
        - Dec 7 cruise planning
    - 902111 - Carbon Flux Ecology
        - SINKER data validation discussion and planning
    - 902204 - Scalable Robotics
        - mola strobes and interface
    - 902603 - Miniature 4K Subsea Optics

        - NDA with Sunex, zemax simulation of stock sunex lenses
    - 902606 - Low Altitude Survey AUV
        - regular meeting and Voyis coordination
    - Overhead
        - CNC Machine Shop supervisor interviews
    - Out of Office
        - Nov 19-Nov 27, Dublin, Ireland, vacation

- Brent Roman
    - Out of Office
        - Sept 8 - Oct 16 (vacation)
- Carlos Rueda
    - 901502 - Ocean Soundscape
        - Group meeting with external collaborators
    - 901513 - Targeted Sampling by AUVs
        - With Yanwu, reviewing May 2026 chl patch tracking exercise data.
    - 902101 - LRAUV Technology Development
        - TethysDash 4.99.165, dash4 4.99.76.
        - TethysDash `compose.yml` with mitigation to java4sell security issue while new based image is available with a proper fix.
        - TethysL 5.0.4. (since 5.0.0 with a new Rust implementation)
    - 902504 - Scalable Semantic Mapping
        - Group meeting. Dial debrief mtg scheduled to go over observed lagging issues.
    - Overhead
        - ESIP: fixed COR operational issue.
    - Out of Office
        - Dec 9-10: vacation
        - Dec 22-Jan 7: vacation
        - Jan 15-21: vacation
- Karen Salamy
    - 300057 - Mooring Maintenance
        - Operations
            - `tarraw_oa2_202611` script + `process oa2_202611` cron entry added for dock testing ahead of Nov 24 OA2 mooring turn
            - Checks of data downloads for all mooring including the 202611 testing for OA2
    - 902101 - LRAUV Technology Development
        - Bug Fixes
            - #893 `merged` — TrackDB positions timeout increased to 15 s to match Dash4
            - #896 `ready` — "Use for new mission" now advances past Mission selection automatically. 11 commits: Strict Mode double-mount, auto-advance race, two-way step sync, Back-then-reselect
            - #894 `ready` — TrackDB position refresh reduced to 1 min to match Dash4. Also adds `isTransientError` helper; stale track stays visible during background refresh failures and network errors
        - Review - TethysDash API Audits
            - 4.99.163 *(Nov 16)* · tethysdash#146 — Assessed: D-List now auto-generated on deployment end/recover. No code change needed.
            - 4.99.164 *(Nov 18)* · tethysdash#147 — Assessed: Cell ACK `unixTime`/`isoTime` accuracy. Reviewed `determineCommandStatus.ts`. No code change needed.
        - In Review - Emme currently reviewing

            - #889: Prevent prior-run commands from appearing as running in Schedule
            - #894: Reduce TrackDB position refresh to 1 min
            - #895: Cellsat commands no longer show Timed Out after cell delivery
            - #896: "Use for new mission" advances past Mission selection
    - 902111 - Carbon Flux Ecology
        - Features
            - #149 (draft): Add Planktivore particle size spectrum (hourly + daily) and daily mosaic cards to PSD and ROIs tabs
            - Branch: SedFlux 2025+2026 overlay plots added to Flux and PSD tabs. No PR yet
        - Operations (snowfall and thalassa servers)
            - ADCP data gap (Nov 6–10) infilled. Wrote and deployed `generate_deployment_adcp.py` — fills the since-deployment card that `generate_adcp_report.py` had no mode for. Notified Paul Roberts and Colleen Durkin.
            - SedFlux plotting scripts updated: 5 files in `/home/salamy/SedFlux_scripts/`
            - Contacted IS for new write permissions on thalassa DURKIN_DATA
        - Issues Filed
            - #148: feat(data-viz): add Planktivore particle size spectrum and daily mosaic cards
    - 902403 - Expedition DB Modernization
        - Planning
            - EXPD DB migration: Perseus → Cassiopeia. Approach confirmed as CNAME (`sh-sql-prod_expd.shore.mbari.org` → Cassiopeia) so no connection string changes needed — clarified after initial confusion over whether strings would need updating. Second CNAME covers unknown machines at cutover. Neil ran a test backup/restore: ~60 min estimated downtime. Date TBD.
    - Overhead
        - Transferred pre-cruise responsibilities to Lisa E. while Matt was out of town. These have been re-set to Matt in charge upon his return today.
    - Out of Office
        - March 15-24, 2027 - Vacation
        - On-campus 3 days/week (**T, W, TH**). New OFFICE - G106.
- Brian Schlining
    - 500055 - VARS, M3/RS, DSG
        - Added cli for dropping ML generated annotations from VARS.
        - Added cli fix for importing very large ML generated annotation sets.
        - Misc: apply drift correction to pisicvore, fix UI label in VARS Annotation, updated timezone override for piscivore videos.
    - 901809 - Deep Sea Bioinspiration
        - Mitigating an out-of-memory issue with the FathomNet REST API. Consolidated paging implementations in the REST API. Updated the web-ui to use the new paging implementation. Deployed the changes to the development server for testing. Updated the development servers NGINX proxy and configuration to match the production environment.
    - 902403 - Expedition DB Modern
        - Numerous updates to the web UI.
    - Overhead
        - Added CORS headers to responses from https://search.mbari.org.
    - Out of Office
        - Nov 12 - Vacation

- Quinn Shemet
    - Out of Office
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- Alana Sherman
    - 901904 - Deep-Sea Coral-Sponge Community Observatory
        - Worked on Deep Sea Connect for Mega schematics and relearned how the system works and also discovered and issue with the
    - 902401 - Geo-Sense
        - Still working with Nuria and Basilio on our shipments
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    - Overhead
        - El Nino meeting at MLML
        - MT team meeting and Sups meeting
        - Machine shop supervisor interviews

    - Out of Office
        - Sick for one day last week
- George Stern
    - 300078 - DMO Support - AUV
        - Motor and board test mechanical setup
        - Initial board power up and beginning software integration
    - 902204 - Scalable Robotics
        - Setup mola2; even NVIDIA has gremlins in the board bring up, still not clear why 2 jetsons flashed with the same build which are supposed to be identical behave quite differently…
    - 902304 - Piscivore Cam
        - Brent discovered video from the last deployment's Gen4 Camera was running fast; after a lot of research we discovered Oclea's driver binary likely assumed an incorrect clock coming from framos hardware; fully planned and began executing a hardware fix for the next deployment on Nov 30th but Oclea got us a new driver in record time which appears to fix the problem
    - Out of Office
        -
- Justin Tucker
- Johann Voigtlander
    - 902208 - Mini ROV Operations
        - Back from Italy, purchased sonardyne beacon battery and iwand.
    - 902504 - Scalable Semantic Mapping
        - Blueboat mapping of harbor, testing new software
- Emme Wiederhold
    - Out of Office
        - November 25th - December 8th