

Space Details

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Home

This page last changed on Aug 13, 2015 by [aren](#).

This is the home page for the Summer Interns space.

Schedule

Refer to the Summer Intern Calendar (Zimbra Public Folders)

BBQ coordination

T-shirt coordination

Open House Assignments

Weekly updates (Please Report by noon each Thursday)

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01-August-2013

This page last changed on Jun 05, 2015 by [kgomes](#).

02-August-2012

This page last changed on Jun 05, 2015 by [kgomes](#).

I'm starting my confluence post early because I will most definitely forget it this week...

It's very frustrating when biology does things you don't expect it to, or when you finally figure out that the method you've been planning on using isn't the best way to answer your question(s). I have been working with a new culture in which the females have all suddenly become gravid and the singles floating around are all males, which is a problem since so far, I have used a more-or-less consistent ratio of males:females without eggs for my work. It might not matter now since I'm also changing my approach to better address the question of how non-target genetic material changes what signal I am getting from my copepods in culture. I sort of wish I had talked to more people at the beginning of my project, but at least things are making a little more sense now.

Have to also figure out if something funny is happening with the prongs I am using in lab. Consistency has been decreasing, which is not good.

More later.

03-July-2013

This page last changed on Jun 05, 2015 by [kgomes](#).

Although this has been a short week, I finally feel like things are coming together on my project. I was able to obtain the preliminary conversion rates for my holothuroids! This allows me to convert my length measurements into a mass which then can be used to estimate population biomass. I am meeting with Christine Huffard today to go into detail about extracting my data from VARS and using software to change the measurement point made in VARS to the actual sizes being seen (makes the measurements based on the known 29cm of the sizing lasers). With thousands of observations already, I have decided that I need to stop collecting data in the middle of next week. I think I am going to come in during the holiday to get a little extra data collected as well. Overall, I think my project is progressing well.

04-August-2011

This page last changed on Jun 05, 2015 by [kgomes](#).

05-July-2012

This page last changed on Jun 05, 2015 by [kgomes](#).



It's Thursday.

06-August-2015

This page last changed on Aug 06, 2015 by [arredondo](#).

Week 9...

Comments

This week has been filled with writing for my paper, presentation, and poster. I also had to check for any bugs on Expd and SamplesDb after the server solstice was replaced by solstice2 for testing.

Posted by [arredondo](#) at Aug 06, 2015.

Week 9:

I did a lot between last Friday and today. For CeNCOOS, it looks like I will add a page on to the CeNCOOS webpage describing oxygen variability in the Central Californian region. A version of the page might be out by next Wednesday (the symposium). I was able to do many plots this week including some model and observation comparisons of both oxygen contours and density contours. I am working on a plot of the change in the entire pacific basin with model data. I will be able to plot potential change in isopycnal surfaces over time, and I would like to identify the California Current to put it on one of my plots. So, my presentation and paper are just starting - my presentation is further along. I should have my presentation mostly finished this weekend, and then the paper will just write itself, right?

Posted by [aren](#) at Aug 06, 2015.

Excited to be headed into the final week! My experience here has been great and I greatly appreciate the good people that I've been working with this summer. Tomorrow the CSUMB students have to prepare their presentations for testing on the big screen! So I really need to spend tonight refining my presentation and determining what figures I will be using next week. Gotta be ready to go on Wednesday and on Friday next week.

This week has been pretty busy. There are a few things that I overlooked earlier on in the program that are really coming back to haunt me. Once I get the last few strings untangled with my project I will be free to write up my report. I plan on coming in tomorrow for the first friday since forever. Hopefully tomorrow's workshop at CSUMB ends early and I can make it in before 12:00

Posted by [psmall](#)s at Aug 06, 2015.

Woah! , its almost over...

This week I spent some of my time adding a new cetacean(sperm whale) to my classifier, but the testing has to be still done for the species. I am really excited about my presentation next week, hopefully I will complete it by the end of this week so that I get time to practice it couple of times before giving the final one, lets see how it goes...

Posted by [pmurgai](#) at Aug 06, 2015.

Week Nine:

Last Confluence! This week has been interesting, I still have work to do to complete my project and I was fortunate enough to have spoken with Ray Thompson yesterday about some parts that were requested to be cut with the water jet. He mentioned that he did not have the UHMW material available this week so I gave him the OK to use starboard so I can (fingers-crossed) apply my method prior to Wednesday, He said he would not have time to complete the parts until Monday. However, my phone rang an hour later and it was Ray telling me that my parts were finished! I have been trying to reach Brett this week and have not had any luck... I hope he becomes more available here at the finish. I am fairly anxious about giving my presentation next week and to add to that I have not yet had a chance to apply my method. It's been a great experience here this summer and I have enjoyed meeting and working with all of the other interns and MBARI staff.

