

902101 - LRAUV Technology Development

Week 51

1. Akshay Hinduja
 - a. Analyze potential issue with frame of reference assumptions, looks ok and normal
2. Carlos Rueda
 - a. Dash4 [4.97.7](#).
 - b. TethysL [4.8.0](#), a significant release as it removes the prerequisite of having java on the system. VS Code Extension tested on macOS, Linux, and Windows. (Thanks IS for the loaners.)
 - c. LRAUV: Removed the (nightly) XML mission validation cronjob: Not really needed anymore. (Full TethysL mission validation continues to be done as part of the LRAUV nightly build.)

Week 50

1. Akshay Hinduja
 - a. Finished v1.0 of tethystales, completing initial requirements from LRAUV dev team
 - b. tagged in mbari-org github
 - c. Pushed to dockerhub mbari/tethystales
 - d. Tested on lrauv lab computers, pending announcement for broader mbari users
2. Karen Salamy
 - a. I will be resuming updates to github bug requests this week until the end of the year.

Week 49

1. Akshay Hinduja
 - a. Finished v1.0 of tethystales, pending feedback on install and runtime from users
 - b. Meet with LRAUV team to scope next iteration requirements
2. Brian Kieft
 - a. Brizo/Makai launched today to kick off ESP sampling and Arctic sim testing.
 - b. Mission work for arctic demo
 - c. Fixed issue with reliability plots
3. Mike McCann
 - a. Fred said that auv-python processed ahi data has thebad interpolation problem fixed

Week 48

1. Akshay Hinduja
 - a. Improvements to tethystales - Irauv log visualization.
 - i. Added panel for playback, scrubbing and log selection
 - ii. Added panel to visualize attitude
 - iii. Added realistic mesh for Irauv from osrf files
 - b. Working on simplifying package setup for end user
 - c. Spoke with Mike about possibly adding Monterey Bay geotiff to rviz map
2. Denis Klimov
 - a. We are setting up/ restoring LRAUV battery pack degaussing setup. This time, it is going to a mobile table setup which would allow easy relocation, faster setup, and likely better quality degaussing since the orientation of the table relative Earth's magnetic field can be adjusted.
 - b. Evan is helping with joining two mobile benches together to extend the table top length.
 - c. Daniel had assisted with restoring operation of the PC with a Labview and magnetometer, needed for setting up the table orientation, and testing battery pack degaussing results.
3. Mike McCann
 - a. Talked with Akshay about 3D geospatial data
4. Justin Tucker
 - a. Build 5 COM and COB documentation

Week 47

1. Akshay Hinduja
 - a. Finished matplotlib based visualizer
 - b. Tried out HoloOcean and Unreal Engine based simulator for log playback, ran into physics issues as velocity estimates from LRAUV were incomplete and cause the simulator to show no pitch or yaw motions.
 - c. Started working on RVIZ and ROS2 playback. Finished stage 1, works well with faster than realtime playback achieved. Working on making improvements to visuals, and playback control. Facing random issue of RVIZ flickering, seems to be internal QT related bug.
 - d. Plan to wrap up by end of month
2. Brian Kieft
 - a. Met with Saab to reboot development.
 - b. Supporting Brizo, Pontus, Triton, Tiny deployments this week.
 - c. Met to decide on ESP sampling strategy for December deployment.
 - d. Troubleshoot failed docking arm on Pontus and fixed
 - e. Fixed issue with Tiny's hotspot to support Ivan's testing offshore.
3. Mike McCann

- a. Fred helped identify improperly interpolated LRAUV data processed by STOQS – expecting that the newer auv-python processing would do the proper interpolation

Week 46

- 1. Akshay Hinduja
 - a. Have v1 matplotlib based simulated LRAUV log playback ready. Downsides are slower performance, but good for diagnosing vehicle issues, and observing state behaviour visually
 - b. Working on quick tangential option of using holoocean simulator using Unreal Engine for higher fidelity animations
 - c. Diving into LRAUV codebase to integrate with gazebo
- 2. Mike McCann
 - a. Got help from Quinn with cleaning up some memory corrupted delayed mode data from brizo

