

902208 - Mini ROV Operations

Week 28

1. Johann Voigtlander
 - a. Installed and tested VOYIS camera on the MiniROV.
 - b. Fixed clump cam flickering - was a faulty SDI bulkhead
 - c. Made some major improvements to the new joystick console
 - i. Can now stream video on the network
 - ii. Has overlay for scientists/pilots/winch operator

Week 27

1. Johann Voigtlander
 - a. Submitted the MiniROV 2027 proposal and budget
 - b. Installed Paul's stereo camera on the vehicle for testing
 - i. Designed and 3D printed a mount for it
 - ii. Confirmed cable wiring and voltage
 - c. Sent clarification emails to Pietro in Italy
 - i. Had to edit the master deployment document

Week 25

1. Alana Sherman
 - a. Proposal planning

Week 24

1. Johann Voigtlander
 - a. Finished up control van wiring
 - b. Ordered new UPS
 - c. Made fixture for NAS in rack
 - d.

Week 22

1. Johann Voigtlander
 - a. Completed 20' control van swap. Completely re-organized and optimized the racks so that our next swap(s) should go MUCH smoother.
 - b. Completed a 25 page document on MiniROV deployments, sent it to Mandy for export compliance.
 - c. Started installing Compas lab equipment on MiniROV
 - d. Got quotes on Kongsberg USBL purchase/rental

Week 21

1. Alana Sherman
 - a. Read over Johann's procedures manual
 - b. Trying to still come up with an emergency recovery plan that both sides like
2. Johann Voigtlander
 - a. Rewiring the MiniROV with improvements to simplify breaking down/setting up the server racks
 - b. Working on deployment document for Gaia Blu

Week 20

1. Justin Tucker
 - a. Heading sensor housings being machined
2. Johann Voigtlander
 - a. Started moving from 10' van to 20'
 - b. 3D designed and printed reinforced parts that broke (Swing arm mount, foam pack adapter)
 - c. 3D printed CCW miniROV propeller out of resin

Week 19

1. Johann Voigtlander
 - a. 3D printed CCW thruster for the MiniROV to try counter rotating props
 - b. Repaired some of the oil compensation lines
 - c. Rebuilt the benthic expansion can after it was re-anodized
 - d. Ordered new tubing/zip ties
 - e. Made a deployment document to share with Italy
 - f. Frank and I ballasted and investigated ground faults in the tank. The only ground faults on the vehicle are from the thrusters which are coming from multiple thrusters but are small, ~200 all together.

Week 18

1. Alana Sherman
 - a. Submitted abstract
 - b. Working on documentation for *R/V* Gaia Blu cruise
2. Johann Voigtlander
 - a. MiniROV has been rebuilt. Frank and I placed it in the test tank and we have some thruster ground faults that we are addressing
 - b. Working with Justin for the new heading sensor housing

Week 17

1. Johann Voigtlander

- a. Replaced cracked manipulator arm manifolds
- b. Rebuilt one USBL
- c. Rebuilding the MiniROV
- d. Potted cables that were damaged/cracked

Week 16

- 1. Johann Voigtlander
 - a. Refurbishing MiniROV cables
 - b. Working with Susan to record a time-lapse of the miniROV rebuild
 - c. Cleaned connectors, changed O-rings, and general maintenance

Week 15

- 1. Johann Voigtlander
 - a. Changed the oil on the thrusters. Replaced filter board O-rings
 - b. Opened EPOD and moved fiber bulkhead locations. Increased RX dB by ~5
 - c. Tested all cables for ground faults. Inspected and cleaned the ends

Week 14

- 1. Johann Voigtlander
 - a. Ordered new 8-pin heading bulkheads for heading sensor
 - b. Inventoried and organized fiber cables
 - c. 3D printed a new tilt motor mount, cut new tilt motor tracks to tension the belt.
 - d. 3D modelled a new "Foam pack adapter", the front panel which holds the heading and CTD sensor. It is now much more rigid and modular.
 - i. Had to do some maintenance on the Prusa XL printer to print this part
 - e. Got VARS data transferred for Brian
 - f. Working with Justin on the new heading sensor housings
 - g. Took apart the dead Sonardyne beacon. Got a quote for a new battery for it.

Week 13

- 1. Johann Voigtlander
 - a. Got a quote for Sonardyne battery replacement
 - b. Purchased bulkheads for the new heading sensor housing
 - c. Camera calibration for GT's sled
 - i. Removed GT's sensors afterwards for his next deployment

Week 11

1. Alana Sherman
 - a. Helped get the mob and dock testing done, the Mini is not out to sea with GT and his lab
2. Johann Voigtlander
 - a. Deploying minirov from David Packard

Week 10

1. Johann Voigtlander
 - a. Mobilized MiniROV on DP

Week 9

1. Johann Voigtlander
 - a. Mini in TT, made up a new laser bracket, upgraded all NUCs to windows 11 which involved a lot of testing and software installation. The MiniROV system seems stable so far. Camera and laser calibrations are all done.

Week 8

1. Johann Voigtlander
 - a. Installed MiniROV equipment in the 10-foot control van.
 - b. Debugging ground faults

Week 7

1. Alana Sherman
 - a. Helped disconnect AUV van
2. Johann Voigtlander
 - a. Frank and I have been outfitting the 10-foot control van with all necessary ROV equipment. After two days of rewiring and system integration, we powered up the vehicle without any issues. While there is still significant work remaining, we are currently ahead of schedule.

Week 3

1. Johann Voigtlander
 - a. The A125 DVL LabVIEW integration is nearing completion.

Week 2

1. Justin Tucker
 - a. Thruster, combo ring, first parts fit tests
2. Johann Voigtlander
 - a. Upgraded the new NUCs to Labview 2025 32 bit.

- b. Removed Datalogging and supervisory control module from copilot
- c. Working on a new LabVIEW program to integrate the VN100 IMU