

Brian Kieft Sorted By Project

300082 - DMO Support - Wave Glider

- Piloted bioacc vehicle this past weekend (Week 11)
- Worked on hotspot 3 eavesdropping/tracking code for CANON. Couldn't get new cell/sim to work. Chris/Adriana installed a new one from the vendor. (Week 37)
- Recovered Tiny on Thursday (Week 47)

300083 - DMO Support - LRAUV

- Prepped Pontus for deployment (Week 3)
- Supported MBTS deployment (Week 4)
- Launched LRAUV daphne Monday for MBTS. (Week 11)
- Supported Daphne MBTS run (Week 14)
- Investigated data issue with sampler following false start on sampling mission. Attempting to streamline sampler files to stakeholders. (Week 14)
- Supporting Synchro deployment (Week 16)
- Supported MBTS deployment. Daphne recovered. (Week 16)
- Diagnosed sampler data ingest issues for MBTS. New solution offered. (Week 16)
- Lots of work with existing deployments: optim, piscivore, Durkin Lab, Monique, and engineering tests. (Week 19)
- Worked with WHOI/Carlos to get backup dash up and running to facilitate power off Friday recovery and provide future backup if/when MBARI goes dark. (Week 19)
- Provided beacon ids to ship for current deployments. Working on automation in ODSS. (Week 19)
- On call for Daphne/Pontus deployments (Week 30)
- Standard on call for deployments happening in Monterey Bay. Currently that's Daphne and Ahi. (Week 31)
- Supporting planktivore/sampling deployment going on now (Week 35)
- Troubleshooting issues with puck sensor and CTD hysteresis on Daphne. (Week 35)
- Supporting MBTS run with Daphne (Week 37)
- Supporting CANON and EcoHAB field programs (Week 39)
- Supported CANON/EcoHAB deployments. Issues that required on call response mostly involved fouling, failed control, and failed comms. (Week 40)
- Assisting in testing Daphne satcom issue. Water detected in connector. (Week 41)
- Supporting Daphne deployment (Week 49)

706007 - LRAUV USGS Great Lakes Prey Fish Assessment

- Dealt with data unserialize issue from summer deployment. All sample data is now unserialized appropriately. (Week 3)

- Standing by on booking. Got initial shipping quote (Week 19)
- Working with team back home and on shipping logistics. We plan to ship tomorrow 7/11 (Week 28)
- Launched LRAUV Triton in Lake Huron for coordinated bioacoustic ship survey (Week 30)
- (Week 30)
- Triton was recovered this morning from Cheboygan MI after 10 days of bioacoustic survey. Next stop is Lake Superior. (Week 31)
- Triton and associated gear have arrived home! Will get to data download shortly (Week 35)
- Handled a missing data issue per their request and updated for stoqs (Week 49)

708143 - EcoHAB

- Recovered Ahi/Planktivore following a successful run in the N bay for the final EcoHAB. (Week 40)

901009 - CANON

- Preparing for CANON sampling mission with intravehicle acomms. Testing Yanwu's missions. (Week 35)
- Preparing makai for test ESP deployment (Week 35)
- Setting up acomms testbed via LRAUV dock to test eavesdrop functionality on Waveglider. Test loaded firmware on benthos modem to simulate a load at sea. Somewhat risky (Week 35)
- Working with Yanwu on mission testing and MMP validation (Week 37)
- Worked on various mission iterations for intravehicle comms and Waveglider eavesdropping (Week 39)
- Fixed up a couple hotspot scripts to be compatible with this year's experiment (Week 39)
- Wrapped up CANON for the year following mostly successful sampling on Makai and a full load of samples on Brizo. (Week 40)
- Yanwu and I elected to skip sample coordination by acoustics and rely on clock time to alternate. (Week 40)
- First time demonstrating sustained OTH eavesdropping from Waveglider using DATMMP interface. This feature was important in passing along sample numbers from underwater allowing vehicles to remain submerged. (Week 40)