-Robert

Posted by [rchavez](#) at Aug 07, 2015.

I completed my research/ project, the presentation and the paper. Now I am just revising the paper and going over the presentation to make sure everything make sense. I worked on a layout board for my mentor just to learn more about OrCAD since I finished my project.

Posted by [achen](#) at Aug 07, 2015.

After finishing processing my data last week, this week I spent time composing my presentation as well as getting ready for our two days at sea. Weds and thurs on the Rachel Carson were absolutely incredible! I'm so grateful to have been able to be part of the science team on an actual research cruise (not to mention seeing multiple whales breaching and dolphins swimming by the boat)! Peter Brewer let me sit in the chief scientist chair for the entire ROV dive on Thursday, and I controlled the science camera. We collected plenty of gelatinous animals that we shone the laser on back in the lab. There are clear differences between the gel spectra and that of seawater, but it will take a lot of careful research to figure out how to interpret these differences.

Posted by [kmccone](#) at Aug 07, 2015.

Since our time left here is short, I will keep my confluence short. I have successfully finished building my second sensor, and it is shorter than the previous sensor. Unfortunate, the second sensor has an electrical short, so it still needs some work, but my time to do that is being cut short. Still shortening my presentation to fit into 12 minutes!

Posted by [wolfe](#) at Aug 08, 2015.

Week 9:

This week I did a little more ImageJ to try and balance out the number of measurements for each species. It's become apparent that I won't get my reconstruction code working before the internship ends, but that's alright I suppose. I spent a lot of time on my presentation, and I presented it on Thursday to Steve, Lynne, George, and Danielle. Their comments were invaluable, and I'm feeling pretty confident about my final presentation 😊 Next week, I'll work on the paper and cleaning up/commenting my code and other documents to be useful and navigable to someone wanting to continue my work in the future.

Posted by [beittenmiller](#) at Aug 08, 2015.

Still working with QIIME to analyze the eDNA results, but the everything else is ready to go. I have learned a great deal working on this project and I'm excited to share that next week.

Posted by [Iziccarelli](#) at Aug 08, 2015.

This was a very busy week. I finally finished my code that determines the accuracy of the orientation generated by the code! Now I am trying to apply the code to all the videos taken by the LRAUV so I can include those results in my presentation. Kakani helped me so much this week getting my presentation up to a presentable standard!

Posted by [sblack](#) at Aug 08, 2015.

I would just like to start off with how I cannot believe this is the last confluence update! It's been an incredible summer and I'll miss not going to MBARI nearly every day. In regards to my project, I have finished analyzing my data and am now working on my presentation. I'm anxious and eager to present this Wednesday, but overall I am very excited to tell everyone my findings!

I also have the great opportunity to continue helping Jim with the abalone project! Whenever there will be another spawning experiment, I will be helping out as much as I can. Really happy about that!

Posted by [mheard](#) at Aug 09, 2015.

A very busy week 9. Trying to finalize the data analysis and draw some conclusions about the different swimming behaviors is more challenging than I thought it would be. On another note, my presentation is coming together thanks to a lot of help from Kakani. Hopefully with a bit more practice, Wednesday will be smooth sailing.

Posted by [abaumer](#) at Aug 10, 2015.

Another busy week and again! Issues with data analysis but hopefully it gets worked out this morning. The presentation is coming together, definitely work to do but I am happy I still have time to work on it and practice this week. After looking at a couple of thousand photos it is hard to choose what to include! I can guarantee many fantastic images of worms and their fecal tracks!

Jessica Whelpley

24 Old Field Ln

Redding, CT 06896

jessica.whelpley@gmail.com

Posted by [jwhelpley](#) at Aug 10, 2015.

Week nine:

This week was very busy. I was working on my paper, and at the same time, preparing my presentation. In the middle of the week I was talking with my mentor and clarify the main purpose of my study. Only at this time I can better understand my work. But these things happen. Now, everything is clearer to present next week, even taken out some analysis in which I worked hard.

Posted by [bmejia](#) at Aug 13, 2015.

One more day left in my CSUMB/MBARI Internship! I have to say, its been excellent. Thank you my fellow interns for making this experience bearable. I had a great time talking to everybody last night during the barbecue, thanks again Wiley, and to your parents, for putting that on.

