

Paul McGill

Week 53

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office
 - Sick day to deal with medical appts.

Week 52

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
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- Overhead
- Out of Office
 - Sick day to deal with medical appts.

Week 51

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Did some analysis of Rover current meter data from Pulse 72. Found some issues with the data logging and got Rich H. in the loop to address them.
 - Looking for a Python implementation of Zhang's camera calibration algorithm so I can run images myself and perhaps avoid the steep MathWorks license fees for their MATLAB toolbox.
- 901700 - 2017 Acoustical Ocean Eco
 - Trying to set up my local copy of OrCAD to connect to MBARI's CIS database. Will need Jose's help with this.
- 901800.98 - Bioacoustic Payload

- 901803 - Carbon Wave Glider Development
 - Held group Google Meet meeting to discuss end-of-year spending and humidity sensor integration.
 - Sending Andrea's Collaborator's Agreement up the chain of command for approval.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Spent a little time looking at lock-in detection for cameras to detect coral fluorescence.
- Overhead
 - More OrCAD online training.
- Out of Office
 - Sick day to deal with medical appts.

Week 50

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Did more post-cruise clean up such as sending optodes off for cal and beacon inventory.
- 901700 - 2017 Acoustical Ocean Eco
 - Created symbols for new parts and submitted to CIS database, waiting for Jose to create footprints. Looking for ways to shield xducer cables into shield.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Inventory of DIC analyzer parts as they're received and coding of CC charges.
 - Set up Collaborator's Agreement for Andrea so she'll have access to MBARI network.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Working on layout for Deep Sea Connect data system. Trying to find deep-rated power switch to control power to it.
- Overhead
 - More OrCAD online training.
 - Finished fixed-asset inventory.
 - Renewed some software licenses.
- Out of Office

Week 49

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Ordered the last of the parts for the DIC analyzer build.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Participated in Wed's ROV dive through virtual presence.
- Overhead

- Had a major laptop computer crash and had to restore from a ten-day old backup, which took a whole day.
- Out Monday for family medical reasons
- Have resumed OrCAD online training classes
- Out of Office

Week 48

- 300070 - DMO Support- Ventana
 - Helping DJ with Ventana ground-fault issues
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Working on math to do Laser Measure calibration underwater instead of in moonpool.
- 901700 - 2017 Acoustical Ocean Eco
 - Designing Faraday cage for Simrad sonar. Did Zoom call with Jose to get my OrCAD set up correctly for this.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Ordering parts for DIC analyzer
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Working on Deep-Sea Connect wireless data system for macro camera
 - Helping Alana with Raspberry Pi software configuration
- Overhead
- Out of Office

Week 47

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Processing Laser Measure camera calibration images from last Station M cruise. Doing calculations to feed distortion-corrected images into Dan Davis's MATLAB code.
- 901700 - 2017 Acoustical Ocean Eco
 - Drawing schematics for Simrad sonar noise-shielding enclosure.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Ordering lots of parts for Wave Glider instrument build. Team met on Zoom to discuss strategy for rest of this year.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Helping Alana with strobe testing. Working on deepsea connect wireless data system for Macro Camera.
- Overhead
 - Had phone call with entrepreneur who contacted Alana about using seafloor rovers to mine mineral nodules. Also had phone call with MetOcean about our problems with their beacons and possible solutions.
- Out of Office

Week 46

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 45

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 44

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 43

- 300070 - DMO Support- Ventana
 - Helping DJ with Ventana ground-fault system
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling

- Loading ship for Flyer cruise next week. Working with Duane E. to analyze camera calibration images from last Ventana dive. Made some changes to our calibration target.
- 901700 - 2017 Acoustical Ocean Eco
 - Still ordering EMI shield materials for WBT Mini sonar.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Talked with Chris Meinig, Director of Engineering at NOAA/PMEL to assure him that MBARI is still committed to building the DIC instrument even with Andrea leaving.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Helping Alana with strobe charge circuit for Macro Camera.
- Overhead
- Out of Office

Week 42

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Reconfigured SES from MARS operation to autonomous mode for Station M. Troubleshoot imaging issue with SES camera. Disassembled, cleaned, and reassembled camera imaging chamber with Johnny and Rich.
- 901700 - 2017 Acoustical Ocean Eco
 - Ordering materials and tools for sonar Faraday cage. Designing power input filter circuit.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Working with Alana and Electrochem engineer to design battery for Coral Macro Camera.
- Overhead
- Out of Office

Week 41

- 300070 - DMO Support- Ventana
 - Helping DJ design a power supply for a new pan and tilt on Ventana.
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Doing frame grabs of camera calibration target video from ROV dives last week.
- 901700 - 2017 Acoustical Ocean Eco
 - Worked with Chad W in the lab to measure the sensitivity of the Simrad WBT sonar to external noise sources. Bottom line - it's VERY sensitive. Working on mitigation strategies.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Helping Alana with Coral Macro Camera strobe power supply and battery pack design.
- Overhead

- Out of Office
 - Was on vacation Wed thru Fri of last week.