Week 45

- 1. Akshay Hinduja
 - a. Working on developing a log playback visualizer to replay vehicle dynamics
 - b. Setup log reader which extracts variable values from nc4 files
 - c. Using tethysdataviz repo to try plug in visualization in same WebGL app. Animation causes crashes in browser window, will pivot to standalone viewer
 - d. Setup simple orientation animation viewer using matplotlib, will use as backbone for more intricate animation in 6DOF
- 2. Brian Kieft
 - a. Lots of work last weekend running Ivan's tests for MARL. Tiny, Brizo, and Pontus were out to support that testing as well as docking.
 - b. Opah did its first dive to full depth (1200m).
 - c. Currently performing the first science dives and will continue to refine control.

Week 44

- 1. Carlos Rueda
 - a. Implemented and now successfully testing [new TethysL CLI program releases](#) that include a Java runtime, so, users won't need to worry about having to have java installed on their machines. (Note that the VSCode extension has always included the automated downloading and use of Java as part of the installation process.) Linux, macOS, and Windows releases are created (the latter one not yet tested). The official installation at `/opt/tethysl/` on tethyshub now uses this new scheme. In general, while the new self-contained releases are proved reliable, the usual java based CLI releases will remain in place.
 - b. TethysL language: Discussion with Quinn about accepting literal strings for expression in argument or output definition.

- c. TethysDash [4.99.12](#) with various updates, in particular, with a much more user-friendly compile error report when obtaining the description of a faulty mission script.
 - d. Dash4 [4.97.6](#).
 - e. Added [this FAQ](#) motivated by a recent exchange about an operator not getting Brizo alerts.
 - f. WHOI: Brief slack exchanges regarding tethysl and Irauv-application makefile.
- 2. Karen Salamy
 - a. Added a few github issues for Dash5 from users via testing.

Week 43

- 1. Carlos Rueda
 - a. Dash4 releases this week: [4.97.2](#), [4.97.3](#), [4.97.4](#).
 - b. TethysDash backend [4.99.10](#), with a couple of more endpoints migrated to quarkus.
 - c. Prepared some slides for Brett's upcoming project update presentation.

Week 42

- 1. Denis Klimov
 - a. Interesting development on redesigning the hall sensor / actuator for the buoyancy system.
- 2. Carlos Rueda
 - a. TethysDash: As an exciting milestone, completed migration of application framework to Quarkus. Tested successfully in production during the last [few weeks](#) (with various incremental steps along the way), the code updates have now been merged into the main branch, and the version is now officially [4.99.0](#). Future work will include converting more endpoints to the new framework as well as taking advantage of more Quarkus features.
 - b. Irauv-application PRs merged (thanks Quinn and Brian).
- 3. Karen Salamy
 - a. I added a few of the requested LRAUV Dash5 issues on the Github server this week.

Week 41

- 1. Carlos Rueda
 - a. TethysDash/LRAUV: One more attempt to make the /dataLink endpoint (used by the LRAUV) work as a JAX-RS resource, unfortunately still unsuccessful, likely because of more strict HTTP protocol handling under Quarkus. So, this endpoint will need to continue being a servlet, which has been working with no issues. Submitted PRs in Irauv-application to improve the logging of HTTP(s) interactions on the vehicle side, intended to help with diagnostics in the future.

Week 40

1. Carlos Rueda
 - a. Ongoing testing of Quarkus-based TethysDash version; so far looking great! Multiple real vehicles connected and no regressions observed; just some minor tweaking mainly involving logging. (Many thanks, Quinn S., for your testing help and observations.) So, we will let this version continue running even when real deployments start this week

Week 37

1. Carlos Rueda
 - a. Dash4 is now [4.97.0](#); and TethysDash backend [4.98.1](#).
 - b. Some monitoring of the several deployed LRAUVs these days, with the TethysDash system proving stable and performant AFAICT.
2. Karen Salamy
 - a. I have added several of the new issue requests for the Dash5 LRAUV project during the last week (CANYON). I still have a few more to go but will finish these this week.