I am looking forward to looking back at this experience one day with pride in all the great things I accomplished this summer. I'm sure all of you will do great later on in life, i'm rooting for you.

George can you please send stuff to

4352 Riverwood Circle

Decatur, Ga

30035

Thanks!

Posted by [psmall](#)s at Aug 13, 2015.

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Thanks!

Posted by [psmall](#)s at Aug 13, 2015.

07-August-2014

This page last changed on Jun 05, 2015 by [kgomes](#).

scroll down and click on the add comment button to post your update

07-July-2011

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Weekly updates for July 7th

08-August-2013

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08-July-2010

This page last changed on Jun 05, 2015 by [kgomes](#).

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09-August-2012

This page last changed on Jun 05, 2015 by [kgomes](#).

EYYY!!!

My last confluence and I am going to be the first one. When it started and George told us that the last couple of weeks were crazy weeks, I thought that it will not happen to me cause I will planning it very

well. But I was wrong and George was right. 😊

My project is almost done, so now I am writing my final project. On Friday, my mentor (Mike McCann) give the chance to share with him his project update, and I could present my project too. It was very nice, cause he ask me some question and now I am getting feedback for people who has started to use the tool that I have write. It's so exciting for me to know that some MBARI staff is using a code wrote for me. Another important date was yesterday, cause I present my PhD project in MBARI and we sent an abstract about my project to the American Geophysical Union's 45th annual Fall Meeting.

Now I am a little sad, cause I feel very good in here (MBARI, Monterey, California, USA) and my family too, and now I the program end. But it has been a really good experience that I have enjoyed a lot working and having a lot of fun at the same time.

Thanks to George and Linda for help us a lot, take care of us and offer us so many fun things to do, to all the intern, you all are very very nice and have been my little family during this time, to all the MBARI staff to be so friendly and help me in every little problem that I have had, specially Erich Rienecker, he is so friendly, thanks to him my family and me have had a very nice house, car, seat, and a very nice time on it. And the last thanks, but not less import, to my mentor Mike McCann to make all the thing very easy to me, be so nice, and help me so much to have a very good experience during my internship.

Have I said that I have enjoyed it a lot?????

10-July-2014

This page last changed on Jun 05, 2015 by [kgomes](#).

This week, I ran multiple rounds of PCR on tissues from three different squid species and a nudibranch species. 2/4 rounds of PCR were successful (i.e. my primers amplified something). I ran the PCR products on a gel and cut out the most promising bands. I was able to get DNA from the bands, which was then sequenced. Good news: I have viable sequence for *Pterygioteuthis*! Basically, the photoprotein sequence that was found in a different species of squid appears to have similar genetic structure to the photoprotein sequence in *Pterygioteuthis*. Now I'll actually have something interesting to talk about during my presentation, even if nothing else happens during my project!

11-August-2011

This page last changed on Jun 05, 2015 by [kgomes](#).

woohoo - heading down the homestretch now! last week!! last confluence update. Titles due Friday - and I'll see you Monday morning in the Harbor View Conference room at 9 am.

11-July-2013

This page last changed on Jun 05, 2015 by [kgomes](#).

11-June-2015

This page last changed on Jun 12, 2015 by [mage](#).

just use the add comment to add your update below

Comments

Dear MBARI diary,

Day three, I am becoming more excited about my project as I start to outline the process and set up a few experimentation days. My first experiment with abalone is next Wednesday, so I have been working with Dr. Jim Barry on figuring out the logistics of how we are going to run the test. I'm also going to be working in the Barry lab soon where I will be messing around with carbon dioxide to make the pH of the bay seawater increase and decrease in order to prepare it for my test tubes – and I get to use stunning machines to manipulate chemistry...(cue mad scientist laugh). I've also been speaking with many people in my respective field who have brilliant perspectives and astounding approaches to problems I am only beginning to understand. Nonetheless, I am eagerly awaiting the launch (lunch) of my abalone project and am hopeful for the rest of this summer.

Best fishes,

Posted by [mheard](#) at Jun 10, 2015.

It was really cool going on the beach right in front of Pacific Forum during breaks. I cleaned up the cabinet and came up with questions for Chad to clarify specifications for the project that I will be working on this summer. I was introduced to the FOCE project lab, the EE tech lab and EE lab. Chad went over what I will be doing this summer today and I did some research on the 4-20mA current loop. I have decided on using XTR117 for the current loop transmitter and started the software flow diagram for the terminal that I will be using to test my instrument simulator. I can't wait to test the circuit and work in the FOCE lab!