Week 40

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 39

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
 - Did more sonar noise testing in lab with Chad W. Discovered that sonar is extremely sensitive to noise on its power input by injecting a signal there.
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Cruise prep for next Mon and Tue. Found a last-minute problem with larval pump but think we've got it resolved.
 - Did loop and cross algorithm testing on Wave Glider with Tom O. Discovered some issues and modified algorithm, but won't get to test until WG is at Sta. M.
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Working on strobe design with Alana.
- Overhead
 - Designing MARS cable extension with Craig D. for possible project with NPS.
- Out of Office

Week 38

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
 - Modified WBT power supply board. Did a few more noise suppression tests on the WBT with Chad W. Working on setting up an ultrasonic sniffer to see if some noise is acoustic and not EM.
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Prepping equipment and setting schedule for Carson cruises at end of this month.
 - Fixed some issues in my ROV transect volume calculations.
- 901700 - 2017 Acoustical Ocean Eco

- Learning how to set up more complex neural nets to improve accuracy. Concepts are easy, syntax is hard.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Finished doc on LI-COR calibration and shared with our PMEL collaborators.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 37

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 36

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
 - Worked with Chad in the lab to track down sources of noise in sonar. May be a power supply issue.
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Troubleshoot power issues with SES on MARS.
- 901700 - 2017 Acoustical Ocean Eco
 - Arranged for a Mathematica pre-release license so I can run latest version on Deepdark without buying another license. Researching methods of hyperparameter tuning for our neural network to improve accuracy above the current 75%.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Making doc to better understand LI-COR calibration in preparation for meeting with NOAA/PMEL on Friday.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Helped Alana with concept review materials and attended review.
- Overhead
- Out of Office

Week 35

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots

- Did power supply noise testing in lab with Chad. Getting some interference from DC-DC converter, working on solutions.
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Post-cruise cleanup and data analysis. Tracked down cause of RF beacon failure on elevator.
 - Moved a metric craption of lithium batteries from garage to Rover lab.
- 901700 - 2017 Acoustical Ocean Eco
 - Working on hyperparameter tuning code for sonar neural network.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Responded to Phase 1 feedback
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Working on code to adapt Okuda's pump controller to flash lasers on coral camera. Having trouble getting programmer to recognize PIC on board.
- Overhead
- Out of Office

Week 34

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Finished tank testing of BLISS larval sampler. Based on flow data collected, was able to calculate the optimal flow rate for this week's deployment at MARS.
 - Finished preparing SES for deployment.
 - Went to sea on Carson on Tue and Wed to deploy and recover instruments.
 - Wrote code to geolocate Rover with Wave Glider data and worked with O'Reilly on algorithm to do loop-and-cross navigation autonomously.
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 33

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Finished modification and reassembly of larval sampling pump. Did bench testing and addressed a few problems. Set up flow rate recording system and ran system in Test Tank to identify optimal pumping rates.
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development

- Reviewed design documents to be shared with NOAA PMEL as part of our CRADA.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office
 - On vacation last Thu and Fri

Week 32

- 300070 - DMO Support- Ventana
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- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 31

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
 - Got filter board modified for testing of sonar in REMUS chassis. Awaiting reopening for testing.
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Got SES into Test Tank but controller is having problems so we'll have to pull it when MBARI reopens.
 - Finished schematics for Larval Sampler motor controller, but can't get it built until MBARI reopens.
 - Gave new Laser Measure calibration target specs to Mariah and she'll work on it this week.
- 901700 - 2017 Acoustical Ocean Eco
 - Implemented data augmentation on sonar data and achieved new high of 77% accuracy with neural network. Still tuning hyperparameters.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
 - Working on OrCAD online training.
- Out of Office

Week 30

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload

- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 29

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
 - Working on electronics for Remus housing chassis.
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Got the SES rewiring completed and housings closed in preparation for next week's tank testing.
 - Determined specs for new camera calibration target for Laser Measure.
- 901700 - 2017 Acoustical Ocean Eco
 - Got sonar classification neural network running with all 4 GPUs on Deepdark, for a 60x speedup from CPU alone. Testing new network architectures.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Had meeting to plan next steps. Working on getting lab system going again.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Checked drawings for new Macro Camera housing. There are issues that need to be addressed.
- Overhead
- Out of Office