901513 - Targeted Sampling by AUVs

- Assisted with sim debug (Week 3)
- Investigated a couple issues with PAM mission with Yanwu (Week 4)
- Supported weekend testing of PAM missions (Week 4)
- Troubleshoot gazebo sim internal with Yanwu. Fixed nvidia driver issues. (Week 6)
- Lab tested gain change for buoyancy inner PID P term for more aggressive buoyancy control during PAM missions. Will sea trial today. (Week 6)

- Working on PAM changes with Yanwu to get higher precision buoyancy control (Week 10)
- Worked with Yanwu to tune buoyancy a bit for the next test at sea. (Week 11)
- Worked with Yanwu on missions for current science deployment (Week 19)
- Investigating vertical mode toggling (Week 30)
- Issues with Ahi responding to acommms mission terminate from Daphne. Initial tests worked well the other direction. Investigating. (Week 35)
- Worked with Yanwu to test missions for CANON (Week 39)
- Working through some data issues with Yanwu (Week 40)
- Looking into acommms issues during preCANON trials involving coordinated ops and terminate mission flag for CANON sampler. DATMMP seems to be missing incoming data though depths were quite shallow from the vehicle sending. (Week 41)
- Troubleshoot issue with nan values for ESP sample volume and sample number. Values are being requested after component is powered off. (Week 41)
- Paper reviewed and edits submitted (Week 47)
- Reviewing and testing new peak detect for backseat variables (Week 47)
- Assisted with fixing build issue (Week 47)
- Deployed ahi for planktivore adaptive sampling testing which was successful. (Week 49)

901902 - Unoccupied Aerial Vehicles for Science, Operations and Outreach

- Planning for coordinated ops Friday at Terrace Pt. (Week 3)
- Supported coordinated flight LRAUV run off Terrace Pt. (Week 4)

902010 - Mesopelagic LRAUV

902101 - LRAUV Technology Development

- Deployed Tethys for more docking work. Debugging some gain issues with the heading command (Week 2)
- Worked with Brent to solve networking issue surrounding the subsea serial port server on the dock. (Week 2)
- Met with Scott to do main thruster diagnostics (Week 2)
- Removed a bunch of dash user accounts for added security (Week 2)
- Debug of vertical control issue during buoyancy controlled depth causing vehicle stall on initial dive. (Week 3)
- Did Thruster HE component testing to attempt to provide more startup torque. Interesting issues with drawing lots of current when spinning very slow. Continuing to investigate with Scott. (Week 3)
- Initial lab MMP testing commenced following the latest fixes. Looking good so far. (Week 3)
- Dataviz lockfile issue solved. (Week 3)
- Tested ingest of plankton predictor outputs on Pontus. Will test at sea next. (Week 3)
- Met with dash5 team to discuss progress and next steps. (Week 4)
- Fixed up data scripts for 2024 data (Week 4)