Posted by [achen](#) at Jun 10, 2015.

Week 1:

I am working this summer on gathering dissolved oxygen datasets with the hope of looking at trends in the central and southern California region. There is some indication that dissolved oxygen levels are decreasing in the California Current region, especially some indications from observations from the CalCOFI repeat hydrography program. Changes in dissolved oxygen may indicate changes in climate, currents, biogeochemistry, and even biology in the ocean. Dissolved oxygen is one of the oldest parameters used by oceanographers. It tends to indicate the "age" of a "water mass." The lower the dissolved oxygen, the longer the water has spent away from a well-mixed surface layer of the ocean. (Respiration decreases the concentration of oxygen, and outside of the euphotic zone there are few sources of oxygen). Lower dissolved oxygen in the California could be the result of many things, including increased atmospheric CO2/climate change.

This week, I set up my computing work environment including a CeNCOOS workstation and my personal laptop. I also started a list of datasets with dissolved oxygen. I downloaded data from CalCOFI and determined that CeNCOOS shore stations would not be applicable to my project. I also worked on my model output data, updating my dataset to include 2011-2015. For fun, I'm helping to deploy the wave glider on Thursday June 11. Tom O'Reilly keeps me company in building G and kindly gave me the opportunity to volunteer. I get a chance to be on the Paragon.

This summer I would like to learn Python; I'm an intermediate Matlab user. I'd love to improve my Matlab skills, and I should actually be learning Fortran. The list of things to do is always endless, no?

Posted by [aren](#) at Jun 10, 2015.

Week one so far has been an outstanding experience already. Everyone is so friendly and helpful which makes me feel really welcomed. On top of that, I'm really enjoying the project that I'm working on so far. Granted this is more of a prologue since I'm learning IPython Notebook at the moment which will be used when I really start my project. It's actually not that bad of a language since it's basically Python

(which I'm familiar with) with some new preloaded assets such as matplotlib, numpy, scipy, and other libraries. Everything is so far so good and I think that the summer here is going to play out just as nice (if not better than it already is).

Posted by [jramirez](#) at Jun 11, 2015.

Larvacean Log, Week One: Over the past two days I have poured over hours of video of the bathochordaeus (which I still have not managed to spell correctly without looking it up). We are investigating the kinematics of these organisms, both when they are swimming freely and when they are swimming in the "houses" that they construct. The swimming mechanism is different for each of these cases. When they swim freely, they send a traveling wave through their tail, propelling them in a direction. However, when they are in their houses, the wave does not seem to propagate through the entire tail; instead, it stops slightly past the midway points and sort of hinges off. The question of why the swimming mechanism changes is of great interest to us.

While the videos are very high in quality (and quite beautiful), both the camera platform and the organism are moving during all of them. This makes the kinematic extraction much more difficult, and out of the range of things I have ever attempted. Therefore, my Matlab skills will need a serious boost to figure out a method to manipulate the videos to keep something still. Luckily, Kakani taught me a few new tricks with video processing in Matlab. Hopefully, by the end of next week I will have developed a protocol for measuring the waveform.

MBARI is even more spectacular than I expected it to be and I can't wait to see more of the bay and surrounding areas. Plus, we start scuba diving certification tomorrow!

Posted by [abaumer](#) at Jun 11, 2015.

Week 1:

This summer I will be working on a project in Ken Smith's lab assessing the enteropneust population at Station M (~4,100 m). The lab has been collecting data at this location for the last 24+ years and is one of the few abyssal plain locations in the world that has long-term data. I will specifically be using the time-lapse images at this site from 2006 to present in order to execute this project. While I am looking at the images I will take notes regarding their feeding patterns and if there is time after I have processed the population results I will look further into their feeding ecology. Additionally, I will also look at the ROV transects for closer images of these organisms. Linda has indicated that these ROV images show enteropneusts with eggs and potentially associated organisms so I am very excited to get a closer look at these fascinating creatures. Anecdotally the population has increased due to an increase of food supply at this site so I think it will be very interesting to quantify their population.

So far this has been a busy but amazing first week. It is really wonderful to be surrounded by people with different research interests but are each incredibly passionate about their work and other hobbies! I really enjoyed the Wednesday lecture on biomimicry and I can't wait to attend more.