Week 28

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 26

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development

- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 25

- 300070 - DMO Support- Ventana
 - Showed pilots my work on ground fault scanning board that demonstrates that current setup on ROV gives incorrect readings. Did more lab testing to show that scanning could also be much faster.
 - Found a COTS regen shunt regulator for ROV's pump motor controller that should eliminate failures caused by motor regen events.
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Continuing with BLISS larval pump 1 atm motor controller design. Ordered all connectors.
 - Got connectors installed on SES MARS interface so I can continue testing it.
 - Tested battery on SES modem and thought it was good but it isn't. More testing needed.
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 24

- 300070 - DMO Support- Ventana
 - Installed protection components on Ventana's Vicor boards to stop frequent damage to their PC control pins.
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Working on SES refurbishment and testing of MARS interface.
 - Tested the attempted repair of Larval Pump's Elmo motor drive that failed at 6500 psi, but it's truly dead. Now designing a 1 atm housing for our last remaining Elmo.
 - Analyzed SES fluorometer data for Pulse 71 with our new standard fluorescence target and discovered that black Delrin fluoresces at 590 nm. Designing new protocol for establishing reference fluorescence during SES deployment.
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Looking at camera and lens specs for Coral Macro camera.
- Overhead
- Out of Office

Week 23

- 300070 - DMO Support- Ventana
 - Helping DJ to better protect the Vicor control inputs on Ventana power supplies. Also researching changes to the ground-fault system so it produces better data.
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Working with John F. to refurbish SES. Tracking down equipment and docs to test MARS connection for SES. Also tracking down equipment to test larval pump motor driver with new pressure-tolerant oscillator. Hard to find stuff when people aren't at MBARI!
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Inspected and tested lithium battery shipment
- Overhead
 - Helping Yanwu to make improvements to DSP code for decimation of hydrophone data.
 - Dealt with dead AC power circuit that shut down computer Deepdark.
- Out of Office

Week 22

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 21

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 20

- 300070 - DMO Support- Ventana
 - Writing code to test ROV ground fault system.
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Prioritizing work for MBARI reopening next month. Developing backup plan in case pressure-tolerant motor control isn't.
- 901700 - 2017 Acoustical Ocean Eco
 - Wrote Python code to augment sonar data set.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Planning for starting up lab work again to test analyzer.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
 - Reviewed some of Yanwu's on data decimation filters for the hydrophone data.
- Out of Office

Week 19

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 18

- 300070 - DMO Support- Ventana
 - Trying to set up an Arduino to exercise a Ground Fault Sensing board from Ventana in order to understand some problems with that system.
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Reviewed depth-of-field testing images for Macro Camera and tried to compare them with my modeling, but more in-lab testing will be required.
- 901700 - 2017 Acoustical Ocean Eco
 - Battled configuration problems with Deepdark not recognizing its GPUs, but finally got it going again.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System

- Overhead
 - Training: Got online accounts and software set up for OrCAD training.
- Out of Office

Week 17

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Got SnappyTNG camera controller code to compile with latest XC8 compiler. Also fixed problems with Rover Wakey controller code and reflashed Rover's spare.
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Submitted project Coronavirus update.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Did field-of-view and depth-of-field calculations for Macro Camera design.
- Overhead
- Out of Office
- Training

Week 16

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Working on camera tripod optical calculations for a paper Crissy is writing.
- 901700 - 2017 Acoustical Ocean Eco
 - Still trying to reconcile differences in results between Mathematica and MxNET. Am trying to import results from one framework into the other to offer some insight.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Working with Andrea and Craig to write project coronavirus update for management.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Had Zoom meeting with team to discuss this year's plans.
- Overhead
 - Training - Got OrCAD 17.2 loaded onto my virtual Win10 machine to take online course
- Out of Office

Week 15

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco

- Still banging away on machine learning code. Can't get raw MXNet performance to match Mathematica performance even though the nets are identical. Will continue to beat my head against it.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 14

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
 - Finally got MXNet code running on Deepdark for machine learning, which gives me a x200,000 speedup. Having network problems which keep dropping my connection to Jupyter notebook server on Deepdark; I am troubleshooting.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
 - Engineering Zoom meeting.
- Out of Office

