

Thom Maughan

Week 30

- 300078 - DMO Support - AUV
 - EE Techs finished Hyperion power supply board assembly, adding parts not available at LCSC.
 - Hyperion power supply board testing. Found a minor problem related to BackupBatteryFlag detection circuit.
- 300083 - DMO Support - LRAUV
 - BPC2 battery packs have been installed in Galene and Galene is getting buttoned up and ready for tank test. Batteries will be fully drained then recharged and if all goes well Galene will be deployed thereafter.
- 901217 - Chemical Sensors
 - Ordered upduino, Lattice UltraPlus ICE40UP5K FPGA dev board, for MMSv2 digital board pda and a2d logic implementation.
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - Working with Jim Davis on 'batFS', ultra low power and small footprint file system for nanoFET.
 - Reviewed Jess's bug list for MoSoS v5.2.
- 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Planktivore V1 is being readied for deployment on upcoming Barry Lab cruise on the Packard.
- 902004 - Planktivore
 - Worked with Paul R. on disassembly of Planktivore V1 to diagnose imaging problem that occurred after airline handling. Prism holder was glued to prevent rotation. Paul upgraded XavierNX to OrinNx. Worked with Denis on re-assembly.
- Overhead
- Out of Office
 - Vacation Sep 8,9,10

Week 29

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore

- Overhead
- Out of Office
 - Fifteen days June 12 - 29 for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.
 - Two week vacation July 6 to July 17, Colorado

Week 28

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
- Out of Office
 - Fifteen days June 12 - 29 for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.
 - Two week vacation July 6 to July 17, Colorado

Week 27

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Demonstrated Planktivore twice at MidSEC conference
 - Deployed Planktivore in research salmon pen near Bergen Norway
 - Met with NTNU AURLab team members looking into opportunities for collaboration.
- Overhead
- Out of Office
 - Fifteen days June 12 - 29 for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.
 - Two week vacation July 6 to July 17, Colorado

Week 26

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors

- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Attended MidSEC conference. Demonstrated Planktivore V1 with swim tow and live feed from small stream. Conference was excellent with lots of discussion, connections.
 - Deployed Planktivore V1 in a research salmon pen near Bergen Norway, collaboration with Tidal.
 - Planktivore proposal
- Overhead
- Out of Office
 - Fifteen days June 12 - 29 for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.
 - Two week vacation July 6 to July 17, Colorado

Week 25

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
 - Attending MidSEC conference in Sweden. Excellent presentations and discussions. Swim net tow and demo of Planktivore. Also ran samples thru Manu Prakashs Planktiscopes. Many discussions on eDNA and interest in the 'lunchbox'
- Out of Office
 - Two week vacation July 6 to July 17, Colorado
 - Dental appointments. Two in June, One in July.
 - Fifteen days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 24

- 300078 - DMO Support - AUV
 - Hyperion Power supply assembly
 - Review / feedback on designs
 - Proposal review
- 300083 - DMO Support - LRAUV
 - BPC2 battery packs are ready to go in Galene, awaiting ASO closeout
- 901217 - Chemical Sensors

- Worked with Josh on failed deuterium lamp analysis.
 - MoSoS v5.2 for MSC3
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - Released MoSoS v5.2 for NanoFET, working with Jess on test
 - Working with Jim Davis for NAND low footprint filesystem
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Planktivore V2 'B' is ready for integration on Opah
 - Prep and packaging of Planktivore V1 for trip to MidSEC conference and follow on collaboration with Tidal at Salmon Farm in Bergen Norway
 - Proposal discussions
- Overhead
- Out of Office
 - Two week vacation July 6 to July 17, Colorado
 - Dental appointments. Two in June, One in July.
 - Fifteen days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 23

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
- Out of Office
 - Two week vacation in July around the 4th
 - Dental appointments. Two in June, One in July.
 - Fifteen days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 22

- 300078 - DMO Support - AUV
 - Hyperion power supply board is in fab and assembly at jlcpb. Connectors and a cap will be assembled at MBARI. This version defines a footprint in the form established by Polulu with the addition of EXTVCC.
- 300083 - DMO Support - LRAUV
 - Galene's battery firmware is updated, tested, awaiting housing closure. I did not test the SMBbus over temperature with an actual battery that was over temperature - it was tested by forcing the condition with test code.