Week 36

1. Carlos Rueda
 - a. TethysDash [4.98.0](#) with new unserialize invocation mechanism fully in place. Satisfactory testing during the last several days but still considered under verification. I'll be closely monitoring the upcoming vehicle deployments, and then proceed with merging the branch into main.
 - b. TethysDash modernization: migration to Quarkus is progressing, but not yet ready for prime time. I did some good testing of various functions over the weekend on the production server.
 - c. TethysL is now [4.4.4](#).

Week 34

1. Carlos Rueda
 - a. TethysDash [4.97.43](#) with use of a new [separate service](#) to run LRAUV `unserialize` jobs. Successful testing in production (<https://oceanids...>) not only using a simulator but also with a real vehicle. Thanks Quinn S. for your help setting up and connecting Pontus for this purpose.
 - b. Met with Tanya Tebcherani (Johns Hopkins U.) to discuss plans for applying LLMs for LRAUV vehicle autonomy and assistance to operators.

Week 33

1. Carlos Rueda

- a. TethysDash backend [4.97.4](#) with significant internal changes as part of modernization.
- b. Assistance to WHOI.
- c. Finally managed to have a functional LRAUV sim after a long time. This is very important in general for LRAUV/TethysDash development/testing, and more recently to test/validate the significant changes going on in TethysDash, which involve the critical [dataLink](#) endpoint that vehicles use to connect.

Week 31

- 1. Carlos Rueda
 - a. TethysDash backend is now [4.97.3](#) and Dash4 [4.96.62](#). Thanks, Jason A, for the feedback.
- 2. Justin Tucker
 - a. Continued model reorganization for mass and buoyancy calculations.

Week 30

- 1. Brian Kieft
 - a. Updates for horizontal control during surfacing
 - b. Docking arm power investigation
 - c. Fixed sample volume bug for ESP
 - d. Supporting Opah deep/nav deployment
- 2. Karen Salamy
 - a. Added new github issues for Dash5 for the LRAUV team.
- 3. Justin Tucker
 - a. Working through a solidworks macro to export mass properties for the entire assembly.
 - b. Update and reprint of thruster alignment templates

Week 29

- 1. Brian Kieft
 - a. Prepping WG hotspot 3 and freshly upgraded tethyshub for acomms transfer to shore to support CANON 2025 with ESP. Deployment Thursday latest
- 2. Mike McCann
 - a. Identified some log files that are not properly loading into stoqs_lrauv_jun2025
- 3. Carlos Rueda
 - a. Dash4 ([4.96.5](#)) now has an admin option to generate API keys for client applications/tools. Immediate use of this functionality was to generate a fresh key for Tom's hotspot script in preparation for CANON.
 - b. TethysDash backend: As part of modernization efforts, very significant internal changes (including some database related refactoring, and finally using Maven instead of Ant! 😊)
- 4. Justin Tucker

- a. Hovering module support, brackets and system mass

Week 27

1. Brian Kieft
 - a. Integrating GliderFET ph sensor
 - b. Identified ground fault on Galene (which was unfortunately the antenna)
 - c. Docking system checkout and debugging on Brizo.
2. Karen Salamy
 - a. Sat in a ZOOM meeting with the LRAUV team and indicated my time is on the SINKER until mid-July's deployment. I was asked to add three Github issues for the team late last week which were user-comments using the new Dash5 UI. The team is shifting to the new Dash5 full time as needed/possible.

