902010 - Mesopelagic LRAUV

Week 50

1. Justin Tucker
    a. Nose shell fabrication Jig design and printing
    b. VR camera port structural analysis

Week 49

1. Justin Tucker
    a. Continued optimization on on nose shell shape

Week 47

1. Justin Tucker
    a. Nose shell design for EyeRis and Planktivore
        i. Background review of prior work to minimize prey response to vehicle movement in imaging volumes.
        ii. Baseline characterization of bow wake on LRAUV and Meso LRAUV
        iii. Training on Fluent Adjoint optimization

Week 46

1. Justin Tucker
    a. Revisions on DVL Housing
    b. Continued work on nose assembly

Week 45

1. Justin Tucker
    a. Continuing work on DVL housing drawings and miscellaneous nose assembly parts
    b. tail shell router jigs

Week 44

1. Justin Tucker
    a. DVL housing, bracketry, and nose frame adapter drawings released for manufacturing.
    b. Continued work on nose frame assembly, nose shell, CTD bracketry, puck bracketry, and EyeRis payload adaption.

Week 43

1. Justin Tucker
    a. Preliminary DVL housing drawings being reviewed

Week 42

1. Justin Tucker
    a. Continuing design/drawings for DVL housing

Week 41

1. Justin Tucker
    a. DVL housing design and continued nose assembly modeling
    b. AHRS mounting path resonant frequency analysis

Week 40

1. Justin Tucker
    a. DVL housing design
    b. Nose assembly updates

Week 39

1. Justin Tucker
    a. DVL housing design and layout tradeoffs

Week 35

1. Justin Tucker
    a. Successful pressure test including safety factor identification on sacrificial tubes.

Week 32

1. Justin Tucker
    a. Organize previous carbon tube testing for benchmarking of simulated failure index
    b. Intro discussion with Schrodinger's polymer science lead on applying their multiscale modeling method to composite failure prediction

Week 30

1. Justin Tucker
    a. Comparison NL buckling model setup with LS-Dyna Implicit solver

Week 29

1. Justin Tucker
    a. Meeting and prepwork for Port Hueneme pressure test.
    b. ANSYS mechanical and Helius composite tube model setup and comparison

Week 21

1. Jon Erickson
    a. Drafting
    b. Still waiting on a quote for the VB parts from Lee Hyd.

Week 20

1. Jon Erickson
    a. Still working on the VB system components.

Week 18

1. Jon Erickson
    a. Finalizing pump specs with Lee. Selecting Hydraulic parts to match.

Week 16

1. Jon Erickson
    a. STILL working on the Variable Buoyancy system. Requires a new pump.

Week 14

1. Jon Erickson
    a. Thruster motor is delivered. It Fits!!! Waiting on Rotor parts
    b. New circuit design for the Variable Ballast system. For the ability to pump at 1,500 meters.
    c. Testing set up for proof pressure test of vehicle hull. Prepare for test to failure on the spare hull tube.
    d. Finish prints for VB system parts.