- 901217 - Chemical Sensors
 - Trouble shooting 4 ISUS resulted in 3 problems due to bubbles/droplets affecting optical path. 1 was due to a failed lamp.
 - Presented ISUS timing to the Carbon Lab. Lobbying for restructuring the routine and cutting down on the sample time with lamp on - hopefully going to save about 30% in power for ISUS sample while maintaining accuracy.
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - Working on MoSoS v5.2 release for nanoFET, integration on Spray Glider. Expecting to release without NAND support (not needed for Spray2) but will follow in the next month or so with logging to NAND flash. Spot checking, not full testing / support for the release on MFET and MPHOX
- 901904 - Deep-Sea Coral-Sponge Community Observatory
 - ROVVOR, planktivore attached to the ROV Ricketts. Barry Lab is encouraging the enhancement of our phase 1 proposal to included a deep, 4000m, capable housing dedicated to the ROV.
- 902004 - Planktivore
 - Planktivore V2 'B' for deep LRAUV Opah has completed leak testing. It will be scheduled for deployment in the next month or so.
 - Trip prep for MidSEC conference in Sweden followed by salmon lice detection experiments in Bergen Norway. June 11 to June 27.
- Overhead
- Out of Office
 - Two week vacation in July around the 4th
 - Dental appointments. Two in June, One in July.
 - Fifteen days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 21

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
- Out of Office
 - A week vacation in May (TBD)
 - Ten days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 20

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
- Out of Office
 - A week vacation in May (TBD)
 - Ten days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 19

- 300078 - DMO Support - AUV
 - Hyperion power supply, environmental board
 - Discussions
- 300083 - DMO Support - LRAUV
 - Battery rebuild for Ahi and Brizo
 - Adding SMBus alarm flag management to BPC2. Modifying the trickle charge behavior to add user intervention to force trickle charge on. Temporary hold on closing Galene until I've got the alarm flags managed (safety).
- 901217 - Chemical Sensors
 - Prep'd then postponed the ISUS timing talk.
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - MoSoS v5.2 on nanoFET. Working thru and testing the command set.
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Planktivore abstract and presentation
 - Finalized build of Planktivore V2 'B' for Opah. Helium leak check needed more vacuum than we were comfortable pulling. Did not fill with helium due to potential oscillator risk.
 - New plan for leak check is to put in test tank for several days while monitoring humidity
- Overhead
 - May 5 Proposals, May 6 Proposals
- Out of Office
 - A week vacation in May (TBD)
 - Ten days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 18

- 300078 - DMO Support - AUV
 - Review, discussions regarding backplane, etc.
 - Helped with Hyperion proposal abstract
 - Signed up for project manager
- 300083 - DMO Support - LRAUV
 - Evaluation of Ahi battery pack
 - Rebuild of Ahi battery pack using BPC1 / Oceanserver with help from BPC2, delivered to DMO ASO
 - Rebuild of Brizo battery pack using BPC1 / Oceanserver with help from BPC2, delivered to DMO ASO
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- 901217 - Chemical Sensors
 - ISUS sample timing presentation prep for science meeting. Postponed until May
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - Started command eval of MoSoS v5.2 on nanoFET, interrupted by LRAUV battery needs
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Final assembly is finished on Planktivore V2B for Opah. Helium leak test was not conclusive due to limits on vacuum inside Planktivore.
 - Revised leak test is to put on bottom of test tank for a few days while monitoring humidity.
 - Met with planktivore users, met with Alana, submitted 3 year Planktivore abstract
- Overhead
 - Project proposal season
- Out of Office
 - A week vacation in May (TBD)
 - Ten days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 17

- 300078 - DMO Support - AUV
 - Project proposal abstract / presentation
 - Wrapping up modular power supply board, preparing for fab and assembly
- 300083 - DMO Support - LRAUV
 - Battery testing on Ahi. 25% of the batteries are not reporting due to SMBus hang on two banks of 8. 25% of the batteries that are reporting are bad. Bad being defined as not charging to at least 80% of capacity.

- Various meetings to determine a plan for Ahi. Conservative plan is to use BPC1 battery packs from Galene. Charge, Discharge, connector cycle on a couple sticks. All 62 sticks are reporting and charging as expected, delivered to LRAUV lab. Ahi rebuild is planned this week.
- 901217 - Chemical Sensors
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- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
 - MBARI Tour for MLML, Tom Connolly's python class. Thanks to Jess Metter and Logan Grady for helping.
- Out of Office
 - A week vacation in second half of April (TBD)
 - Ten days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 16

