

Rob McEwen Sorted By Project

600034 - Precision Control Technologies for ROVs and AUVs

- Participating in Dave's Axial test dives at Portuguese Ledge. The objective is to test mbtrnpp and Mbtrnupd8 and the new Resons, on both Mappers. (Week 9)
- Participated in Caress TRN sea days. (Week 10)
- Working on a few code improvements identified during the dive. (Week 10)
- Reworking my diagrams to incorporate mbTrnUpd8 and mbtrnpp. (Week 12)
- Planning to add lastLat/Lon feature to WaypointDepth as discussed with Dave c. (Week 12)
- Planning to adjust offset code to retain its value when disableTrn is set. (Week 12)
- Talking with S. Rock about an ROV simulation. (Week 14)
- Preparing to add Trn to the ROV simulator. (Week 16)
- Integrating Kent's SimMB1Svr with Simulator.cc (Week 32)
- Integrating Kent's SimMB1Svr into Simulator.cc. Copied the guts of SimulatedMbTrnRecv.cc into Simulator::multibeam(). I'm working through the bugs now, expect to be done tomorrow. I may re-architect this later because this approach should work, but is messy. (Week 33)

708164 - Integrating efficient and dependable wave power generation

- Working with Eric M. to read radar data into Matlab (Week 1)

708167 - WEC Dynamics and Control

- Reworking Matlab code to read in Eric M's radar data format. (Week 2)
- Reworking Matlab code to read Eric's new data format. (Week 3)
- Starting on Ahrs mounting and magnetic calibration. (Week 3)
- Got a first version of Matlab wave-crest prediction code working with Eric's interface. (Week 4)
- Starting to look through the voluminous radar data. So far I can't find any useable data. (Week 4)
- Paragon data was much better. Will try to determine why. (Week 4)
- Will try better color scaling on the radar plots to see if we can make the wave crests more evident (Andy). (Week 6)
- Will try to look at scans taken on wavetops to see if the data is better and also how far until the next wave (Andy). (Week 6)
- Tested Nav440 Ahrs magnetic calibration procedure. (Week 8)
- Reworked Matlab code to read Eric's new data format generated by the buoy. (Week 8)

901101 - Seafloor Mapping

901405 - PowerBuoy

- Working with Eric to modify Matlab code to read the latest Garmin radar format. (Week 10)
- Made a version of Matlab radar processing code that works with the Garmin. At this point it only plots the data. (Week 12)
- Roof data appears mostly circular. The only wave consistently visible is the beach break to the right by the harbor entrance. (Week 12)
- Verified equations of motion for simulating John Ryan's buoy/anchor drop. (Week 20)
- Simulated buoy travel after anchor landing. (Andy's code). (Week 20)
- Now looking at Open Robotic's added mass code for the Power Buoy simulator. (Week 20)

901513 - Targeted Sampling by Autonomous Underwater Vehicles

901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach

- Preparing to switch from Believer 3 build to repairing Believer 2 (Week 1)
- Meeting + working on Believer 3 build. (Week 2)
- Believer 3 (Week 3)
- Preparing for flight tomorrow (Week 4)
- Discovered that the plane had an unusually large angle of attack on the unsuccessful catapult launch. It was 25 degrees. This implies that the main wing was stalled, which would explain why the plane didn't fly. However, the plane is held securely by the launch mechanism. (Week 6)
- Exploring the theory that the launch flange tore off the plane during the catapult, or partially tore off, explaining how the plane could pitch up while still attached. (Week 6)
- Assisted in repairing Believer 2 by relaminating (re-covering) the nose. (Week 6)
- Got Mission Planner to run on my VM, and talk to the 915 radio and to the plane. (Week 6)
- Now running some whole system checks in the lab. (Week 6)
- Assisted Jose with monokoting Believer 3. (Week 8)
- Hinged the ailerons and rudders/elevators. (Week 8)
- Remounted the Pxfhawk. (Week 8)
- Working with James (and others) to get the receiver cable made with the embedded MAX3232 inverter. (Week 8)
- All the components save the pitot tube and parachute release are plugged in and ready to test. Will try the first power-up this afternoon. (Week 8)
- Obtained Frsky receiver. (Week 9)
- Most electronic components are plugged into the Pxfhawk, but not mounted. These include the receiver, the telemetry radio with embedded Max3232, the power distribution board, and the servos. (Week 9)
- James is mounting the pitot tube and board. (Week 9)
- Next is to power it up, test the receiver and telemetry, center the servos, and attach the linkages for the ailerons and rudder/elevators. (Week 9)
- Believer 3 now contains all major electronic components (receiver, telemetry radio, GPS, etc.) necessary for flight (no payload), except the parachute servo. (Week 10)
- Starting the bring-up and checkout process today. (Week 10)
- Tom O and I were finally able to reflash the transmitter, the embedded radio, and the receiver and get them to bind. So the transmitter will now bind to either B2 or B3. (Week 12)
- The next step is to zero the servos and connect the linkages. (Week 12)
- Working through the Pixhawk 4 setup for Believer #3. (Week 14)
- Re-installed Mission Planner and got it to work on Blackhawk-VM. (Week 14)
- Put on the linkages, verified that they work. (Week 14)
- Rehinged the Stbd elevator with improved hinge locations. (Week 14)
- Motors and ESC's now responding. (Week 16)
- Painting Believer 3 this week. (Week 16)
- Setting up telemetry. (Week 16)
- Cleaning up Believer 3 build. (Week 20)

902101 - LRAUV Technology Development and Fleet Operations

- Plotted latest Triton run, analyzing power and sonar pointing problem. (Week 4)
- Will examine recent Tethys data for power consumption and maximum possible range. (Week 10)
- Planning to look at Tethys data to predict range. (Week 12)

902201 - John Ryan's Hydrophone Deployments

- Simulated the descent rate and the distance the release travels after the anchor lands, for both the small and large rigs. (Week 32)
- John's moorings were deployed yesterday. Apparently all went well. (Week 33)

Out of Office

- 10 March Thursday
- 18 March Friday
- Vacation May 11-13.
- Vacation April 29 and May 11-13.

Overhead

- Annual review (Week 4)
- Annual review (Week 5)