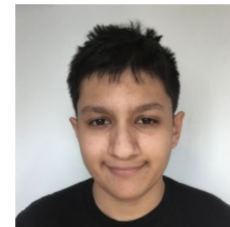
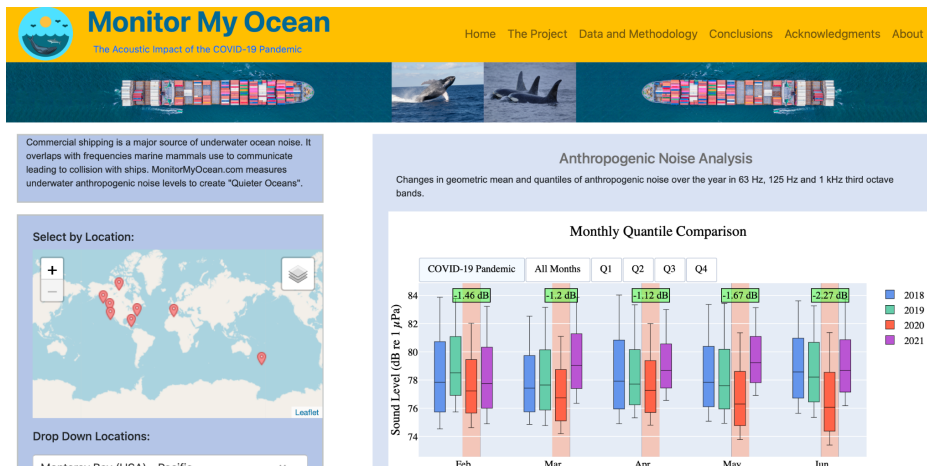


Engineering Weekly Report 5/12/2022 - 5/19/2022

Executive Council Notes

- Soundscape project data on [pacific-sound registry in the AWS Open Data](#), and our [open documentation](#) contributed to the 2nd place winner in the 2022 International Science and Engineering Fair, Earth and Environmental Science, Artash Nash, a 10th grader!. Check out his site here: <https://www.monitormyocean.com> . He tells us his next step is to work on "marine mammal signature detection." Our work is clearly having an impact.



Individual Activities

- Kevin Barnard
 - 701139 - ML Tracking
 - Continued analysis of May 24-25 data; working on generating visualizations of track information
 - 902002 - FathomNet
 - Met with VIAME and BIIGLE to discuss potential interactions with FathomNet
 - Started working on Medium article for FathomNet-compatible image serving solutions
 - 902005 - VARS Annotation Assistance
 - Implemented several BoxJelly features to prepare for VL introduction
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring buoy
 - 902106 - Niobicon-Based AUV Docking Development
 - Learning how to use mooring simulation software
 - Organizing collaboration with WHOI
 - Recovered AUV dock mooring, found a flooded termination and worked on repairing
 - Help with abstracts of 2 new projects
 - Out of Office
 - Returned from 12 days vacation
- Danelle Cline
 - 901502 - Soundscape Research and Education
 - Working on blog materials for upcoming World Ocean Day with John, AWS partners and ITD group.

- Switching audio streaming to a new production Windows server shoutcast.shore.mbari.org in response to changes in our streaming provider.
 - Finished ansible deployment of Aurora data use workflow
- 901603 - Video TAG
 - Read project abstracts
 - Abstract submission for [2022 Marine Imaging Workshop](#)
- 902005 - VARS Annotation Assistance
 - Added support for mirrored Titan prefixes with unique ISO tags in processing workflow S3 buckets. Testing looks good on that.
 - Moved YOLOv5 detection-tracking docker image to docker hub instead of ECR; added linux/amd64 and linux/arm64 builds.
 - Testing batch CDK stack. Working through issues with IAM, but expect this work to be finished soon.
 - Finished up ansible deployment of [deepsea-ai](#) stack.
- 902202 - MBARI Cloud Integration Exploration
 - Discussion with Duane about a brainstorming session with Kevin. Possible idea to use STOQS parquet data in data lake as proof of concept.
- Overhead
 - Moving my office is going slow; I hope to finish by early next week.
- Duane Edgington
 - 901603 - Video TAG
 - Read 2023 Abstracts
 - Attending abstract presentations May 19.
 - 902005 - VARS Annotation Assistance
 - Continued project work.
 - Weekly team meeting.
 - Overhead
 - Moved computer out of B109. Running in Axxx
- Jon Erickson
 - 701145 - Penguin Hotspots
 - Working on weight and balance for the EK-80 Gimbal assembly on Remus. Right now we are too heavy.
 - 902010 - Mesopelagic LRAUV
 - The end dome machining of the castings is in the shop queue.
Still working with and advising Quest Institute. Mostly about their MARS experiment.
- Ben Erwin
 - Out of Office
 - Vacation 2/12-2/20
- Kevin Gomes
 - 901009 - CANON
 - Migrated ODSS to newer and open source licensed version of ExtJS to avoid licensing costs from Sencha.
 - Something strange happened with podman that caused problems with ODSS and created an outage for a few hours on Tuesday night. Fixed and deployed updated container
 - After Carlos moved the help file to our new documentation system (thanks Carlos!) and since I was in the ODSS anyway, deployed an updated the pointed the ODSS help page to that doc.
 - Added more NOAA charts (and created documentation on how to do so) to support the LRAUV deployments for ECOHAB.
 - 901915 - Improving the Impact of MBARI's Data
 - Working with Visceral on Data templates for new web site