Cheers,
Jessie

P.S. If you are interested in finding out more about deep-sea enteropneust here is an excellent paper about their diversity. Linda is one of the authors so you should definitely check it out! <http://rsob.royalsocietypublishing.org/content/early/2011/11/10/rsob.2011.1916>

Osborn, Karen J., et al. "Diversification of acorn worms (Hemichordata, Enteropneusta) revealed in the deep sea." Proceedings of the Royal Society of London B: Biological Sciences (2011): rsob20111916.

Posted by [jwhelpley](#) at Jun 11, 2015.

11 June 2015 (Thurs):

Week one has progressed smoothly. The facilities are comfortable with a plentiful amount of coffee, support, and excitement. I've thoroughly enjoyed the intern activities so far such as the seminars, cookie break, and orientation. I was taken back about how social all the workers are here and their willingness to strike conversation with me, but I have learned to embrace the acts of friendliness.

This week my mentor Jenny Paduan introduced me to the Sample and Expedition Database, both of which I'll be working on this summer. She told me the background context of the information provided by the databases as well as the issues that occurred after switching the server from Typhoon to Wind. My

current objective is to identify errors present in the databases on Wind and if an error is found, search through the code to find the problematic code. My other two mentors Joe Gomez and Rosemary Martino-Rodriguez have been assisting me with any server or coding issue I need help with.

Highlight(s) of My Week:

Seeing a sea otter.

My first time fixing a few lines of code for the Sample Database.

Posted by [arredondo](#) at Jun 11, 2015.

Orientation on Monday was busy and exciting and left me very excited for the rest of my summer at MBARI. Unfortunately I won't be able to return until next week due to school finals, but every day I've been thinking about how fantastic my first day was! I enjoyed meeting the other interns and especially enjoyed meeting Ed Peltzer and Peter Walz, two scientists with whom I'll be working in the Brewer Lab. During my couple hours in the lab on Monday, I learned about my project using Raman spectroscopy to study gas samples evolved from oil collected in the deep sea. I practiced compressing gas, which enhances the signal from Raman and which I'll be doing with all the samples. Peter also gave me a brief lesson and demonstration on Raman, showing me characteristic peaks in the spectra for seawater and ethanol.

Posted by [kmccone](#) at Jun 11, 2015.

End of week 1:

This summer I am working on getting free food as often as possible as well as validation and optimization of a low cost chemical sensor developed by an intern in 2013. So the plan is, first, look into replacing some of the current components with less expensive alternative. Second, build another sensor so I can collect field data over long periods of time and run controlled lab experiments at the same time. Finally, compare the field data with the experimental data and compare the results. This will be done under the supervision of Ken Johnson, with help from lots of the people in the chemical sensor lab.

Posted by [wolfe](#) at Jun 11, 2015.

Week one is coming to and end and it has been a great one. This summer I am working with Brett Hobson and many others to determine the orientation of jellies in relation to ocean currents. As many of you have probably heard from me it involves a lot of Matlab, which is not one of my strongest skill sets, but I will survive. I have received help from many people already which makes me very comfortable knowing everyone is here and willing to help. Overall I am still trying to get my bearings and work down my list of things to get done for the week. However, I did get to drive a crane yesterday which was awesome and I am hopefully going to watch the launching of the Wave Glider today (fingers crossed). I cannot wait for what the rest of the summer has to offer!

Posted by [sblack](#) at Jun 11, 2015.

Acoustics Week 1:

My first visit to the US and that too for working on applications of oceanography couldn't have asked for more. The jet lag did kick in but it vanished on my first visit to MBARI, the tour all of the all the labs, facilities, watching the auv's and the rov's, free food and not to forget the limitless pacific ocean does put my mind to peace. Its amazing to see how seminars, activities, cookie breaks,barbeques etc are put together so that people can get out of their cubicles to socialize and exchange ideas.

My project here at MBARI is all about playing around with the acoustic signals of the underwater mammals(blue whales, Risso's dolphins, beaked whales etc.). My task is to design a classifier that can automatically distinguish between these creatures(blue whale? or beaked whale? or dolphin ? etc) based on their acoustic encounters with the MARS observatory using a hydrophone in the real time. To distinguish between any two things(in this case underwater mammals) it is important to find out common features based on which they can be distinguished, so that's what I am working on currently i.e the extraction of acoustic features(Energy, auto-correlation,MFCC's,entropy etc) from the already collected acoustic data (dataset provided by the Scripps Institute of Oceanography) of the various species.

Both my mentors Danelle Cline and John Ryan are really enthusiastic about the project which makes me work even more, I am really looking forward to this summer for work and enjoyment!.

Posted by [pmurgai](#) at Jun 11, 2015.

