

902004 - Planktivore

Week 51

1. Brent Jones
 - a. Deploy LRAUV Ahi
 - b. Bringing up new v2 ptvr board. Wrote drivers for I2C mux and I2C batt charger

Week 50

1. Brent Jones
 - a. Bringing up planktivore V2 main boards
 - b. Firmware for I2C switch
2. Thom Maughan
 - a. Delegating and dropping the ball on a few things.

Week 49

1. Brent Jones
 - a. Checking out new board build
 - b. I2C drivers for batt charger
2. Thom Maughan
 - a. Ahi was deployed Monday and recovered Tuesday with a successful targeted sampling experiment.
3. Paul Roberts
 - a. Targeted sampling deployment
 - b. Data management

Week 48

1. Thom Maughan
 - a. Provided a fully assembled camera controller to Brent Jones and progress is being made on software changes for i2c mux and adding the fourth serial port.

Week 47

1. Thom Maughan
 - a. Weekly meeting.
 - b. Shadowgraph housing fabrication will be shifted to 2025. Purchasing cameras and Orin NXs is complete.
 - c. Delegated camera controller hardware bringup to Brent.
2. Paul Roberts
 - a. Shadowgraph design

Week 45

1. Paul Roberts
 - a. Data management

Week 44

1. Paul Roberts
 - a. Data management

Week 43

1. Thom Maughan
 - a. Ahi was deployed on Monday Oct 21 for the Synchro Windfarm study. So far so good on the mission though we are seeing battery stick errors that shouldn't be happening with the way we have Ahi's switches set.
 - b. Weekly meeting

Week 42

1. Thom Maughan
 - a. Weekly meeting
 - b. Planning or Synchro deployment

Week 41

1. Thom Maughan
 - a. DeepRip has had 4 incidences or sudden reset including the one were we lost the SSD a couple weeks back. We may have a damaged motherboard or processor. Both are pricey ~7K.
 - b. Planktivore V1 was mobd. Deployment interrupted due to a config error. Will deploy on Friday.
 - c. MIW Poster and Lightning talk

Week 40

1. Thom Maughan
 - a. Last week: Planktivore V1 prep for Barry Lab cruise, test tank for 24 hours. Plankitovre V2 on Ahi for EcoHAB. ASO group was booked so Planktivore engineering managed the deployment. Ahi did great an ASO recovered Ahi.
 - b. Planktivore V1 housing will be opened for desiccant pack and RTC replacement. Counterfeit DS3231M is suspected due to 3day in a year clock drift.
2. Paul Roberts
 - a. Preparing for Oct. 7 deployment of benthic-planktivore
 - b. Data ingest and processing CANON and ECOHAB deployments

Week 39

1. Paul Roberts
 - a. ECOHAB deployment
 - b. Image processing performance improvements

Week 38

1. Brent Jones
 - a. Recovered Ahi+ptvr for test mission
2. Thom Maughan
 - a. Helped with deployment prep of Ahi for CANON
 - b. Planktivore weekly - Patrick Daniel presented progress on Planktivore image classification
 - c. Ahi will be recovered Friday and then charged, prepd and deployed Monday for EcoHAB.
3. Paul Roberts
 - a. ECOHAB deployment
 - b. CANON deployment
 - c. Data management

Week 37

1. Brent Jones
 - a. Prep, deploy, and fly ahi
2. Denis Klimov
 - a. Figuring out balancing of the battery pack for the Planktivore benthic deployment; and mechanical components for closing the pressure can
3. Thom Maughan
 - a. Received phase 2 feedback. Meetings with DMO on 2025 capacity.
 - b. Weekly meeting. Planning CANON, EcoHAB and Barry Lab deployments
 - c. Denis is working the battery for Barry Lab deployment.
 - d. Ahi was deployed to sniff diatoms for early EcoHAB. Thanks to Chris, Varsha and Cole for the prep and especially Paul for making it happen.
 - e. DeepRip suffered a problem that turned out to be the primary SSD for the OS. Many thanks to Andrew McCann for the Parted Magic USB stick. Clonezilla didnt work for us, but DDrescue did. Paul moved the primary boot SSD to slots not underneath the GPU. Thinking that temperature may have been a factor. DeepRip should be back online Thursday.

Week 36

1. Denis Klimov
 - a. Ordered and received the Subconn components for the battery pack modification for the upcoming Planktivore deployment, including 8-pin bulkhead and straight

8-pin cables, for the cross-compatibility with other Planktivore hardware and wiring. Figuring out the pack state and re-wiring for a new configuration.