Week 25

1. Mike McCann
 - a. Wrote a MacGyver fix to get ESP Cartridge 15 data into [stoqs_ecohab_april2023](#)
2. Carlos Rueda
 - a. Dash4 now [4.94.82](#).
 - b. Dash backend [4.95.31](#).
 - c. Slowness in backend responses recently noted by some operators turned out to be a denial-of-service (DoS) attack by some mis-configured (on purpose?) bot out there. We have had a standard [robots.txt](#) in place, but the bot simply ignores it. I set up a blocking rule in the proxy server, so any requests from that bot now get an immediate unauthorized response.
 - i. <https://mbari.slack.com/archives/C4VJ11Q83/p1749863890631179>
 - ii. <https://github.com/scrapy/scrapy/issues/6597#issuecomment-2817396410>

Week 24

1. Brian Kieft
 - a. Met to discuss piscevore gen 3 integration
 - b. Found issue with nav in sci2 and other regular science missions.
2. Carlos Rueda
 - a. Dash4:
 - i. The user can now star ★ stations (info saved in the browser's local storage). Complementary to this, the station list is now ordered by name, with the starred ones at the top. This ordering is also applied in the dropdown when selecting waypoints in the waypoint editor.
 - ii. For better legibility, set some transparency for the display of tile layers on the map.
 - b. Dash system: Two issues have been observed recently, one apparently involving the new authentication system (refresh token related?); the other, delayed

responses from the backend, possibly involving a recent adjustment in the default event sorting. Investigating, but some tests will have to wait until some ongoing vehicle deployments are completed.

3. Karen Salamy
 - a. Worked on a quick issue last week for the project.

Week 23

1. Carlos Rueda
 - a. Dash [backend](#) and [dash4](#) frontend: The backend now parses the *configuration overrides*, that is, the events coming after the most recent *Listing configuration overrides from Data/persisted.cfg* event. Most of the needed additional information is now in place (and reflected in the Config tab in Dash4), but now waiting for further input from LRAUV folks to determine the final strategy for aggregating it properly.
 - b. Other dash related adjustments/fixes include that returned/displayed events are now (by default) sorted by both descending date *and* descending eventId. Previously, the order of events with the same timestamp would have been less deterministic. (The eventId reflects the actual order in which the events are stored in the database, that is, the order in which the events get deserialized from the incoming data/log stream from the vehicle.)

Week 22

1. Brian Kieft
 - a. Acoustic debug on Triton following deployment. Quick test with Tiny.
 - b. Made a new feature in waypoint to deal with bearing correction
 - c. Loaded up Pontus for docking missions next week.
2. Carlos Rueda
 - a. Dash4 [4.94.2](#) and [backend 4.94.4](#):
 - i. New tracking feature successfully exercised in the field. (*"thanks for putting this together Carlos! It's totally saving us right now on Triton. Definitely one of the strangest issues I've seen with acoustics. We're very happy to have the tracking option."*)
 - ii. Fix in piloting time report.
 - iii. Cell timeout note now includes ID of associated command.
 - iv. Several more users are now exercising the new authentication system (including SSO). No reported issues.

Week 21

1. Brian Kieft
 - a. Added bearing recalc to waypoint behavior
 - b. Went over i2map mission with Cole for next time out
 - c. Ignore depth added for altitude envelope

- d. Fixed Tridente component issues
- e. Lots of UX work this week with the team. Focusing on state of comms

Week 20

1. Brent Jones
 - a. Recovered stuck LRAUV Galene
2. Carlos Rueda
 - a. TehysDash/Dash4: Adjustments/useability fixes in implementation of the new tracking feature.
 - b. The above has been deployed at <https://oceanids.mbari.org/dash49/> , the version that has had the new user authentication (including MBARI SSO) in place since early this year. Per discussion with Brian K., I understand we can now make it the “official” dash4.
I will then be doing the following:
 - i. Deploy the current dash4 (with the traditional auth mechanism) so it gets accessible at <https://oceanids.mbari.org/dash48/> (note, 48), mainly as a backup in case non-MBARI users encounter sign-in issues (though these are unexpected).
 - ii. Enable the new auth system at the usual location: <https://oceanids.mbari.org/dash4/>
 - iii. Notify users via usual channels.
 - iv. Remove <https://oceanids.mbari.org/dash49/>
 - c. TethysL is now [4.4.1](#). In particular, I'm revising the generation of LRAUV information that is captured for TethysL purposes. Main goal is to reduce redundancy, while also increasing accuracy/consistency.
 - d. Exchanges on lrauv-ux channel regarding specification of command/vehicle status report from the LRAUV via Dash backend (a 3-year outstanding issue).
3. Karen Salamy
 - a. Working hard to complete many of the updates on the Map for the team before shifting my focus over to Sinker