Week 13

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
 - Continuing to work on processing sonar data with neural nets. Currently struggling to get data imported in a form usable by MXNet. Many functions done automatically by Mathematica must be performed explicitly by Gluon. With power comes responsibility.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Helped Alana with some macro camera calculations to gather requirements from Jim B.
- Overhead
 - Attended Engineering Zoom meeting.
- Out of Office

Week 12

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots

- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Did a little work estimating Rover's location for upcoming Wave Glider visit, but will have to delay final estimate until we know when WG will be at Station M.
- 901700 - 2017 Acoustical Ocean Eco
 - Working on neural network code for classifying sonar target data. We're all becoming software engineers...
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 11

- 300070 - DMO Support- Ventana
 - Designed protection circuitry for PC input pins on Ventana's Vicors. Parts on order and will install next week. Also doing further analysis of ground-fault system to correct problems.
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
 - Did more Simrad power supply noise testing with Chad and concluded we need a quieter power supply.
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Finally tested larval sampling pump in pressure test chamber but pump failed. Ordered parts for one more test and working on contingency plans if that also fails.
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
 - Had kickoff meeting for year and hope to get system running in lab again this month.
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Participated in end of Barry's Flyer cruise on Fri/Sat w/Alana. Camera was set up during ROV dive and seemed to be working well; will recover in Dec.
- Overhead
 - Set up Web cam for Aaron S. to monitor pressure-test facility.
- Out of Office

Week 10

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 9

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
 - Finalized electronics chassis layout with Jon E.
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
 - Finally found and corrected problem with MXNet installation on DeepDark and can now run neural nets with multiple GPUs.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
 - Tank tested camera overnight, and captured a bunch of calibration target pictures to try some new distortion removal software. Mobilizing for Mon cruise on Flyer.
- Overhead
 - Attended Ocean Sciences meeting in San Diego last week
- Out of Office

Week 8

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office
 - Will be at Ocean Sciences 16Feb to 21Feb.

Week 7

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
- 701145 - Penguin Hotspots
 - Trying to squeeze electronics into a tight space. It's what we do here.
- 901221 - Midwater Time Series
 - Working on Ocean Sciences poster with Rob
- 901618 - Pelagic-Benthic Coupling
 - Wired Larval Sampler pump through pressure test bulkhead and got it spinning in preparation for upcoming pressure tests. Still working on content for Station M 30th anniversary video.
- 901700 - 2017 Acoustical Ocean Eco
 - Modified new Linear Tech power supply to output 15 V in preparation for noise testing on Simrad sonar.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado

- 901904.99 - Coral Camera System
 - Did some cable testing with Alana.
- Overhead
 - Spent many, many hours on NSF proposal to refurbish MARS extension cable and broadband seismometer. Got UPS working again on neural net development machine deepdark. Helped Gene with his CPF talk for Ocean Sciences.
- Out of Office
 - Will be at Ocean Sciences 16Feb to 21Feb.

Week 6

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
 - Continuing to work on NSF proposal
- 701145 - Penguin Hotspots
- 901221 - Midwater Time Series
 - Final editing for predator/prey paper, working on poster for Ocean Sciences.
- 901618 - Pelagic-Benthic Coupling
 - Collected graphics and did on-camera interview for Station M video. Working on pressure test of Larval Sampler pump, and adding a regen shunt to its controller.
- 901700 - 2017 Acoustical Ocean Eco
 - Trying to use a signal generator and oscilloscope's FFT function to characterize filters in the 0 to 500 kHz range, as we don't have a spectrum analyzer that works this low.
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office

Week 5

- 300070 - DMO Support- Ventana
- 701127 - MARS O&M III
 - Working with Craig D. to estimate resources needed for NSF proposal to resurrect MARS extension cable to MOBB seismometer. Had long conference call with collaborators at UC Berkeley and Stanford.
- 701145 - Penguin Hotspots
 - Made spectral noise measurements of Simrad sonar power supply and filter. Working with Craig O. to find better filters, and how to measure their effectiveness. Ordered low-frequency ferrites for us to test. Reviewed Jon E.'s housing design for Remus AUV with group.
- 901221 - Midwater Time Series
- 901618 - Pelagic-Benthic Coupling
 - Worked with Tom M. to reassemble pump for Larval Sampler, and drew schematic for pressure test setup. Tracked down schematics for SES to MARS interface and measured the length of the extension cable.
- 901700 - 2017 Acoustical Ocean Eco
- 901800.98 - Bioacoustic Payload
- 901803 - Carbon Wave Glider Development
- 901807 - Next Gen Acoustic Dorado
- 901904.99 - Coral Camera System
- Overhead
- Out of Office