2. Thom Maughan
 - a. Plankton Proxies deployment. Minimal involvement
 - b. Working with Denis on Barry lab Planktivore v1 deployment. Date changed from Sep 16 to first week on Oct.
3. Paul Roberts
 - a. Deployment support
 - b. Data access for RIMS

Week 35

1. Paul Roberts
 - a. Plankton Proxies deployment
 - b. Data Ingest

Week 34

1. Thom Maughan
 - a. Met with Denis re progress on battery for upcoming Barry lab deployment of Planktivore v1. Cables ordered and received, load testing and charging not done yet. Denis called Craig to get details and to understand 20amp charge current.
 - b. I'm mostly out of the loop on upcoming Proxies deployment of Ahi, but all seems ready to go.

Week 33

1. Paul Roberts
 - a. Prep for Aug 22 deployment
 - b. software updates

Week 32

1. Brent Jones
 - a. Deploy, flew, recovered LRAUV Ahi
2. Thom Maughan
 - a. Holding weekly meetings. Working on 2025 deployment consolidation but not finding reasonable overlaps. Met with Chris Wahl to discuss ASO group 2025 deployments. Met separately with Brett on same.
 - b. MBARI open house. Club Plankton.
 - c. Paul and Brent worked the deployment of intern Steven Patrick's real time plankton classification algorithm. Good results! Follow up meeting with Monique for comparison to Plankton Proxies model.
 - d. Working the planktivore V1 deployment for the Barry lab. Aaron is using the deepconnect frame for the battery and microscope mounting.

- e. Working with Denis on getting the battery housing and cables finished and tested.
- 3. Paul Roberts
 - a. Data ingest from July 27 deployment

Week 31

- 1. Duane Edgington
 - a. Henry Ruhl meeting on planktivore ROI classification and upcoming MiW workshop
- 2. Denis Klimov
 - a. Evaluating the benthic battery pack reuse for Planktivore September deployment. Ordered replacement fuses and connectors
- 3. Paul Roberts
 - a. Ahi 15 deployment

Week 30

- 1. Duane Edgington
 - a. Image processing discussion planned for June 25.
- 2. Paul Roberts
 - a. Automated plankton detection software updates

Week 29

- 1. Paul Roberts
 - a. Automated plankton identification testing

Week 28

- 1. Duane Edgington
 - a. Proposal meeting
- 2. Thom Maughan
 - a.

Week 27

- 1. Thom Maughan
 - a. Working on proposal. Discussions and planning for 2025 and working 2024 September deployments

Week 26

- 1. Thom Maughan
 - a. Proposal
 - b. Aug/Sep/Oct deployment planning

2. Paul Roberts
 - a. model training and testing on data from May 2024 deployments

Week 25

1. Brent Jones
 - a. Now sending housing pressure, temp, and humidity back onshore
 - b. Alerts issued if humidity is too high
2. Thom Maughan
 - a. Proposal season
 - b. Meeting with Piscivore team and Oclea and Rhonda software - vendors of lower power Ambarella based hardware.
3. Paul Roberts
 - a. RIMS annotation and model training

Week 24

1. Brent Jones
 - a. Adding LCM publishers for pressure case engineering data
 - b. Helped debug crashing app on spurious serial input
2. Thom Maughan
 - a. MIW2024 abstract submitted

Week 22

1. Paul Roberts
 - a. RIMS data ingest

Week 21

1. Paul Roberts
 - a. Planktivore data management

Week 20

1. Brent Jones
 - a. Flew Ahi
 - b. Meetings
2. Thom Maughan
 - a. Wrapped up fourth science deployment. Durkin lab use of Ahi + Planktivore went well.
 - b. Lessons learned meeting. Very good input from Sebastian on LRAUV and Planktivore.
3. Paul Roberts
 - a. RIMS data ingest and testing mapping tools
 - b. Testing Tator with Planktivore images

Week 19

1. Thom Maughan
 - a. Ahi is out with Durkin Lab Trap Tracking.
 - b. Weekly meeting
2. Paul Roberts
 - a. RIMS data management and deployment support

Week 18

1. Brent Jones
 - a. Deployed Ahi
2. Thom Maughan
 - a. Weekly meeting, deployment plan review for Plankton Proxies and Durkin Lab trap tracking.
 - b. Ahi was deployed by ASO group on Monday morning and has been performing well after a software update pushed by the LRAUV team. Nitrate has been increasing and it looks like Monique might find the chlorophyll signal for sampling. Ahi is done on Thursday.

