

Mike McCann Sorted By Project

200105 - Core Navigation Data - MDUC

- Created complete set of edited.txt ROV nav files organized by dive (Week 2)
- Met with Lonny & Linda to discuss next steps in the nav editing project (Week 2)
- Preparing to load edited _by_dive.txt files into EXPD's tracking and CleanRovnavData tables (Week 7)
- "By dive" edited ROV navigation data now being loaded into EXPD CleanRovnavData tables (Week 9)
- The tracking table (CleanRovNavLoad) can be queried by consumers to know when to update (Week 9)
- Linda is making great progress on editing, <https://emdb.shore.mbari.org/> looks much better! (Week 9)
- Updating ship_and_rov_core_data_workflow.md with new expd_mapping workflow (Week 10)
- Fixed load_edited_into_expd.py so that it reuses existing CleanRovNavLoad records in expd (Week 11)
- Watching that nightly emdb and expd database update cron jobs are successful & idempotent (Week 11)
- Continuing to monitor nightly cron job operations populating https://emdb.shore.mbari.org (Week 13)
- Continuing to monitor successful execution of nightly EXPD and EMDB loads (Week 14)
- Checking with Lonny on monitoring Linda's progress – nightly emdb load jobs are working fine (Week 15)
- Added Expedition Data comments to popup on EMDB's Dive detail view (Week 16)
- Will be meeting on Monday to discuss final steps with ROV nav editing project (Week 16)
- Updated emdb with raw nav data from v4400-v4459 to help Linda assign quality flags (Week 25)
- Diagnosed a duplicate record problem preventing some data loading problems in emdb (Week 28)
- Examining edited nav data flow into Expd's RovctdData for improving midwater STOQS DBs (Week 30)
- Got TODO list from Lonny & Linda for Expd and EMDB improvements (Week 40)
- Started working on last 3 Bitbucket issues for the ROV nav editing project (Week 45)
- Working on getting a development EMDB system working on new laptop (Week 45)
- Added 2 new cron jobs on emdb: add_new_dives and gen_new_raw_nav (Week 46)
- Glad I wrote the Workflow documentation a year ago when I last worked on this code (Week 46)
- Provided dive and CTD times report for Linda to improve QC of ROV nav data (Week 47)
- Looking at using HTMX for a simple form entry of a data_validation_code in EMDB (Week 47)
- Still looking at using HTMX for updating emdb dive records with Data Validation Codes (Week 48)

200109 - Core Mooring Data - MDUC

- Trying to upgrade Hyrax on elvis to the hyrax-docker 1.16 version (Week 1)
- Submitted 2024 proposal (Week 28)
- Virtually attending OceanSITES meeting (Week 45)

300078 - DMO Divisional Support - AUV

- Planning to migrate the tethysviz STOQS server to a new VM that uses PostgreSQL 15 (Week 23)
- Going through old Dorado missions to make sure all of them get processed by auv-python (Week 34)
- Adding product generation code to auv-python: ODV Gulper files first, then quick look images (Week 35)
- Updated auv-python code to use Python 3.11 on new computer (Week 36)
- Processed dorado mission 2023.285.01 from hotel room in Spain (Week 42)
- Writing matplotlib code to produce the quick look plots in auv-python (Week 42)
- Continuing to work on matplotlib quick look plotting in auv-python software (Week 43)
- Deployed updated STOQS UI that has new scrolling Measured Parameters list (Week 43)
- Quick look plotting from auv-python on hold to work on i2map O2 calibration (Week 44)
- Processed Dorado mission 2023.324.00 (Week 47)

300083 - DMO Divisional Support - LRAUV

- Following BK's recovery of January daphne files reloaded sippers for stoqs_lrauv_jan2023 (Week 9)
- Supporting ECOHAB by ensuring data is flowing into stoqs_ecohab_april2023 (Week 15)
- Maintaining data flow into stoqs_lrauv_apr2023 and stoqs_ecohab_april2023 (Week 16)
- Fine tuning crontab execution times as these databases now take 15+ hours to load (Week 16)
- Submitted help ticket to configure new tethysviz2 STOQS server to host PostgreSQL 15 DBs (Week 24)
- Starting to transfer databases to the new tethysviz2 STOQS server (Week 25)
- Finishing migration of tethysviz2 to the official <https://tethysviz.shore.mbari.org/> server (Week 27)
- Creating a stoqs_greatlakes2023 database for triton and makai deployments there (Week 28)
- Exploring x3dom's <VolumeData> and <ImageTextureAtlas> nodes for visualizing oil spill simulation data in the STOQS database for current Great Lakes LRAUV deployments (Week 30)
- Making good progress on 3D oil spill simulation data visualization in STOQS (Week 31)
- Fixed loading of stoqs_greatlakes2023 (Week 36)
- Making progress on simulation animation in STOQS – plan to present at Web3D Conference (Week 39)
- Used MB-System on new Mac to create a 100x vertical exaggerated terrain of Lake Michigan (Week 40)
- Testing visualization improvement with 100x vertical exaggerated simulation & LRAUV data (Week 40)
- Gave tutorial to Steve Ruberg & Kristen Rosier for getting data from stoqs_greatlakes2023 (Week 48)
- Processing VolumeScatCoeff117deg[470|650]nm variables now instead of Output[470|650] (Week 49)