- Starting a document to map data sources for/from new web site to various sources
 - Starting discussion with Rob S and Katie P on how data and notebooks will be served on new site.
- 902202 - MBARI Cloud Integration Exploration
 - Worked through details on migration to Control Tower and think I have the steps in place to run with it.
 - Trying to coordinate a visit from AWS in July (looks like August might be better)
- Overhead
 - Abstracts and meetings
 - Strategic Roadmap writing and committee
 - Helped Mandy troubleshoot some issue with Google docs for Strategic Roadmap
 - Various Slack support for ECOHAB (mostly)
 - Fixed issue with periodic elements table on our website
 - Working on resource request to support Giancarlo's projects
 - Group meeting
- Out of Office
 - 5/17-18: Sick leave
 - 6/20: Vacation
 - 8/1-8/5: Vacation
 - 10/3-10/6: Vacation
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Working through ROV TRN cruise data with Steve et al to test software and resolve issues.
 - Overhead
 - SRSC: work on challenge text
 - EE Hire: review job description, application
 - Misc admin: resources and more
 - Meeting w Carbon Waveglider team & Paul M re material transfer
 - Out of Office
 - July 14-29 (tentative, vacation)
 - Sick leave
- Rich Henthorn
 - 800139 - EyeRIS (Remote Imaging System)
 - ELI to camera controller serial traffic
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Addressing faulty comms to heave cone controller
 - Out of Office
 - July 4 - 18, WFH and vacation time, email, phone, zoom OK
 - Aug 30 - Sep 16, vacation in Europe, email
 - Sep 22 - 29, Sta.M Cruise (final scheduled cruise of the Western Flyer)
- Brett Hobson
- Scott Jensen
- Brent Jones
 - 901112 - The Monterey Bay Time Series
 - Prepped and deployed CPF
 - Deployed and flying Daphne and Pontus
 - 901805 - Coastal Biogeochemical Sensing Program
 - Final OCR bracket for Spray sent to production
 - 902004 - Planktivore

- Analyzing data from initial field test. Spray performed 1 dive to 40m
 - Power draw on main batteries presents an issue
 - Flight characteristics hard to analyze due to shallow dive. Need to do a deeper dive
 - Overall HUGE SUCCESS
 - Overhead
 - Moving offices
 - Working on 2023 project abstract for Wire Walker power generation
- Chad Keczy
- Brian Kieft
 - Out of Office
 - 05/15 - 06/04 (EcoHAB PDT)
 - 07/02 - 07/09 (HST - vacation)
 - 07/13 - 07/22 (AKDT)
 - 08/01 - 09/03 (EDT)
 - 09/12 - 09/28 (GMT+2 - vacation)
- Denis Klimov
- Diana LaScala-Gruenewald
- Eric Martin
- Thom Maughan
 - 901009 - CANON
 - Created an account for Katie Pitz on DeepRip for a bioinformatics run.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Support for Brent on integration of MFET with OCR504.
 - Starting to organize parts ordered from Chinese contract manufacturers for an MpHOX, MFET build.
 - 902004 - Planktivore
 - Post cruise engineering data. Investigated Spray primary lithium battery behavior under load. Canceled Monday's deployment on Sunday.
 - Working on a cruise plan / checklist doc. Trying to get Planktivore out one more time before handing the vehicle to the Carbon Lab.
 - Attended Embedded Vision conference in Santa Clara. Talked to various vendors about low(er) power solutions for Dual 12MPixel, 12Bit, image pipelines with OpenCV support. Amberella was recommended by Leopard Imaging. AI at the Edge was the theme of the show.
 - Exploring Xilinx and Lattice FPGA product offerings
 - Overhead
 - Staff council meeting.
 - Went on a Waveglider deployment with Jared (Chris out sick) and was able to have recent hire Lenka go out as crew.
 - Office move coordination with Greg Voogd. Best plan is to wait until Danelle's office gets a 20amp dedicated service. Looks like mid-June. In the meantime will use B109 for Spray Glider support.
 - Out of Office
 - TBD trip to Montana.
 - May 27 - 31 Camping
 - Jul 6 - 19 Camping, Bear Lake Monster Swim
- Mike McCann
 - 901221 - Midwater Time Series
 - Testing auv-python workflow by processing entire i2map archive through to a STOQS db
 - Fixed issue with calibrating i2map seabird25p temperature and conductivity – there are two sets of calibration coefficients! Not one set as in Dorado Gulper.