Week 19

1. Brian Kieft
 - a. Troubleshooting Galene drop weight system
 - b. UX project management and testing
2. Mike McCann
 - a. Making sure all delayed mode data is getting processed into STOQS
3. Carlos Rueda
 - a. TehysDash/Dash4: Initial implementation of tracking by LRAUVs of assets whose positions are maintained in the MBARI tracking database. This implementation is already basically functional, but intended to gather additional feedback to determine next steps for completion.

Week 18

1. Mike McCann
 - a. Making sure all full resolution data is being unserialized and processed into STOQS

Week 16

1. Brian Kieft
 - a. Working on Opah bringup and instrument configuration
 - b. Put in a fix for missing binned Wetlabs data.
 - c. April release is here

Week 15

1. Denis Klimov
 - a. We had an issue with one of the PAR sensors; it turned out the power capacitor had a problem, it was drawing extra current; once replaced, the board is working now.
 - b. Updating procedure of polishing PAR housings, and also ordered new metric O-rings for the front of the sensor.
2. Karen Salamy
 - a. Large focus this week on Map updates for the Dash5.

Week 14

1. Brian Kieft
 - a. Multiray debug/refactor
 - b. Data review on various Galene issues from last week
 - c. Shore launched Ahi on Monday for i2map and engineering work. Recovery planned Thursday
 - d. Fixed up joystick a little on lab machine to enable recovery of Galene at the beach
 - e. Wrote a new surface transit mission for shore launches.
 - f. Added some debugging to MMP for testing offshore when available
 - g. Confirmed cause for Galene dropweight incident.
 - h. Working with dash5 team on automated deployments and various issues. Still planning on Q2 beta testing.
 - i. Beginning bringup of Opah (1500m mesopelagic vehicle)
 - j. Assisting Cole in writing new i2map mission

Week 13

1. Carlos Rueda
 - a. Set up subdomain for dash5-staging.

Week 12

1. Brian Kieft
 - a. Galene/Makai engineering deployment last week. Recovered Friday. Lots of prep on Galene especially.
 - b. Refactored multiray lights to work with 1 or 2 lights.
 - c. Lots of work managing Dash 5 progress. The good news is that there's progress. Q1 review meeting coming next week.
 - d. Troubleshooting various issues with DAT MMP code. Found a memory leak on the host.
 - e. Beginning to bring up subsystems on Opah. Starting with buoyancy.
 - f. Looked into Thruster HE fix to allow for thrashing commands without breaking the component.
2. Carlos Rueda
 - a. Dash5: Similarly as done for dash4, set up secrets for GitHub release workflow, proxy-pass and compose.yml on tethysdash2, and Watchtower continuous deployment.

Week 10

1. Brian Kieft
 - a. Launched Aku last week for engineering tests. Lots of changes in Feb release.
 - b. Lots of work this week with Sumo creations and Sliced Bread. Reviewing Figma changes and steering the project in the direction of an engineering lead versus design led. Seeking >25% EV by end of Q1 and the team is finally coming onboard with the concept. Paid first invoice of 4 with nearly 0 EV on the project so far.
 - c. Investigated strange thruster faults observed on Aku during last deployment that were quite disruptive. Able to reproduce on shore. Culprit is thrashing speed commands to the component. Will make HE component more tolerant of crazy missions. Also need to fix mission.
 - d. Spent time troubleshooting mission GPS fixes coming back from Aku with new mission from Yanwu. Culprit was logging style and fix was checked in yesterday.
2. Carlos Rueda
 - a. The [TethysDash API doc page](#) was down, fixed now, and in a reliable way. Previously this involved a manual step which I forgot to apply at some point after some updates. I also added a [status monitor](#) (which would have notified me promptly about the issue in the first place ;))