Week 1

It is hard to believe that my first week at MBARI has already come and gone. While it has been a whirlwind adjusting to a new schedule, and orienting myself to a new building (albeit not so very far from my office) it has been an incredibly rewarding first week. I have spent the bulk of this week working with Richard Henthorn on a program for the benthic rover that scans the data files it creates (syslogs) for important information.

As we have heard this week ship time is very expensive, and it is important to work as efficiently as possible. When the Rover is brought aboard the ship, the team used scan through the syslogs by hand.

These files look like thousands of lines of:

```
013-06-19T16:27:01.68,Aanderaa,_ Obtained data port_ref_optode: o2=291.99,sat=92.85,temp=15.02
2013-06-19T16:27:06.50,Aanderaa,_ Obtained data port_ref_optode:
o2=292.26,sat=92.96,temp=15.03
2013-06-19T16:27:11.42,Aanderaa,_ Obtained data port_ref_optode:
o2=292.49,sat=93.05,temp=15.04
2013-06-19T16:27:12.90,Launch,_ Optode baseline reading is 93.05
2013-06-19T16:27:16.44,Aanderaa,_ Obtained data port_ref_optode:
o2=291.98,sat=92.91,temp=15.05
2013-06-19T16:27:21.46,Aanderaa,_ Obtained data port_ref_optode:
o2=292.03,sat=92.95,temp=15.06
2013-06-19T16:27:26.49,Aanderaa,_ Obtained data port_ref_optode: o2=292.25,sat=93.03,temp=15.0
```

What my program does is scan through each line and looks for 3 things. Firstly it looks for "propulsion motors on" which will tell us when the rover starts a move. Secondly it searches for "favorable current behavior" which tells us when the rover starts looking for favorable currents to move, and eventually how long it performs that behavior. Finally, the program searches for "difference between current and desired heading. This tells us how far off the rover is from its prescribed path. It then drops the lines matching the above behaviors into their own files so the team can instantly see how the rover is performing.

Finally, the program takes the time stamp at the beginning of the line (see above) and converts that into the number of seconds elapsed since the start of the deployment. This is way the team can see exactly how far into the mission things are happening.

I have already improved greatly as a programmer, and can't wait to improve on this project. The rest of my time has been spent preparing for our cruise next week, which I am hugely anticipating!

Posted by [dburrier](#) at Jun 11, 2015.

Week one:

This week has been very exciting, MBARI is such an incredible powerhouse of research and everyone I have encountered has been very welcoming and helpful. To be quite honest, I am still working on getting my bearings on both navigating the building and further understanding my project. I am working with Brett Hobson and a number of others in the Long Range Autonomous Underwater Vehicle lab, my project is to develop an improved ballasting procedure which could increase the range and improve the dynamic control of the LRAUV. Throughout the week I have been reading through documents and speaking to others in the LR AUV lab and other labs to gain a better understanding of the LRAUV itself, as well as ideas on potential methods to accomplish an improved ballasting procedure. Looking forward to the weeks to come, as I am excited to work with everyone I have met (and will meet) to make progress on my project.

Posted by [rchavez](#) at Jun 11, 2015.

I cannot believe my first week at MBARI is coming to an end! It frightens me how quickly this summer might go. On my first day here I felt like a little kid visiting Disney World for the first time. I was very impressed with the facility, the amazing technology available, and very friendly staff here at MBARI (oh and the amount of free food, especially cookies!). I can already tell it is going to be very hard for me to leave when my ten weeks are up.

My project here is working with Brian Schlining and Kathy Dunlop on photogrammetry in the deep-sea. MBARI has years worth of videos recorded by a camera mounted on the ROV Doc Ricketts at Station M

(~4000m at the Monterey Deep-sea Fan) and since 2006 scientists have measured megafauna body size through these videos on the Video Annotation and Reference System (VARS). They are able to do so with the ROV's two paired lasers, which are always 29cm apart and acts as a scale bar in the recordings. However, for maximum accuracy the organism of interest must be oriented horizontally across the same plane the line the lasers make. If the organism is oriented vertically or horizontally across this plane it can still be measured but with a bit of error.

This is where I come in! I have to find a way for correcting these measurements. So far, I have thought about measuring the percent error and precision of measurements starting horizontally across the primary point (basically the midpoint between the lasers) and then measuring the same from angles increasing by 10 degrees from the horizontal line. Today I found out that VARS does not tell you the angle in which a line is drawn so I am currently thinking about doing the same but instead of increasing by 10 degrees, increasing by a certain number of pixels. Once I figure out how to do that I will use VARS to make measurements on a color calibration board and then I will physically make the same measurements on the physical color calibration board. Then comes in a lot of math and I am sure more factors I haven't thought of yet (such as the height of the camera above the bottom of the seafloor and angle the camera is looking down from the horizon).