500055 - VARS, M3/RS, DSG

- Provided input the data workflow documentation that Megan is writing (Week 2)
- Added point visualization in emdb web app for by_dive nav files that are being re-edited (Week 5)
- Linda reports that edited "by_dive" files look good in the emdb web app - ready for loading (Week 6)
- Adjust regex in vfbydive to parse new naming using fractional seconds for framegrabs (Week 33)

901009 - CANON

- Experimented with HDF5/NetCDF module for serving in64 data types (Week 1)
- Switched to more reliable server for the ESRI Ocean Basemap in STOQS (Week 2)
- At Jacoby Baker's request reloaded stoqs_canon_july2020 following fix to ESP parsing code (Week 6)
- Met with Scripps student and John Ryan to discuss getting data from stoqs_canon_april2021 (Week 6)
- Consulting with Chris Preston on getting data out of stoqs_os2018 (Week 6)
- Attending CANON meetings remotely (Week 9)
- Increasing memory of stoqs.mbari.org to support external Parquet data export users (Week 9)
- Updated auv-python software to process nav data if i2map CTD data fail to log (Week 13)
- Reloaded partial CTD recorded i2map platform data into stoqs_canon_fall2019 (Week 13)
- Supporting ECOHAB with loading data into https://stoqs.mbari.org/stoqs_ecohab_april2023 (Week 14)
- Fixed an upstream interpolation/merging LRAUV data problem by using xarray (Week 14)
- The /pg_data partition on kraken (our internal stoqs server) got to 97% full (Week 19)
- Needed to pg_dump/pg_restore several stoqs databases to recover from above problem (Week 19)
- Submitted IS request to build new kraken2 server with more capacity (Week 19)
- Spinning up replacement kraken2 internal stoqs server with lots of help from Peter (Week 20)
- Running pg_restore for all existing stoqs databases into kraken2's postgres version 15 server (Week 20)
- Upgraded to stoqs-mapserver 7.4.2 for Postgres 15 authentication support (Week 21)
- Continuing to test Postgres 15 on kraken2 – so far so good (Week 21)
- Making sure automated i2map data processing is executing for ongoing CANON campaign (Week 21)
- The new internal stoqs server (kraken2) is performing well with Postgres15 and more space (Week 22)
- Transition to new stoqs.shore.mbari.org complete with DNS changes wednesday morning (Week 23)
- With IS help opened firewall so that stoqs.mbari.org can see the new kraken server (Week 23)
- Fixing brizo's bad dead reckoned position data from the May 2023 CANON campaign (Week 23)
- Used wgTiny positions for LRAUVs during ESP filtering in stoqs_canon_may2023 (Week 24)

- Fixed functional testing using SeleniumHub containers in STOQS postgres15 branch (Week 24)
- Able now to upgrade to Django 4.2.2 in postgres15 branch with planned tethysviz migration (Week 24)
- Merged Django 4.2.2 and postgres15 changes into master branch (Week 25)
- Mentoring Capstone team who is working on the STOQS modernization issue (Week 25)
- Tested STOQS development system modernization capstone student work (Week 28)
- Mentoring capstone students – one team is doing so well I had to order new STOQS mugs (Week 29)
- Renewed Matlab license on elvis so that it no longer needed a reboot every few days (Week 33)

901101 - Seafloor Mapping

- Met with capstone students who are working on the build for mbdrg2gltf in MB-System (Week 6)
- Dave merged the capstone teams mbgrd2gltf contribution to MB-System (Week 23)
- Fixed GitHub Actions, but marginally successful in getting Selenium testing to work there (Week 25)

901221 - Midwater Time Series

- Investigated short record of CTDO data for i2map's 2020.41.02 mission (Week 5)
- Resurrected ROVCTDloader.py script to update midwater STOQS databases (Week 30)
- Reprocessed i2map data to get the latest auv-python goodness in stoqs_all_i2map (Week 33)
- Verified that September's i2map mission was automatically processed into stoqs_all_i2map (Week 39)
- Writing code to walk DMO share's "Calibration Files" folder to get correct i2map O2 calibration (Week 44)
- Completed work on pulling correct SBE-43 O2 calibrations from Erich's calibration file archive (Week 45)
- Reloaded stoqs_all_i2map – much better agreement now between port & stbd O2 sensors (Week 45)