- 300078 - DMO Support - AUV
 - Decided against producing the updated Hyperion Power Supply due to issues with hand assembly likely stemming from too much copper for heat dissipation on the 400W PCB. Redesigned the power supply to use modules modeled after Polulu. Preparing for fab and assembly.
- 300083 - DMO Support - LRAUV
 - Ahi has two of the banks of 8 sticks not reporting. Ahi finished the science mission but ran out of battery on the transit home from the CFE deployment. Running battery diagnostics show 25% are bad of the sticks that are reporting.
 - Discussed plans with DMO and LRAUV team and then consensus is to fly Ahi next week for MBTS and then immediately afterwards swap in two BPC1 packs. Working on the BPC1 packs removed from Galene to make sure they are tested and ready for swap into Ahi.
- 901217 - Chemical Sensors
 - Wahoo! MSC3 based GoBGC floats are now being deployed. This after nearly a year long four float engineering test.
 - Working on MMS interface v2.
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - MoSoS v5.2 is being requested for test and validation and then use on the Spray2.
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Weekly meeting. No progress on Planktivore v2 B build

- Working on the Planktivore proposal. Meetings with Monique, Steve H, Francisco, Colleen have all surfaced the need an institutional plankton image data pipeline. Met with Kevin who recommended adding the pipeline effort to the Planktivore proposal
- Overhead
- Out of Office
 - A week vacation in second half of April (TBD)
 - Ten days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 15

- 300078 - DMO Support - AUV
 - Hyperion Power supply design update finished. BOM uploaded for fab and assembly at JLCPCB. Holding off submitting the order until partial build assembly issues are resolved.
 - Hyperion Power Supply, second partial stuffing. Most of the small form factor chips had solder issues. Many iterations of reflow and reattach. The 6 layer PCB has lots of copper for high current and thermal dissipation and this is believed to be the culprit.
 - Reviewing next steps with Paul and Erik. Recommendation is to modularize and for the near term violate the 11mm component height goal.
- 300083 - DMO Support - LRAUV
 - Wiring upgrade on Galene is nearly complete. Tested the optimum camera / lights port and the drop is now 1v at 6v instead of 2v.
 - Battery discharge, charge cycle with no issues. It's ready for closeout in prep for tank test.
 - Ahi+Planktivore has 28 out of 62 sticks not reporting. It's a contender for battery upgrade after we qualify Galene with at sea testing.
- 901217 - Chemical Sensors
 - Investigating a Bug where the MSC3 fails to sleep. This has happened 3 times out of 50 4 day K0 calibration runs. Jess has setup a sampling / sleep interval test program to run on one of the test boxes to try and reproduce. Implemented an error log and reset handler in case of sleep fxn fail.
 - Working on MMS v2. Jess analyzed hundreds of floats including Seabird Suna to get the integration time setting from 2014 to 2025. As expected, SUNA required much less integration time due to higher optical signal. Reducing integration time will reduce power consumption and increase float battery life - the goal is to halve the power consumption of ISUS. Planning another lab talk on April 30 to go over the details and timing of an ISUS sample.
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program

- MoSoS v5.2, not much this week.
 - Installed CCS on a loaner laptop in an effort to help Brent Jones.
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Weekly meeting. Build is on hold waiting for Denis's time
 - Meetings with science users to get input for Planktivore abstract.
- Overhead
- Out of Office
 - A week vacation in second half of April (TBD)
 - Ten days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 14

- 300078 - DMO Support - AUV
 - Hyperion power supply design update. Fab at JLCPCB. Parts ordering, etc.
 - Partial build of first board
- 300083 - DMO Support - LRAUV
 - Jim M upgraded the wires, retired. There was some confusion on what was done in the schematic, errors were found, corrected. Varsha is making sure the schematics are correct. Battery testing will resume and we plan to be in the test tank in 2 weeks.
- 901217 - Chemical Sensors
 - In progress on MMS v2 Analog and Digital board design. Prototyped
 - Presented to the science group in Chem Sensors on the inner workings of the ISUS sensor.
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- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - One of the DeepRip2 guest users was running a high cpu compute job that caused alerts on the UPS and had spooled the fans up loud. Trying to figure out if the fan noise is normal...
 - Planktivore build is pending work by Denis
- Overhead
 - Helped Guillaume Liniger get setup on deepedna 3 for a neural net / monte carlo simulation job. Matlab install. Many thanks to Doug and Daniel for the guidance on Mac Windows App for shared screen on Ubuntu and Matlab install support
- Out of Office
 - April 6th, appointment. Depending on length, will make up the time on off friday
 - A week vacation in second half of April (TBD)

