Denis Klimov

Week 30

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 29

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
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- Overhead
- Out of Office

Week 28

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
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- Overhead

- Out of Office

Week 27

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
    - As Power Buoy deployment is getting closer, we will need to have IFCB ready. I am looking at assembling an improved version of the mobile test stand and run IFCB in building G using such a stand so it can be moved around as needed. In the meantime, it is in the optics section of a lab B232 requiring some repairs and tuning.
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
    - Looking at the Interface Can issues which leaks occasionally for no apparent reason.
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
    - Assessing previous design of a fluorometer and camera system. We have a number of options going forward, especially regarding a second video channel. But the consensus so far is that we should keep the existing 2-channel fluorometer for fluorescence signal reference and method continuity. Besides, its housing is likely too small for camera integration.
    - The other important point, we are looking at eliminating a legacy solution of using liquid interface between cans with optics, and carousel disks which would allow better illumination and simplified assembly and maintenance.
    - Preparing materials for proposal
- 902401 - Geo-Sense
    - We had a successful 3rd deployment of the DAS system with the Elevator and 115 m. of the optical fiber unspooled with the ROV. Deployed/ recovered with Rachel Carson and stayed out for a week. An updated output of the optical fiber from the elevator was tested and we acquired good data.
    - Sensitivity was proven to be sufficient to detect minor earthquakes. This test is informative for optimizing equipment for further deployments.
- Overhead
    - We are at the finish line with the Laser Cutter project. At the building G installation, we had 85 CFM of the exhaust with this machine which is below manufacturer-specified 300 CFM, so a Stop Order was issued by the Safety Office concerning fumes toxicity and possible laser beam hazard issues.
    - With the new installation in B137, the new lab by the former Model Shop, we measured 210 CFM with improved ducting and building exhaust fan;

which is still below manufacturer specifications. However, uncertainties in the requirements exist in the manual which Tech Support failed to clarify: is 300 CFM a specification of the fan itself, or is air flow measured after the fan and ducts are connected to the machine, and in such a case, where and how this is to be measured?
    - Instead of optimistic interpretation on the uncertainty in air flow requirement, I am proposing de-rating laser power to 70% from installed 65W CO2 laser utilizing conservative interpretation of such an uncertainty, while still adhering to the Safety Factor specified by the manufacturer.
    - Based on the physics of cutting materials with lasers, reducing beam power to 70% would proportionally reduce exhaust air from 300 CFM to about 210 CFM which we achieved. This power reduction would make it effectively a 45W CO2 laser.
    - Since the machine is simple and does not have any system of detection if air flow is sufficient, responsibility for watching fumes/ smoke removal is on the operator. So, laser power above 45W and up to installed 65W might still be possible which can be decided by the operator, as soon as implications are understood.
- Out of Office

Week 26

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- Overhead
- Out of Office

Week 25

- 300083 - DMO Support - LRAUV
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- 901112 - Monterey Bay Time Series
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- 902101 - LRAUV Technology Development
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- Overhead
- Out of Office

Week 24

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
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- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 23

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 22

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 21

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
    - We assembled the instrument and looking into leak testing.
    - Need to order some parts as it turned out, some O-ring information in the assembly drawings was missing.
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
    - Post-deployment discussions and looking at the previous design data for the imaging sensor.
- 902401 - Geo-Sense
    - Testing clock drift in the environmental chamber.
    - Recycled old batteries after the deployment, looking into the way of storing/ securing glass spheres in the lab.
- Overhead
- Out of Office

Week 20

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 19

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam

- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 18

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 17

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 16

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead

- Out of Office

Week 15

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
    - IFCB technical conference this week; our IFCB has a rotary valve issue.
- 901112 - Monterey Bay Time Series
    - IFCB technical conference this week; our IFCB has a rotary valve issue.
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
    - Assembly drawing for the low resolution optics side is completed; working on the harnesses into the central controller housing.
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
    - Preparing for SES deployment; a number of runs in the Test Tank, to get some familiarity with how the instrument runs.
    - Handling flooded LF modem and flooded/ corroded (DDR) battery pack; parts cleaned up and the board stack was washed and backed in the oven.
- 902401 - Geo-Sense
    - Dealing with post-deployment action items; removing battery packs from glass spheres for recycling; ordering the fiber optic inspection tool.
    - Testing DAS clock drift at 6C in OFF state in the environmental chamber in the building G which so far produces inconsistent results.
- Overhead
    - LSO: LIDAR operation in the Test Tank this week. Laser cutter TWA is on hold; but data collected for the TWA seems to be sufficient.
    - BSO: we are ordering a range of emergency supplies for batteries in a DDR or thermal run-away state; so far for a Test Tank area, and building A. Talking with Kaya about propagating some of those solutions to DMO.
- Out of Office

Week 14

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense

- Overhead
- Out of Office

Week 13

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 12

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 11

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 10

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 9

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
    - Setting up the IFCB instrument on the mobile station. Plan to make a station like this with bigger wheels, and move it for further maintenance running into the building G.
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
    - Working on assembly notes and checking out the instrument before closing.
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
    - We are starting regular meetings in the face of the upcoming deployments.
    - Pre-deployment testing of SES instrument, to get familiar with its operation.
- 902401 - Geo-Sense
    - We are processing deployment data from the Feb 3, 4 DAS deployment. In conditions of poor visibility, we somehow strained the fiber during spool deployment. People at Sintela produced a good report based on the data identifying two strain events and pinning exact time when it happened, to 1 sec. precision.
    - Subsequently, I made a report based on ROV video and dozens of framegrabs, identifying the first strain event due to the fiber coming to the tension and spool starting rotation.
    - And Rebecca E. did an analysis based on the ROV coordinates, which pointed out that when the strain even happened, we likely pulled the

optical fiber against strain release, thus possibly stressing the fiber at the very end of the strain relief (aka “the noodle”).
        - Those findings are going to influence the next design.
- Overhead
    - Studying the laser cutter from Boss Laser and working on creating laser safety TWA for this machine. Turned out, we did not have sufficient airflow for this machine, it is going to be moved to building B. Also, when working with oversized materials and during the alignment, we need to have SOPs in place in order to do it safely.
- Out of Office

Week 8

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 7

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 6

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration

- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 5

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 4

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
- 902401 - Geo-Sense
- Overhead
- Out of Office

Week 3

- 300083 - DMO Support - LRAUV
- 702106 - CeNCOOS
    - Looking into purchasing spare parts for the IFCB.
- 901112 - Monterey Bay Time Series
- 901809 - Deep Sea Bioinspiration
- 902004 - Planktivore
    - Working on the assembly notes for the Planktovore instrument optics.

- 902101 - LRAUV Technology Development
- 902304 - Piscivore Cam
- 902305 - Event Detection Using the Sedimentation Event Sensor
    - Looking how to use the upcoming deployment to have a repeatable fluorescence standard.
- 902401 - Geo-Sense
    - DAS Jan 12th deployment was postponed to the Fab 3rd; so now we have more time for the Test Tank testing. In mean time, we have to move the Laser Lab A282a into A283, due to the upcoming facilities work, and in case if we would need to open the sphere and work with the laser before the upcoming deployment days.
- Overhead
- Out of Office

Week 2

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- 702106 - CeNCOOS
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