

Justin Tucker

Week 53

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office

Week 52

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office

Week 51

- 300078 - DMO Support - AUV
 - Released revised INS drawings to shop
- 901101 - Seafloor Mapping
 - Print material test for thermal experiment nozzle
 - Released thermal spacer drawings for strobe can improvement
- 902010 - Mesopelagic LRAUV
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office

Week 50

- 300078 - DMO Support - AUV
 - Incorporate updates to INS housing design
 - Working through 2D drawing updates
- 901101 - Seafloor Mapping
 - Scope and cost estimates for LASS integration with WHOI's Jason ROV
- 902010 - Mesopelagic LRAUV
 - Nose shell fabrication Jig design and printing
 - VR camera port structural analysis

- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office

Week 49

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
 - Continued optimization on nose shell shape
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office - 12/2-12/3 Tension Member Technology tour

Week 48

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office

Week 47

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
 - Nose shell design for EyeRis and Planktivore
 - Background review of prior work to minimize prey response to vehicle movement in imaging volumes.
 - Baseline characterization of bow wake on LRAUV and Meso LRAUV
 - Training on Fluent Adjoint optimization
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office

Week 46

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
 - Complied LASS clearances and CAD for Jason team
- 902010 - Mesopelagic LRAUV
 - Revisions on DVL Housing
 - Continued work on nose assembly
- 901405 - Wave-Energy Conversion for Oceanographic Applications

- Overhead
- Out of Office

Week 45

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
 - Thermal experiment
 - Purchased and assembled hoses and fittings
 - Designing heated plume nozzle
- 902010 - Mesopelagic LRAUV
 - Continuing work on DVL housing drawings and miscellaneous nose assembly parts
 - tail shell router jigs
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office

Week 44

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
 - Heated plume experiment cart mount and assembly.
- 902010 - Mesopelagic LRAUV
 - DVL housing, bracketry, and nose frame adapter drawings released for manufacturing.
 - Continued work on nose frame assembly, nose shell, CTD bracketry, puck bracketry, and EyeRis payload adaption.
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office

Week 43

- 300078 - DMO Support - AUV
 - Completed a successful 6000m pressure test on the INS housing at DSPL.
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
 - Preliminary DVL housing drawings being reviewed
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office

Week 42

- 300078 - DMO Support - AUV

- Travel booking for DSPL trip
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
 - Continuing design/drawings for DVL housing
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office
 - Oct 22-23 - INS 6000m pressure test San Diego DSPL

Week 41

- 300078 - DMO Support - AUV
 - INS pressure test trip scheduling
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
 - DVL housing design and continued nose assembly modeling
 - AHRS mounting path resonant frequency analysis
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
- Out of Office
 - Oct 22-23 - INS 6000m pressure test San Diego DSPL

Week 40

- 300078 - DMO Support - AUV
 - INS Housing 6000m pressure test scheduling at DeepSea Power & Light
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
 - DVL housing design
 - Nose assembly updates
- 901405 - Wave-Energy Conversion for Oceanographic Applications
- Overhead
 - SolidWorks Vault Upgrade
- Out of Office

Week 39

- 300078 - DMO Support - AUV
 - INS measurement center lever arms
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
 - DVL housing design and layout tradeoffs
- 901405 - Wave-Energy Conversion for Oceanographic Applications
 - 2 point mooring analysis
- Overhead

- PDM 2024 upgrade prep
- Out of Office

Week 38

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
- Overhead
- Out of Office

Week 37

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
- Overhead
 - Finished up and documented Ricketts lifting assembly analysis and suggestions
 - Working through ProteusDS mooring design training
- Out of Office

Week 36

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
- Overhead
 - Build out of ASME minimum nonlinear material models for 316 stainless steel.
 - Finishing up Ricketts lifting assembly analysis and suggestions
- Out of Office

Week 35

- 300078 - DMO Support - AUV
 - INS housing preliminary "low pressure" 5300psi test completed with no issues.
 - Further pressure testing planned using DeepSea Power & Light's facility for full working depth certification.
 - INS electronics bracketry completed and handed off for integration.
- 901101 - Seafloor Mapping
 - LASS integration completed, joined for first expedition day
- 902010 - Mesopelagic LRAUV
 - Successful pressure test including safety factor identification on sacrificial tubes.
- Overhead
- Out of Office