- Ten days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 13

- 300078 - DMO Support - AUV
 - Parts kit, BOM and centroid for EE Tech partial stuff of power supply board to enable Erik's development
 - Finished updating next rev of power supply design, layout is complete, preparing fab and assembly package for JLCPCB
- 300083 - DMO Support - LRAUV
 - Working with Jim M on wiring modifications for Galene.
- 901217 - Chemical Sensors
 - Proof of concept prototype using an STM32u585 processor gpio to replace the fpga in the spectrometer interface boards.
 - Schematic design of improved mms2 analog board
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - MoSoS v5.2 serial command testing on nanoFET
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Weekly meeting, coordinating with Denis
 - Working on options for project proposal
- Overhead
- Out of Office
 - A week vacation in second half of April (TBD)
 - Ten days mid-June (dates tbd) for Norway Planktivore collaboration with Tidal and imaging workshop in Sweden.

Week 12

- 300078 - DMO Support - AUV
 - Working on Hyperion power supply design update and pcb layout. Manufacturing plan is JLCPCB and LCSC for automated assembly.
- 300083 - DMO Support - LRAUV
 - Helping coordinate Galene wiring upgrade.
- 901217 - Chemical Sensors
 - Support
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - MoSoS v5.2 command testing on nanoFET.
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Planktivore v2 'B' build.
- Overhead

- Out of Office
 - Mon 3/16 and Tues 3/17 vacation.

Week 11

- 300078 - DMO Support - AUV
 - Hyperion power supply partial build to test GaN FET 24v buck converter. Initially there were issues, but after swapping the controller the converter was working. 30v input was running ~96% efficient at 180W! Characterizing efficiency in 10v steps to 60v, one of the FETs blew when the input was at 60v and it took out the pads on the board. The design as is will work for development.
 - Working on an design update which will have automated assembly
- 300083 - DMO Support - LRAUV
 - Battery testing is in progress, charge / discharge. No bugs or odd behavior. Calibrating capacity as measured by the electronic load vs what is reported by the sticks.
 - Galene is intended for high current (5 to 6amp) payloads and testing at 6amps has a 2v drop in the wiring harness. Varsha is out so I'm working to get Galene to the EE-Techs for wiring upgrade pending finding the right schematic.
- 901217 - Chemical Sensors
 - Supporting the lab. There have been two units that have had what appears to be a sleep problem that happens once in the 4 day cycle. Not sure if it's hardware / silicon errata related. Rerunning the K0 cal on the board that failed to try and reproduce. I've added an error log entry in the event HIB fails to sleep in the next release.
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - Setting up for testing MoSoS v5.2 on nanoFET after merging Jim's latest update.
 - Providing support for mini-ISUS. Luke is experiencing a spurious byte on wakeup with his setup. Jess has a test setup that does not reproduce the problem with the protocol analyzer. Likely culprit is floating TX signal when sleeping for more than a few minutes.
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Talked with Kobun on his proposal to gather eDNA on Planktivore. It's easy to add the eDNA 'sponge' as it would be zip tied to the optical extensions.
 - Denis is making good progress on final assembly of Planktivore V2 'B'
- Overhead
- Out of Office
 - One week vacation planned in Apr / May, not sure yet

Week 10

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
- Out of Office
 - Vacation Feb 16 to 20
 - OSM Feb 19 to 23

Week 9

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
- Out of Office
 - Vacation Feb 16 to 20
 - OSM Feb 19 to 23

Week 8

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
- Out of Office
 - Vacation Feb 16 to 20
 - OSM Feb 19 to 23

Week 7

- 300078 - DMO Support - AUV
 - Hyperion meeting

- Kitting, BOM and placement file for partial assembly - 24v supply
 - Hyperion environmental board design
- 300083 - DMO Support - LRAUV
 - Batman integration testing on Galene. Finding and fixing issues ranging from cable harness to firmware bugs.
 - Released v0.9.14 and started discharge test
- 901217 - Chemical Sensors
 - Logic analyzer capture of MMS interface signals and timing.
 - Ordered STM32HU585 processor boards for evaluation as timing generator
 - Photodiode interface opamp selection for high gain transimpedance amp.
 - Setting up a thermal cooling / heating surface for testing MMS Analog board across 0c to 35c for eventual comparison to new MMS2
 - Looked into a minor bug on MSC3 MoSoS v5.1.8
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - Merged MoSoSv5.2 into the mainline. There are a few issues, notably with serial that will be resolved soon. New development will be on main from now on.
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- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Poster for OSM26
 - Board Bullets
- Overhead
 - Working with IS on DeepEdna3 install.
 - Peter installed the 61TB drives on DeepEdna1 and 2 and implemented the storage naming convention. Absorbed the cost of the PCI cards into Planktivore.
- Out of Office
 - Vacation Feb 16 to 20
 - OSM Feb 19 to 23