901910 - Plankton Taxonomic Groups from AUVs

- Begin implementing Monique's proxy calculations in auv-python (Week 1)
- Using Holoviews datashader for proxy visualization (Week 1)
- Implemented flash counts in the Python translation of Monique's proxy code in auv-python (Week 2)
- Making some adjustments following review my proxy calculations with Monique (Week 5)
- Code is implemented in auv-python for production proxy computation (Week 5)
- Tested complete pipeline into: https://stoqs.shore.mbari.org/stoqs_mb_diamonds_t (Week 5)
- Continuing to work on demonstration Notebook trying to make it agree with Monique's results (Week 6)
- Testing Notebook computations in resample.py with a stoqs_auv_compare database (Week 6)
- Monique is reviewing another iteration of the 5.2-mpm-bg_biolume-PiO-paper.ipynb notebook (Week 7)
- Fixed some STOQS bugs for loading stoqs_auv_compare for evaluating proxy calculations (Week 7)
- Revised 5.2-mpm-bg_biolume-PiO-paper Notebook to get better agreement (Week 10)
- Reprocessing auv-python generated 1 Second data with the Notebook method (Week 10)
- Will be reloading https://stoqs.shore.mbari.org/stoqs_auv_compare to validate (Week 10)
- Reviewing flash intensity calculation in Notebook (Week 11)
- Continuing to compare auv-python calculations with the Monique's calculations (Week 11)
- Systematically comparing data loaded into stoqs_auv_compare using Holoviews in Jupyter (Week 13)
- Improved profile numbering algorithm by using scipy's find_peaks() (Week 14)
- Implemented time shifting data for dorado plumbing lags (Week 14)
- Decreasing Gulper sample durations from 4 to 2 seconds for finer representation (Week 14)
- Continuing to get my Notebook and auv-python code to agree with existing proxies (Week 14)
- Evaluating auv-python generated proxies with datashader plots Jupyter Notebooks (Week 15)
- Fixing an auv-python processing problem with bad ctd1 data affecting other instruments (Week 16)
- Verifying daytime/nighttime processing for bioluminescence proxy variables (Week 16)
- Adding ISUS processing to auv-python (Week 16)
- Fixed sampling and plumbing lag computations for Dorado biolume data (Week 19)
- Reloaded newly processed auv-python data in test stoqs_auv_compare_t database (Week 19)
- Met with Monique & Michael to discuss next steps and her presentation for ASLO (Week 19)

- Reprocessing entire Dorado archive with labels for which CTD is best (Week 19)
- Wrote code to convert UTM positions for 2003-2004 Dorado data processing in auv-python (Week 21)
- Testing reloading stoqs_all_dorado on kraken2 (Week 21)
- Loaded stoqs_all_dorado on kraken2 with legacy and new auv-python processed data (Week 22)
- Identifying some missions that need better quality control in the auv-python software (Week 22)
- Loaded stoqs_auv_compare for another comparison of auv-python proxy data (Week 25)
- Contributed to 2024 proposal submission (Week 28)
- Adding additional QC for occasionally bad dorado parosci data from 2008 to 2012 (Week 29)
- Currently loading stoqs_all_dorado_t as a test of auv-python generated and QC'ed data (Week 30)
- Finished load of stoqs_all_dorado_t, still comparing Matlab with auv-processed data (Week 31)
- Found problem with extrapolation with interp1d() in auv-python (Week 33)
- Fixing remaining data quality issues before reloading stoqs_all_dorado (Week 33)
- Toggling between loading stoqs_all_dorado_t and stoqs_all_dorado to verify good processing (Week 34)
- Started reload of stoqs_all_dorado with PAR data addition (Week 35)
- Discovered malformed query that impacts performance of plotting data from stoqs_all_dorado (Week 43)
- Modifying auv-python's biolume proxy code to support variable flash_threshold values (Week 46)
- Attempting to understand optical backscatter data processing and units from Dorado & Pontus (Week 48)
- Working on Notebook that uses Holoviews to interactively explore Parquet data from STOQS (Week 49)