Week 9

1. Akshay Hinduja
 - a. Continue finding bug in Iruv application during sim
2. Mike McCann

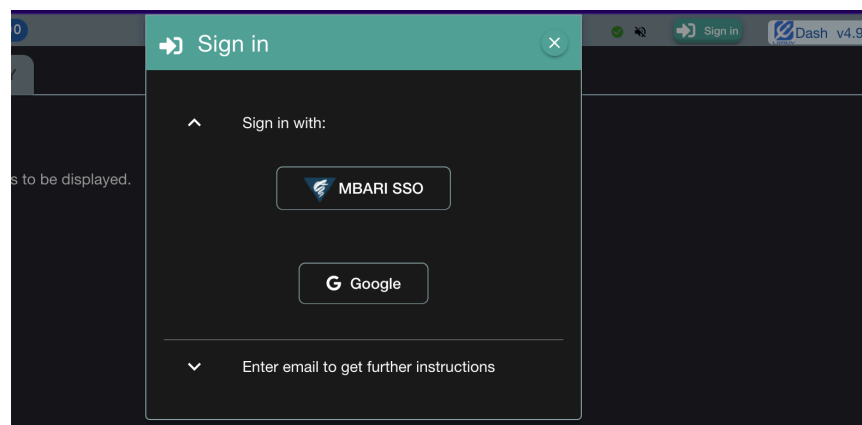
- a. Reprocessed Daphne's data for Sipper data after Quinn fixed a truncated .nc4 file
- 3. Karen Salamy
 - a. Began work for Brian to implement a Waypoints Layer for the Map on Dash 5.

Week 8

- 1. Akshay Hinduja
 - a. Continue working on finding log replay bug
- 2. Brian Kieft
 - a. Deployed Aku yesterday from skiff to begin long list of sea trials for Feb release features.
 - b. Dash 5 full team meeting scheduled for Thursday.
- 3. Carlos Rueda
 - a. TethysL C++ translator: Fixed bug about not expanding macro variable in number expression. Thanks, Yanwu, for the report and testing.

Week 7

- 1. Akshay Hinduja
 - a. Finding simulator bug in LRAUV application
 - b. Causes some data to not be transferred through from gazebo from csv
- 2. Brian Kieft
 - a. Aku engineering deployment. Cut short due to battery issue
- 3. Carlos Rueda
 - a. TethysDash: As previously indicated, <https://oceanids.mbari.org/dash49/> now as a separate location with the new authentication mechanism in place for testing purposes. Updated [google doc](#) with the motivation and the (super easy!) steps on how to test.



Also, reverted <https://oceanids.mbari.org/dash4/> to having the traditional one. Keeping core LRAUV folks up-to-date with all of this.

- b. TethysL 4.3.6 (maintenance release)

Week 6

1. Akshay Hinduja
 - a. Meet with John Ryan and LRAUV team for IC listen hydrophone integration
 - b. Meet with brian to troubleshoot data stream errors in gazebo simulator
 - c. Finished writing nc4 to gazebo conversion tool pending test and integration
2. Brian Kieft
 - a. Lots of gazebo sim issues. Met with Akshay to discuss options and topic data fixes
 - b. Met with our dash5 team here to prioritize issues in git.
 - c. Met with Sliced Bread to plan for full team meeting week of 2/17. Goal is to have functional dash 5 in users hands by end of Q2 for beta and feedback.
3. Carlos Rueda
 - a. TethysDash now has MBARI SSO as a direct authentication option (still via Firebase). Many thanks Andrew and Travis for the great assistance. The various new auth options are behind special flags to facilitate testing. This kind of change is challenging and tricky to put into production, especially because, while keeping in mind that real testing and verification only happen when using our production server with real users, we also need to support both mechanisms as a safety net (during a transition period). This “mixed” mode in the current version has brought inconveniences to some users. I plan to have a completely separate webapp with the new mechanism, while reverting the usual dash4 to the previous version. Hopefully that will enable a smoother path toward migration.
4. Karen Salamy
 - a. Met with Brian and Quinn to go over the most important Github issues to be addressed first thing when SUMO Creations is back on board for Dash5.