Week 17

1. Thom Maughan
 - a. Wrapped up Synchro Offshore Windfarm pilot study. Great job by Jason Adelaars organizing and handling the watchstanding for Ahi.
 - b. Ahi ran great. We had more drag with Piscivore and Planktivore on the same vehicle, current consumption was up around 3.3amps at commanded speed. A couple days running C1 to M1, then it was off to M2 and back to C1 for recovery on power off friday. Brian Kieft was on call all week and was a great coach for new watch standers. In addition he worked with Carlos et al to have the Dash hosted at WHOI. Recovery went well.
 - c. Met with Monique regarding plans for Plankton Proxies mission. Daphne with Piscivore goes on on Wed this week, Ahi + Planktivore V2 goes out on Monday. Chris Wahl, DMO ASO group is preparing Ahi for deployment. We'll have back to back with Durkin Lab deploying May 6.
 - d. Working with Sebastian on watchstanding and deployment plans
 - e. Paul Roberts is back and we discussed improvements in imaging he learned.

Week 16

1. Thom Maughan
 - a. Synchro Windfarm study is in full swing. Multi-platform coordinated ops with Ahi + PlanktivoreV2 + Piscivore playing a key role. So far so good on Ahi reliability. Chris Wahl did a great job fixing and testing the vehicle. We followed his advice on providing notification to the ASO group and the response has been fantastic.

We are also using the planning tab in the ODSS and will be providing feedback to Carlos and Kevin for future improvements.

- b. Ahi is making way to M2 and bucking some current. We are using more battery than is preferred but still within limits to return (20A-Hr predicted). We are working around a system integration problem that occurs outside of cell range when missions are changed and power is cycled to the payloads, there appears to be a race condition that causes Planktivore / LRAUV lcm based time sync to prevent image recording. The workaround is to avoid mission changes. Ahi due to arrive at C1 on Friday during a power outage. Brian is on top of this.

Week 15

1. Paul Roberts
 - a. Preparing for April 15 deployment

Week 14

1. Thom Maughan
 - a. First science mission. Ahi+Planktivore V2 shadowing I2MAP

Week 13

1. Duane Edgington
 - a. Plan to check in with Thom regarding data management.
2. Brent Jones
 - a. Meetings. Hot wash of last week's I2MAP mission
3. Paul Roberts
 - a. Data ingest into RIMS

Week 12

1. Brent Jones
 - a. Coordinating joint i2Map + ahi + planktivore deployment. Flying ahi
2. Paul Roberts
 - a. Coordinated deployment with I2MAP
 - b. RIMS data management
 - c. pre-post deployment checklists / training

Week 11

1. Brent Jones
 - a. meetings
2. Thom Maughan
 - a. Weekly meeting to cover Ahi+Planktivore v2 shadowing I2MAP on Mar 20.
 - b. LRAUV overview of watch standing for Jason and Sebastian. Many thanks to Quinn for the assist.

3. Paul Roberts
 - a. Prep for March 18 deployment

Week 10

1. Brent Jones
 - a. meeting
2. Thom Maughan
 - a. Planktivore weekly meeting. Planning for March, April and May
 - b. Planktivore is a candidate for DOEST in June.
 - c. Paul has processed the 27million mooring images from last spring. We are chasing an image aberration and its in those images as well though the effect is minor and the plan is to complete operations this spring before opening the housing.
3. Paul Roberts
 - a. Mooring data processing and import into RIMS

Week 9

1. Paul Roberts
 - a. Deployment support
 - b. RIMS integration

Week 8

1. Thom Maughan
 - a. Ahi+Planktivore v2 performed well on the sea trial, we'll know better after plankton image processing how we did. LRAUV team was also working on a new 'tail' mission that will be useful for Plankton Proxies.
 - b. Poster for OSM24

Week 7

1. Thom Maughan
 - a. Ahi + Planktivore deployment with Galene on the 14th. We have addressed most issues found in previous deployment. Working to chase down a faint image 'reflection'.
 - b. LRAUV team is also using Ahi for testing a new 'tail' mission.

Week 6

1. Duane Edgington
 - a. Kick off meeting Feb 6.
2. Thom Maughan
 - a. Board testing
 - b. Prep and deploy Ahi + PtvrV2.

- c. Watch standing for Ahi. Weather affected some of the team availability for watchstanding. Very appreciative of new DMO team stepping up.
 - d. Slides, planning, held Planktivore kickoff Feb 6.
- 3. Paul Roberts
 - a. Deployment on LRAUV Ahi
 - b. RIMS data ingest and testing dataset bootstrapping

Week 5

- 1. Paul Roberts
 - a. RIMS software integration

Week 4

- 1. Thom Maughan
 - a. Board checkout for strobes, energy, and ltc4162 boards.
 - b. Kickoff prep

Week 1

- 1. Thom Maughan
 - a. PCB checkout