901915 - Improving MBARI Data Impact

Out of Office

- Jan 18-20 Vacation
- Feb 13 Vacation
- Feb 17 Vacation
- Feb 21-24 Vacation days
- March 2-3, 7, 9 Vacation days
- March 9, 13 Vacation days
- March 13 Vacation day
- March 27-28 Vacation days
- 23 May: Vacation day
- 7-11 August: SIGGRAPH in LA
- 26-30 June: Vacation
- 9-11 October: Web3D 2023 Conference
- 12-20 September: Vacation
- 18 July: Vacation
- 31 July: Sick day
- 17 August: Vacation
- 29 September: Vacation
- 9-13 October: Web3D 2023 Conference
- Nov 28: Vacation
- Dec 11-15: AGU
- Dec 26-19: Vacation
- Dec 26-29: Vacation

Overhead

- Provided STOQS data export instructions to our Great Lakes collaborators (Week 5)
- Annual review (Week 6)
- Some flails over trying to keep Docker services running during underlying updates (Week 7)
- Met with capstone team to advise on their project plan for MB-System's mbgrd2gltf (Week 7)

- Updated internal web calendar to synchronize future R/V David Packard Zimbra events (Week 9)
- Meetings with capstone students on mbgrd2gltf project for MB-System (Week 9)
- Met with capstone students who are working on mbgrd2gltf for MB-System (Week 11)
- Moved office (Week 13)
- Met with capstone students and Tom O'Reilly about building MB-System with cmake (Week 15)
- Submitted 2 more capstone projects for CSUMB online students (Week 15)
- Met with capstone students about their project to build MB-System with mbgrd2gltf added (Week 16)
- Tested MB-System pull request from capstone students and advised them to submit it (Week 19)
- Giving the 4 capstone students a tour of MBARI on Friday afternoon (thanks in advance to the Video Lab and the AUV teams :-) (Week 19)
- Gave project abstract presentation on proposed EXPD modernization project (Week 21)
- Attended CSUMB CS capstone festival last Friday and had kickoff meetings with new teams (Week 21)
- Expd database modernization project discussions following go ahead from MT (Week 22)
- Exploring kerchunk, fsspec, zarr, xarray, and datashader to visualize MARS DAS data (Week 22)
- Advising 2 CSUMB CS Capstone teams (Week 22)
- Sent Jupyter Notebook that combines multiple MARS DAS files with xarray to Aaron Micallef (Week 23)
- Getting IS help next week to change my UID so that MacOS XQuartz works properly (Week 24)
- Thinking about writing Expedition Database Modernization proposal (Week 24)
- Wrote a Jupyter Notebook that computes platform track lengths from data in STOQS (Week 25)
- Shared first draft of Expedition Database Modernization proposal (Week 25)
- IS is changing my UID tomorrow so that my Macs will stop acting like they're brain dead (Week 25)
- Plowing through piled up emails (Week 27)
- Mentoring capstone teams (Week 27)
- Submitted Expedition Database Modernization proposal (Week 28)
- Placed order for computer upgrade (Week 29)
- Working the open house on Saturday – supervising our parking volunteers (Week 30)
- Setting up new computer (Week 31)
- Preparing for SIGGRAPH next week (Week 31)
- Attended CSUMB Capstone presentations last Saturday (Week 33)
- Agreed to mentor CD/CD students in the Fall with an Expd Database modernization project (Week 33)
- Writing requirements document for Expedition Database Modernization capstone project(s) (Week 34)
- Copying everything over to new computer (Week 34)
- Reduced some labor items in response to Phase 2 for Expd Database Modernization (Week 35)
- Still adding to requirements document for Expd Database Modernization capstone (Week 35)
- Still copying everything over to new computer (Week 35)
- Revised Expd Modernization Requirements for capstone document based on group input (Week 36)
- Met with CSUMB students about their Expd Modernization projects – they're excited about it! (Week 36)
- Mostly vacation, but did get the STOQS mapserver container to work on Mac M2 arm (Week 38)
- Mentored Expd Modernization project capstone teams (Week 39)
- Provided feedback for Expd Modernization project alignment with strategic roadmap (Week 39)
- Accepted offer to be on the jury for best paper at the Web3D 2023 Conference (Week 40)
- Presented oil spill simulation visualization from STOQS at the Web3D Conference last week (Week 42)
- Still discovering more things that need to be transferred from old laptop to new laptop (Week 42)
- Arranged MBARI tour for current capstone students at noon on 1 December, an off Friday (Week 44)
- Met with seminar speaker to discuss Hacking for Impact and student mentoring (Week 44)
- Attended 2017 intern Rachel Kahn's PhD defense from MIT-WHOI (Week 45)
- Rescheduled capstone student tour to Friday 8 December (Week 45)
- Background checks for capstone student tour completed (Week 46)
- Signed project partner letter with Durham Univ. for using STOQS for terrestrial smart boulders (Week 47)
- Appreciating Mac M2 performance after getting native ARM images to build for STOQS (Week 49)
- Giving tour of MBARI for capstone teams Friday at noon (Week 49)