- Investigating vertical mode flipping in various near bottom missions (Week 4)
- Worked with Scott to test HE Thruster (Week 4)
- Investigated delay in heading command for docking. Appears to be sensor clock drift. (Week 4)
- Lots of Gazebo simulator work. Pushed new docker images to public repo. (Week 6)
- Testing with WHOI on gz sim (Week 6)
- Lots of testing on Galene and Ahi following Mon/Tue deployments. (Week 6)
- Fixed issue with goToSurface, altitude envelope, and keepstation behaviors (Week 6)
- Fixed vertical control mode flipping issue (Week 6)
- Did another basic MMP test in the lab (Week 6)
- Fixed up some config issues with our tethysl default missions (Week 6)
- Made a repo to hold our Thruster HE code (Week 6)
- Made a release repo for our partners at WHOI to use (Week 6)
- Fixed an issue with DAT timestamp being written with drift from DAT. Converted back to vehicle time. (Week 6)
- Sent fuel gauge test to WHOI collaborators and helped prep for Buzzards Bay deployment. (Week 6)
- Debugging WHOI bottoming incident during B&T. Solution sent. (Week 6)
- Reviewed PR for onboard TethysL execution. Testing at sea today. (Week 6)
- Signed SOW for 4 mo support work via Sumo Creations. Will track EV against issues for next 4 months to determine next steps. (Week 8)
- Debugging docking runs with Rob (Week 8)
- SOW approved for UX support through mid-year (Week 10)
- Created header text for export control and IP. Waiting on legal. (Week 10)
- Ran forensics on tail mission failure. Issues were misconfigured DAT and issue with WPT behavior. (Week 10)
- Lots of GZ sim work for TRN (Week 10)
- Supported Ahi/Galene deployments for testing vertical control changes and tail mission fixes. (Week 10)
- Flipped AHRS configs to base for all vehicles (Week 10)
- Pushed docker sim to public repo with latest (Week 10)
- Merged Feb release and started march (Week 10)
- Met with battery team to discuss integration/architecture. Folded repo into LRAUV project. (Week 10)
- Did some more sim work for TRN data plumbing. Some issues came up and I'm working through it. (Week 11)
- Working with Daphne/Ahi deployments. Ahi launched yesterday, Daphne was Monday. (Week 12)
- Wet wifi work with Brent. Testing at sea tomorrow (Week 12)
- Instrument debugging on Aku/Pontus (Week 12)
- Finished SW headers with Quinn and opened repositories to Saab Inc. (Week 14)
- Lots of work with Saab SW dept this week getting the host sim and build environment up and rolling (Week 14)

- Met with WHOI to discuss upcoming scallop deployments and dash failover options. (Week 14)
- Updated Thruster HE configuration on two vehicles for testing at sea with lower P term gains for turbo mode. (Week 16)
- Diagnosed and fixing an issue with Galene's buoyancy system involving a pot change inside the vehicle. Hoping to close today. (Week 16)
- Got power numbers for Monique for planning purposes for deployment (Week 19)
- Implemented cell only for chl back to shore (Week 19)
- Vehicle prep for all these deployments (Week 19)
- Various minor bug fixes and added functionality of rudder angle during go to surface behavior following an incident attempting to recover a heavy vehicle caught mid water. (Week 19)
- Fixed buoyancy neutral issue first noted at WHOI where buoyancy setting from B&T was not being set properly. (Week 19)
- Random bug fixes including ESP dual lcb turn off (Week 35)
- Cradlepoint configs switched back to domestic (Week 35)
- Working with Saab to replace their developer Ilya and get some momentum rolling on tech transfer. (Week 35)
- MMP testing and canon preparation. Running Pontus/Brizo for testing. (Week 37)
- A couple minor bug fixes but was able to successfully deploy the DAT MMP component for the field experiment. Currently working on merging into the release following successful testing. (Week 39)
- Loading up some new bugs in Jira (Week 40)
- A couple bugs fixes in JIRA and a couple added. (Week 41)
- First bioacc sea trial with Aku. Recovered today following a mass shifter failure and oil leak. Diagnosing and will get back out. (Week 47)
- Tested os build (Week 49)
- Tuned motor controller and tested at 1.5 m/s. 33% increase in speed now available. (Week 49)
- Debugging oil leak on Aku (Week 49)

90210150 - LRAUV Tech Txr Saab

- More repo access (Week 47)
- Minor support for TDP (Week 49)

90210151 - LRAUV Tech Txr WHOI

- Worked with team on build environment and recent deployment for near bottom survey. Deployment was a huge success. (Week 47)
- Investigated issue with sim data on host. (Week 47)
- Worked on support for host sim and various other system questions (Week 49)