- Starting on computing salinity and processing dissolvedO2
- Overhead
 - Getting Peter's help to fix git/ssh key problem for ssdsadmin on elvis
- Out of Office
 - 27 June - 29 July: Vacation
- Rob McEwen
 - 901405 - PowerBuoy
 - Verified equations of motion for simulating John Ryan's buoy/anchor drop.
 - Simulated buoy travel after anchor landing. (Andy's code).
 - Now looking at Open Robotic's added mass code for the Power Buoy simulator.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Cleaning up Believer 3 build.
- Paul McGill
 - 701145 - Penguin Hotspots
 - Working on getting AOS accelerometers potted. We are short of techs this week.
 - 901618 - Pelagic-Benthic Coupling and the Carbon Cycle
 - Met with Duane E. about Laser Measure and am trying to get latest software from Dan Davis.
 - Began tracking down lasers and batteries for Smith Macro Cam to be deployed June 29th.
 - 901700 - Acoustical Ocean Ecology
 - Worked with Knute to track down source of ground fault on MARS Echosounder. We found two bad connectors and are working on getting them replaced.
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Am editing Fanny's paper.
 - Overhead
 - Had online meeting with NOAA/PMEL to discuss transfer of Carbon Waveglider parts and design.
 - Out of Office
 - Was on vacation April 21st thru May 11th.
- Tom O'Reilly
- Craig Okuda
- Doug Pargett
- Ben Raanan
 - 300083 - DMO Support - LRAUV
 - Prep and support for Daphne and Pontus time-series deployments
 - 902009 - AUV User Experience Design
 - 2023 abstract
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Supporting EcoHAB deployment in Santa Barbra
 - LRAUV video clip
 - Resolved network configuration issu on LRAUV backseat computers
 - 902204 - Scalable Marine Robotics Foundations
 - Working on project update presetation
 - Testing 4D science data interpolation
 - Integrating simulation env with TethysDash
 - Integrating new battery simulation with LRAUV application
 - More work on DVL plugin
 - Intern project rampup
 - Overhead
 - SR committee
- Mike Risi

- Out of Office
 - May 5 - vacation
 - May 9-10 - vacation
 - June 2-8 - OI cruise
 - June 10-14 - vacation
 - June 20-22 - vacation
 - August 8-9 - out of office
- Paul Roberts
 - Out of Office
 - 4/2 - 4/9 (spring break san diego)
- Brent Roman
 - Out of Office
 - Thanked and Excuses from Jury Duty last Friday afternoon.
- Carlos Rueda
 - Out of Office
 - May 16-20: vacation
- Karen Salamy
 - Out of Office
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- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Iron Mountain video imports.
 - 902002 - FathomNet
 - Deployed first iteration of Ocean Vision AI game to <http://fathomnet.org/game-prototype-v0.2.0>
 - Meetings with Viame, Biigle developers to discuss FathomNet integration.
 - Reviewed abstracts for marine imaging workshop
 - 902005 - VARS Annotation Assistance
 - Running analysis comparing human annotations to ML annotations.
<https://github.com/mbari-org/vaa-track-analysis>
 - Overhead
 - Abstract presentation
 - Meeting with GEOMAR to discuss a VARS deployment.
 - Out of Office
 - Jul 7-8 Vacation
 - Jul 25-28 Vacation
- Alana Sherman
 - 901618 - Pelagic-Benthic Coupling and the Carbon Cycle
 - Getting macro set up for testing before June deployment
 - 902208 - MiniROV Operations
 - Going through storage and cleaning out many years of accumulated and misc parts
 - Overhead
 - Worked on abstracts and abstract presentations
 - Seafloor process hiring committee activities: interviews for our second candidate
 - Strategic roadmap
 - Out of Office
 - Out with sick kids Monday afternoon