Week 6

- 300078 - DMO Support - AUV
 - Hyperion Power Supply parts are in (delayed by weather). Parts kitting, assembly documents for handbuild by EETech of a) 24 supply only, then b) qty 3 of complete board. Using Erik's python script to change placement file formatting per Jose's request.
 - Hyperion Environmental board design
 - Various design discussions with Erik
- 300083 - DMO Support - LRAUV

- Gemini AI code review of batman firmware. Implemented the suggestion to use fixed point instead of floating point on Cortex-M0.
- BPC2 BatMan integration test, specifically the discharge test surfaced a couple problems. LRAUV power cable modified for Galene, moving forward, we will make the change on BPC2 connector. Firmware bug affecting 'S', aka stick status command. Found and fixed. New firmware uploaded and test re-started with charge until end of day, then discharge until 'reserve' voltage behaviour is observed.
- 901217 - Chemical Sensors
 - Working on design of new MMS interface analog and digital boards, aka, MMS2
 - Captured logic analyzer signals of existing FPGA design - very interesting that continuous photodiode read clocking and ADC conversion is happening when the MMS is idle.
 - Manufacturing support, discussions with Ben Davis on MMS board checkout and tuning.
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - MoSoS v5.2 for nanoFET, working with Jim on git merge to main branch
 - CCS support for Brent Jones who is bringing up his new formfactor nanoFET.
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Worked with Paul on Planktivore V2 maintenance. Paul disassembled the housing, found screws had galled. Need to service screws yearly.
 - Removed backup battery, lightened by 480 grams.
 - DMO ASO group is preparing Ahi for deployment next week.
- Overhead
 - CANON HiPP. Received DeepEdna3 server. Working with IS on install of 61TB drives. Ran into a snag and need to order PCIe U2 cards to mount the drives.
- Out of Office
 - Vacation Feb 16 to 20
 - OSM Feb 19 to 23

Week 5

- 300078 - DMO Support - AUV
 - Hyperion: parts ordering and pref for assembly by EE-Techs. PCBs and parts expected in the next day or so.
 - Hyperion: started environmental board design
- 300083 - DMO Support - LRAUV
 - BatMan BPC2 packs integrated on Galene. One of the packs had a serial noise char. Root cause due to cable cross talk and tri-state RS232 transceiver. Worked through options and decided to enable RS232 transceivers since we are

not need RS232 multidrop. Recommendations are for better cables (ground twisted with rx, ground twisted with tx), lower value pull down resistor (10K) when transceivers are tristate.

- Started multiday discharge test
- 901217 - Chemical Sensors
 - Finalizing MMS v2 Analog board design (new spectrometer interface). Started layout
 - Prelim MMS v2 Digital board design. Processor selection, power supply, ADC
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
 - PO for Jim Davis
 - Started MoSoS v5.2 command testing on nanoFET, MFET, MpHOX.
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
 - Weekly meeting
 - Working Planktivore v2 'B', aka second build
- Overhead
 - Performance review
- Out of Office
 - Vacation Feb 16 to 20
 - OSM Feb 19 to 23

Week 4

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
 - BPC2 Batteries packs are installed in Galene. There are resistors in series with the RS232 ground and we are seeing an occasional garbage character, likely a termination problem with the multidrop transceiver.
- 901217 - Chemical Sensors
 - Merged and reviewed Irene's changes for the sampfast command. Advised modifying the arguments to make MoSoS v5.2 table driven command processing easier. Merged and tested the update.
 - Making good progress on the new MMS2 Analog and Digital board designs.
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
 - Photonics West Jan 20
 - Employee feedback and Review prep
- Out of Office
 - Vacation Feb 16 to 20
 - OSM Feb 19 to 23

Week 3

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
- Out of Office
 - Vacation Jan 5 - 9
 - Photonics West, 1 day, likely Jan 20

Week 2

- 300078 - DMO Support - AUV
- 300083 - DMO Support - LRAUV
- 901217 - Chemical Sensors
- 901513 - Targeted Sampling by AUVs
- 901805 - Coastal Biogeochemical Sensing Program
- 901904 - Deep-Sea Coral-Sponge Community Observatory
- 902004 - Planktivore
- Overhead
- Out of Office
 - Vacation Jan 5 - 9
 - Photonics West, 1 day, likely Jan 20