902106 - Niobicon-Based AUV Docking Development

- Lots of docking up until this Saturday when vehicle and dock failures caused the suspension of docking tests until the mooring is recovered. (Week 3)
- Met with team to prepare for recovery and science deployment (Week 4)
- Met with team to discuss April deployment and what needs to be done (Week 12)
- Worked with Rob on docking sim stuff (Week 14)
- Pontus docking has reached a milestone as of yesterday: LRAUV docked, charged, and communicated from underwater via the rod up through cell back to shore. Full dash command and control was demonstrated while the vehicle was on the dock. This opens up a vast array of new applications including event response observing and persistent presence. (Week 30)
- Docking was going well but the arm is having communication issues. Attempted LCB swap which worked for a little bit but then failed again. Diagnosis needed. (Week 31)
- Lots of docking work this week. Swapped a drop weight on pontus yesterday and got it back out. (Week 35)
- New docking record of spending over 24 hours on the dock charging. (Week 35)
- Merging DAT interface file for backward compatibility. Firing up Elecia White to add the discrete set/clr functionality to DATMMP to round out the component for docking. (Week 40)

902405 - Precision Control Technologies

- Met with team yesterday and today and have a plan to move forward with TRN solution ingest onboard the LRAUVs. (Week 2)
- Met with team to test initial ingest of TRN data. Rich is making updates to publish lat/lon solution and we'll ingest and use it as a fix. I need to fix the sim to start over the test site at Portuguese ledge. (Week 3)
- Met with Steve/Rich/Michael to work on multi-vehicle (conav) simulation. (Week 11)
- Dealing with various networking issues on the lab sim setup. Trying to get Steve a sim run with TRN Data Bridge in place. (Week 12)
- Got Steve some initial data from the gazebo sim with TRN running. (Week 14)
- On hold until after 5/14 (Week 19)
- Met with Steve/team last week to go over results from simulation (Week 19)
- First TRN ingest deployment on an LRAUV occurred on Pontus. Met with Steve today to go over results which were generally favorable. Fine tuning various parameters and will run again soon. (Week 47)
- Deployed Pontus for revised TRN testing (Week 49)

DQ2317 - US Oil Detection in Freshwater

DQ2322 - Denmark Windfarm

- Have begun initial logistics for shipping. Meeting tomorrow with team. (Week 2)
- Met with team to discuss initial logistics and sampling plan (Week 3)

- Working logistics on horn site with team there (Week 6)
- Responded to team with a few more questions. Continued work on logistics (Week 8)
- Still awaiting spend approval. Things are starting to get pricey. Schedule risk is increasing. (Week 11)
- Met with Jos and continued discussions on ops. (Week 12)
- Standing by on flights/lodging until we have a charge number. (Week 12)
- Lots of logistics work on charts, shipping, travel. Discussing sampling approach (Week 14)
- Further discussions with team on sample plan, charts, operations area. (Week 16)
- Expecting ffp shipping quote this week. (Week 16)
- ATA carnet submitted for shipping (Week 19)
- Shipping date 5/14! (Week 19)
- Troubleshooting charts issue (Week 19)
- Prepping Makai (Week 19)
- Packing (Week 19)
- Housing wrapped except for 2 more nights at the end of trip (Week 19)
- Reached out to FCCO again in Denmark for data and they are fixing their API. (Week 37)

Out of Office

- 02/12-02/16 (MST)
- 01/17 (afternoon CPR renewal)
- 04/04-04/10 (CST)
- 04/15-04/19 (GMT+8)
- 06/03-06/18 (GMT+1)
- 03/12-14 (MST) tentative
- 03/12-14 (MST)
- 04/04-04/10 (CDT)
- 04/15 (PDT)
- 05/27-06/21 (GMT+1)
- 07/08-07/12 (HST)
- 07/16-07/22 (EDT)
- 05/27-06/21 (GMT+2)
- 07/08-07/12 (GMT -10)
- 07/29-0702 (EDT)
- 07/29-0802 (EDT)
-
- 10/23-29 ? (MST)
- 11/06-12 (CST)
- 11/15-12/2 (PST)
- 10/23-29 (MST)
- 11/25-12/2 (PST)
- 12/5-6 (MST)

