

901405 - Wave-Energy Conversion for Oceanographic Applications

Week 50

1. Francois Cazenave
 - a. Working on 2-point mooring
 - b. Designing new buoy
 - c. Testing compensator and laser

Week 49

1. Francois Cazenave
 - a. Working with Abel to assemble cable terminations
 - b. Working on replacement for leaky fittings on PTO
2. Scott Jensen
 - a. 6x build of power electronics is now complete
 - b. Supporting design of HDS battery system

Week 47

1. Francois Cazenave
 - a. Installing PTO in building G and troubleshooting
2. Rich Henthorn
 - a. Set up Ubuntu laptop with MBC applications for component testing
3. Eric Martin
 - a. Troubleshooting the platform, LRF seems fine, so same presentation as in the past.
 - b. Cable design submitted to the shop for a bench cable to talk to the top hat directly.

Week 46

1. Francois Cazenave
 - a. Installing the powerbuoy in buoy room and PTO in building G
2. Scott Jensen
 - a. Conducted a sleuthing into the buoy failures.
3. Eric Martin
 - a. Some troubleshooting on the recovered system found mechanical damage to a connector led to the disconnect of power to the top hat controller. We still need to follow up on the damaged load cell and unresponsive laser range finder.

Week 45

1. Francois Cazenave
 - a. Installed equipment in building G
 - b. Cleaning up buoy and moved it to building B.

Week 43

1. Francois Cazenave
 - a. Recovered buoy

Week 42

1. Francois Cazenave
 - a. Dove on buoy to open heave cone and remove acoustic modem
 - b. Preparing for recovery

Week 41

1. Francois Cazenave
 - a. New PTO tether termination design
 - b. Planning recovery of buoy

Week 40

1. Francois Cazenave
 - a. Planning buoy recovery
 - b. Preparing for PTO tether assembly and break test
2. Justin Tucker
 - a. HDS meeting
 - b. Housing design for HDS battery

Week 39

1. Francois Cazenave
 - a. Modifying design of PTO tether

Week 38

1. Francois Cazenave
 - a. Preparing new tether test
 - b. Monitoring buoy

Week 37

1. Francois Cazenave
 - a. Monitoring buoy

- b. Dove on the buoy to close the heave cone, install the acoustic modem for canon and refill the oil.

Week 36

- 1. Francois Cazenave
 - a. Monitoring buoy and preparation for CANON

Week 35

- 1. Francois Cazenave
 - a. Prepared and installed new fence for buoy
 - b. Worked on buoy charge system

Week 34

- 1. Francois Cazenave
 - a. Building new fence for buoy

Week 33

- 1. Scott Jensen
 - a. Another meeting closer to building but some questions linger

Week 32

- 1. Scott Jensen
 - a. A bit more working getting PCB package out for Fabrication and Assembly

Week 31

- 1. Scott Jensen
 - a. Preparations for a 6x PTO electronics fabrication

Week 29

- 1. Scott Jensen
 - a. More meetings but getting more focused

Week 27

- 1. Francois Cazenave
 - a. Monitoring buoy
- 2. Scott Jensen
 - a. Battery meetings and specification reviews
- 3. Justin Tucker
 - a. Weekly HDS meetings

Week 26

1. Francois Cazenave
 - a. Buoy inspection dive
2. Scott Jensen
 - a. Meetings and discussions about state machines and the best implementation for the battery.

Week 25

1. Scott Jensen
 - a. Meetings and meetings about the battery
 - b. Landing on an external battery for low SoC recovery
2. Justin Tucker
 - a. Weekly meetings, housing design considerations

Week 24

1. Francois Cazenave
 - a. Monitoring buoy

Week 23

1. Francois Cazenave
 - a. Preparing Spotter mooring
2. Scott Jensen
 - a. Battery development specification meetings
3. Justin Tucker
 - a. Battery housing preliminary design

Week 22

1. Francois Cazenave
 - a. Monitoring buoy
 - b. Preparing Spotter mooring
2. Justin Tucker
 - a. Prep for spotter buoy deployment
 - b. Battery housing weekly discussions

Week 21

1. Francois Cazenave
 - a. Monitoring buoy
 - b. Preparing Spotter buoy
2. Scott Jensen
 - a. Meetings about numbers of cells and the like for the design of the battery pack

3. Justin Tucker
 - a. Battery design discussions

Week 20

1. Francois Cazenave
 - a. Wave energy buoy deployment, preparations, cleanup
 - b. Monitoring buoy

Week 14

1. Francois Cazenave
 - a. Buoy, PTO and mooring preparations for deployment
2. Justin Tucker
 - a. Mooring line pull angle study

Week 13

1. Francois Cazenave
 - a. Finished testing the PTO and put away equipment
 - b. Preparing mooring for deployment
2. Scott Jensen
 - a. Batteries, batteries, batteries. Charged, Internal resistance, capacity all checked and 24 identified
 - b. Installed into Buoy
3. Eric Martin
 - a. Tether wiring

Week 12

1. Francois Cazenave
 - a. Assembling and test PTO
 - b. Ordering mooring components
2. Eric Martin
 - a. Top hat seems to be closed, moving onward.

Week 11

1. Francois Cazenave
 - a. Testing PTO
 - b. 2-point mooring design
2. Scott Jensen
 - a. Monitoring the build up for next deployment
3. Eric Martin
 - a. Repairs to vicor boards input fuses
 - b. Testing Top hat pre-closure

4. Justin Tucker
 - a. Working through 2 point mooring simulations
 - i. Improvements to post processing scripts
 - ii. Working through design of experiment automation setup. Investigating use of DAKOTA (<https://dakota.sandia.gov/>)

Week 10

1. Justin Tucker
 - a. Continued 2 point mooring simulation

Week 9

1. Francois Cazenave
 - a. New tether order
 - b. PTO assembly and testing
 - c. New mooring design (meeting with Andy and Justin)
2. Justin Tucker
 - a. 2 point mooring analysis studies

Week 6

1. Francois Cazenave
 - a. Tether order, meeting, deployment planning
2. Scott Jensen
 - a. The build of the replacement power converter has been completed along with initial acceptance tests.
 - b. Finally assembly prior to integration is underway

Week 5

1. Francois Cazenave
 - a. PTO assembly
2. Scott Jensen
 - a. Working on testing out the power electronics
 - b. These are identical electronics, just replacements for the damaged set
3. Eric Martin
 - a. Some wiring advisement

Week 4

1. Francois Cazenave
 - a. PTO assembly

Week 3

1. Francois Cazenave
 - a. Assembling PTO. Replaced all seals.
 - b. Valve test

Week 2

1. Francois Cazenave
 - a. Presssure tested PTO
 - b. Testing valve