Posted by [peart](#) at Jun 11, 2015.

Week 1: June 11

I spent a lot of time this week downloading software and familiarizing myself with Mathematica, R, and 3D geometry. I'm working with Steve Haddock, and my project is trying to find out how radiolaria form their intricate glass spherical colonies, starting by modeling the structure and then thinking about how the organisms might handle the process, so I've been modeling spheres formed by subdividing faces of polyhedra (octahedron and icosahedron are the stars for now). Whether or not the method of subdivision is possible with tiny glass rods, and how they might do it otherwise are the big questions. I also have to read up on silica deposition to see what methods of growth have been observed in other organisms.

Because it takes a while for the computer to compute the shapes (5 subdivisions took at least 30 min to plot), it looks like I'll also get to work in the lab helping with genetics work. Working on the cool structure problem and also getting to learn PCR and DNA extraction etc, I basically get to have my cake and eat it too!

Posted by [beittenmiller](#) at Jun 11, 2015.

Added by Lisa Ziccarelli , last edited by Lisa Ziccarelli on Jun 10, 2015

Labels: (None) EDIT

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We're having a great start this week and I'm happy to see everyone is settling in alright and getting excited for the summer. We've organized an open water dive class for several of our interns that starts this weekend. Meanwhile, I have been working on 3 projects. The first is conducting the quantitative phytoplankton counts for CANON15 day cruises via epifluorescence microscopy. Unfortunately, the microscope has been under repair for about a week, but Kurt is working on it and says it should be ready by the end of this week. The second is working with the Chavez N15 data. To this end, I have begun learning MATLAB from square one. It's a great deal to learn in just a few weeks, but I've got some excellent teachers, including Brian and Reiko. The third project is learning how to process eDNA samples. While Kris and Kevan are finalizing the protocol, Shannon has taken me through extractions.

Posted by [mage](#) at Jun 12, 2015.

Week one:

This exciting experience in MBARI will be better than I thought. I started meeting so many people who received me very kind and friendly, and eager to learn Spanish. Knowing all MBARI and enjoying its majestic scenery.

My work this week has focused on knowing and learning how to handle the Video Annotation and reference System (VARS), a very useful tool for summarizing the cruises made by MBARI. Also, I started to explore the videos from a cruise in Isla Tortuga South, Gulf of California, 2015. I have been seeing and identifying amazing organisms with unique features and adaptations that allow them to live at great depths. On the other hand, I am very surprise to notice that people from MBARI are using my work to identify these organisms; even regardless of my work is in Spanish.

I am very grateful for this opportunity and also to the people who work in MBARI, including all interns, for making me feel at home. (GRACIAS !!)

Posted by [bmejia](#) at Jun 13, 2015.

A little late but here we go,

When I mentioned to the older researchers at my university that I will be doing a summer internship with MBARI via the CSUMB REU this summer I must have been told a dozen or so times about how fortunate I am to have this opportunity. As joint CSUMB/MBARI interns Madison, Robert, and I are able to benefit from the weekly skill building workshops designed by the REU while also working at a world class institution with mentors that are very invested into our projects. I am working with Dr. Charlie Paull and his research assistant Dr. Roberto Gwiazda to try to determine the implications behind what we believe to be whale created depressions on the seafloor in a remote part of the Canadian Beaufort Sea.

Like many others here I am using VARS to annotate ROV data. The videos that I am looking at were taken from multiple dives spanning from 2010 to 2013. When Charlie and others first explored this part of the Arctic they were originally drawn to the location by using sonar to locate high reflectivity spots of the ocean, with these reflective hotspots indicating that some sort of gas was seeping out from the seafloor (later identified to be methane). They were surprised to find the frequent and large depressions that existed around the methane seeps and it would be a few years after the first expedition before marine mammals and specifically whales would be seen as the cause for the depressions.

As a first order analysis I am looking at the ROV data and using VARS to note whale marks whenever I see them. Using the distance between the two beams shot out from the ROV as a measuring tool I am also taking note of the width of the marks and other characteristics (i.e mark pattern, visibility, impact on surrounding) to match what whale type/types could have created the depressions. This will eventually lead to the question(s) of why would this whale type be feeding on the bottom of the ocean in this high of abundance? Has this been seen in other places? Is there a direct correlation with the methane seepage seen in this area and the whales' decision to feed in these places? I think I'm off to a pretty good start and I'm excited to see where this project will go. Hopefully I will produce something useful out of it at the end of the summer but you never really know...