Week 5

1. Akshay Hinduja
 - a. Deep dive into ExternalSimGazebo class for LRAUV-applications
 - b. Understand code flow
 - c. Wrote new class to read nc4 log files, and translate to gazebo messages
 - d. Check logic flow manually and then run and debug
2. Brian Kieft
 - a. Meeting today on Dash 5 with subs.
 - b. Troubleshooting GZ sim DVL issues. Getting closer to proper ingest in the application.
 - c. Instrumented ThrusterHE component to test at sea for failed rpm diagnostics
 - d. Met with WHOI to review their LRAUV plans for development for this year
3. Carlos Rueda
 - a. TethysDash/Dash4 now able to support Firebase Auth for user authentication. For now this is an opt-in feature for some time while testing/tuning. Emailed core LRAUV folks asking for their help testing, pointing them to this [doc](#), which explains the why and the how.

- b. (plus overhead?) - Initial implementation in TethysDash and satisfactory testing to support Microsoft 365 for IMAP access. Thanks Peter for the assistance.
- 4. Karen Salamy
 - a. A 2025 kickoff meeting is set for tomorrow at 10AM with Brian and Quinn

Week 4

- 1. Akshay Hinduja
 - a. Shit priority to LRAUV
 - b. Look through ExternalSimulator class
 - c. Plan for nc4 data extraction and conversion to gazebo messages for sim
- 2. Brian Kieft
 - a. Fixed missing data from last year's canon experiment
 - b. Added timeout to TRN mission for approach depth
 - c. Fixed up LRAUV cron jobs to deal with 2025 and removed old years
 - d. Adding PAR to sample at depth
 - e. Supporting Aku deployment for bioacc testing
- 3. Carlos Rueda
 - a. Lots of work on a new authentication mechanism for TethysDash/Dash4. I now feel very close to deploying it into production, but with temporary settings to allow power users and other testers to exercise it for a while so we can make sure it works reliably, while also likely exposing the need for adjustments, etc. Also, worth noting that, especially in consideration for our external TethysDash deployments, both the old and the new mechanisms are intended to be supported.

Week 3

- 1. Akshay Hinduja
 - a. Nc4 log reader looked at and extracted relevant information, Will contact Brian to meet to see where these data fields can be fed into simulator.
- 2. Mike McCann
 - a. Removed bad latitude data from processed ahi data to make [stogs_lrauv_dec2024](#) look better
- 3. Carlos Rueda
 - a. Advancing Firebase Auth option for user authentication
 - b. Got the green light from the project to open source some repos. Now checking with Basilio before proceeding. (Quinn S. also interested in the discussion.)

Week 2

- 1. Brian Kieft
 - a. Will run tests to diagnose light terminated yoyos
- 2. Mike McCann

- a. Identified some missing full resolution .nc4 files from pontus's december 2024 deployments
 - b. Recreated pontus .nc files and reloaded [stogs_lrauv_dec2024](#)
- 3. Carlos Rueda
 - a. TethysL maintenance release 4.3.5.
 - b. TethysDash: Upgrading libs related to configuration
 - c. Inquiring project lead about open sourcing some of the repos
 - d. Revisiting Firebase for user auth (which I successfully used 6 years ago for the myVan webapp). The goal is to use Firebase as a replacement of the current user authentication mechanism in the Dash4/TethysDash system. (Supabase is one other possible alternative.)

Week 1

- 1. Carlos Rueda
 - a. TethysL: simplified release workflows, including the removal of the long-unused graalvm-based binary releases. Also added a step to delete uploaded artifacts. Addressed dependabot alerts.
 - b. TethysDash [4.99.21](#).