Week 34

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
- 902010 - Mesopelagic LRAUV
- Overhead
- Out of Office
 - Aug 20-21 - Port Hueneme pressure testing

Week 33

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
 - Reassembly of LASS and miscellaneous part completion
- 902010 - Mesopelagic LRAUV
- Overhead
 - Continuing work on Ricketts lifting assembly
- Out of Office
 - Aug 20-21 - Port Hueneme pressure testing

Week 32

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
 - Organize reassembly of LASS brackets
 - Design of Norbit bracket adapter
- 902010 - Mesopelagic LRAUV
 - Organize previous carbon tube testing for benchmarking of simulated failure index
 - Intro discussion with Schrodinger's polymer science lead on applying their multiscale modeling method to composite failure prediction
- Overhead
- Out of Office
 - Aug 20-21 - Port Hueneme pressure testing

Week 31

- 300078 - DMO Support - AUV
 - Reanalysis of INS housing to fine tune safe hydrostatic test pressure.
 - Searching for test facility availability for housing.
- 901101 - Seafloor Mapping
 - Lens hood FOV clearance modification
- 902010 - Mesopelagic LRAUV
- Overhead
 - Debugging upgrade and license issues with Ansys RSM on linux
- Out of Office

Week 30

- 300078 - DMO Support - AUV
 - Lower INS housing end cap made it through the shop and is ready for electronics integration.
- 901101 - Seafloor Mapping
 - Misc. hardware ordered for LASS integration
 - Thermal experiment, continuing to work through ordering and assembling subcomponents. Working through challenges with uniform flow through nozzle array
- 902010 - Mesopelagic LRAUV
 - Comparison NL buckling model setup with LS-Dyna Implicit solver
- Overhead
 - Working through LS-DYNA node perturbation methods for initiating buckling.
- Out of Office

Week 29

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
 - LASS plate, design for cable management spindle
 - Thermal experiment, Pump to motor coupler and mounting layout
- 902010 - Mesopelagic LRAUV
 - Meeting and prepwork for Port Hueneme pressure test.
 - ANSYS mechanical and Helius composite tube model setup and comparison
- Overhead
 - ANSYS training for multi design point DOE runs.
- Out of Office

Week 28

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping
 - Thermal experiment - Continuing to work on setting up the motor and VFD. Worked through the BOM of the rest of the experiment design.
- 902010 - Mesopelagic LRAUV
- Overhead
 - Working through a general setup of two way coupling between solidworks and ANSYS to pass and control geometry parameters from ANSYS for design studies and repeat templates.
- Out of Office

Week 27

- 300078 - DMO Support - AUV
- 901101 - Seafloor Mapping

- LASS sled revised orientation plate and tolerances.
 - Thermal experiment - Started on motor/pump and heater design.
- 902010 - Mesopelagic LRAUV
- Overhead
 - Structural Analysis for ROV crane lifting assembly
- Out of Office

Week 26

- 300078 - DMO Support - AUV
 - INS Housing, minor updates to metric fastener specs
- 901101 - Seafloor Mapping
 - LASS sled orientation brackets released for manufacturing
- 902010 - Mesopelagic LRAUV
- Overhead
 - Ansys Mechanical and Fluids single floating seat purchased and available for all users.
- Out of Office
 - July 15th -18th Vacation

Week 25

- 300078 - DMO Support - AUV
 - INS housing - minor updates for internal cable clearances.
- 901101 - Seafloor Mapping
 - LASS sled orientation plate and brackets being finalized
 - Stereo camera lens hood FOV and sensor placement established
- 902010 - Mesopelagic LRAUV
- Overhead
 - Ansys Mechanical and Fluids evaluation
 - HPC remote solve services installed on Ubuntu VM
 - Multi user and HPC licensing usage analysis - in progress
 - Pressure controlled nonlinear buckling template 2D shell model created
- Out of Office
 - July 15th -18th Vacation