Overhead

- Did some annual report work (Week 2)
- Setting up a spring meeting with NOAA's office of general council natural resources section and some MBNMS members. (Week 2)
- Collaboration agreement for nature conservancy (Week 4)
- SOVA workshop (Week 4)
- Collaboration agreement work with Ivan (UPC), Matteo (UPC), and Matt (Nature Conservancy). Awaiting approval for all (Week 6)
- Supported WHOI deployment off the shelf/cape when some issues came up with batteries (Week 8)
- Another ping on Ivan/Matteo collaborator agreement. Still waiting for M team. (Week 8)
- Standing by on legal from TNC to respond about collaboration agreement. (Week 8)
- Wrote up software implementation section for WHIO license agreement. (Week 8)
- Met with cofounder of Oshen to discuss UX and potential ASV demo here (Week 10)
- Met with TNC CTO for pressure testing of whale tracking housing (Week 10)
- Supported WHOI offshore deployment and issues involving battery drain (Week 10)
- Worked with Cornell on human/robot interaction proposal. (Week 10)
- Wrapped pressure testing with Nature Conservancy. Launched WG with telemetry tow package testing for them on Monday. (Week 11)
- Still working on getting Ivan's student access to MBARI network. Almost there... (Week 11)
- NOAA/MBNMS tour prep for tomorrow (Week 12)
- NOAA/Chidong info on vehicle tracking (Week 12)
- Finished 3 documents for Matteo Collaboration with UPC in Barcelona (Week 12)
- Reviewed Cornell University collaboration proposal (Week 12)
- Resume reviews and screening (Week 14)
- Hosted NOAA and MBNMS policy reps for UAV flight and Paragon AUV recovery. Discussed future UAV work for kelp and mammal surveys. (Week 14)
- Finally wrapped collaboration agreement with UPC in Spain. (Week 14)
- Cornell collaboration paperwork has been delivered. Awaiting signature from them. (Week 16)
- Met with WHOI Sentry team to discuss onboard AI and mission path planning as well as backseat operations. (Week 16)
- Lots of work with Saab on getting DataViz, unserialize, and the host sim running. (Week 16)
- Supporting WHOI deployment back East. Diagnosed and fixed various configuration issues (Week 16)
- Assisted WHOI with their camera deployment with Stella troubleshooting. They recovered yesterday and had a successful mission. (Week 19)
- Working with Saab on bringing up application. (Week 19)
- Investigated Stella grounding incident and provided fixes. (Week 19)
- Proposals! (Week 28)
- Coordinated pressure testing of foam pack with nature conservancy collaborator (Week 35)

- Prepping for visit from Oshen to test microvessel wind powered ASV Sep 16. (Week 35)
- Helped out WHOI on their recent deployment with some navigation issues surrounding the windfarm. (Week 37)
- Rescheduled Oshen visit/training/testing for October due to shipping issues. Wrote collaborator agreement. (Week 37)
- Our collaboration with Oshen has begun. Took delivery of the ASV and am assisting the founders in preparation for sea trials. (Week 39)
- LNM was issued on time and all other associated paperwork for FN access is wrapped up. (Week 39)
- Met with Saab again. Significant labor risk on their end due to allocations. Passed along final piece needed for cross compiling on their host machine. (Week 39)
- Got trained up on the Oshen microvessel ASV. Ran a brief test offshore to look at basic performance (low wind in this case) and collect some hydrophone data. Will examine station keeping abilities next week or after and have it join the Synchro windfarm line the following week. Here's the sailboat and LRAUV during CANON: (Week 40)
- Planning to launch Oshen ASV for an overnight test Thu-Fri. Sanctuary clearance issued for the plan through Q4. LNM covers us for this deployment and I'll re-issue for mid-Oct through Q4. (Week 41)
- Oshen ASV launch/recovery last week. Issues sailing upwind in autonomous mode were observed and manual control and emergency recovery had to be performed to get the vehicle back safely. Good hydrophone data was recorded and will be processed. (Week 47)
- Nature conservancy meeting to discuss future of whale tracking device (Week 49)
- Meeting with Oshen to review the latest engineering mods. They have added a thruster now and redesigned the sail for better upwind and light air sailing. (Week 49)