Posted by [psmall](#)s at Jun 15, 2015.

12-July-2012

This page last changed on Jun 05, 2015 by [kgomes](#).

Halfway point!

12-June-2014

This page last changed on Jun 05, 2015 by [kgomes](#).

just scroll down to the bottom where it says add comment - and add your update

13-August-2015

This page last changed on Aug 13, 2015 by [aren](#).

Comments

Week 10:

Hi guys. I added the page for the last week...

This week I made my oral presentation. I had a lot of comments from various mentors about my slides, so the process took a long time. I saw my slides visually and practiced with a microphone and laser pointer on Monday. I also finished my plots on Monday including getting p-values for some regression lines and making a very complex contour plot. On Tuesday, I reviewed the literature again to come up with my summary & conclusion slide comparing my result to that of other regions. I also worked with the CeNCOOS team on the webpage to describe dissolved oxygen and trends, and got some feedback. I met with Francisco for an hour to discuss my presentation, my future plans, and my work with the model that I did not present in my presentation. On Wednesday, I listened to all of the intern presentations. I also received word in the morning that I was accepted as an oral presenter at the EPOC (Eastern Pacific Ocean Conference) this September in Lake Tahoe. Today is Thursday. I am writing my paper, working on the CeNCOOS webpage, meeting with people to follow up on discussions or side projects I had open, preparing some scripts to leave behind at CeNCOOS, working on a collaborator's agreement, returning things to people, ... and I will continue to do this on Friday.

My email address where you can always reach me is:

alicerenster@gmail.com

But if it is related to science, please use my grad school email:

alice.ren@maine.edu

For the next year, I can be found at:

6 MIDDLE STREET
ORONO, ME 04473

****If you plan on visiting Acadia National Park, you should definitely let me know and swing by!**

Posted by [aren](#) at Aug 13, 2015.

This week, I completed the oral presentation, finished my IEEE paper/ final paper. I had a great time this summer! Thank you again! George and Linda! and everyone! =D

My email address: amy82425@gmail.com

My mailing address: 964 Capistrano Ct. San Luis Obispo, CA. 93405

Posted by [achen](#) at Aug 13, 2015.

This week I practiced my presentation a couple of times with my lab which helped me explain my project as clearly and concisely as I could! It was definitely a challenge to stick to the 12 min time slot but in the end it seemed like a really good length. I'm working on my paper now. I'll be really sad to leave MBARI tomorrow, but I'm hopeful that I'll be able to come back to see the new laser coming to the Brewer Lab and maybe even help out with another cruise.

My personal e-mail address is coconutbananz@gmail.com (yes I made it in 3rd grade....) but I most often check kmcccone@stanford.edu (which I'll have for one or two more years).

My permanent mailing address is P.O. Box 2028, San Anselmo, CA, 94979

Posted by [kmcccone](#) at Aug 13, 2015.

We did it! Thank you all for making this such an exciting summer. I will be hanging around for at least a few months to count some more plankters, so stop by if you're in town. My email is lmziccarelli@gmail.com

Posted by [Iziccarelli](#) at Aug 13, 2015.

Thank you to everyone for making this an unbelievable summer.

Email: wileyhw@gmail.com
Corvallis Address: 311 NW 18th ave. Corvallis OR 97330
Portland Address: 6928 SE 108th ave. PXD OR 97266

If you guys are ever in Oregon let me know! You have a free place to stay! When I am in Portland I am about 15 minutes from the Portland airport.

Posted by [wolfe](#) at Aug 13, 2015.

Week Ten:

I mistakenly assumed that last weeks confluence update was the last, my apologies. This week has been a time crunch, Monday I was able to complete my vehicle supports and was finally able to apply a fraction of my procedure. Tuesday I spent entirely on revisions and refinement of my presentation. Wednesday we had our final presentations and as nerve racking as it was everyone nailed their project presentation, the one minute summary on the other hand was surprisingly much more challenging.

It has been an excellent experience here at MBARI, I honestly can't express how genuinely helpful and kind everyone here has been. Not to mention how spoiled I have become this summer given the beach-front location, weekly cookie breaks, amazing seminars and \$3 BBQ's. It has been very rewarding and a great pleasure to have been a part of this summers Internship program.

Thank you to everyone who helped me this summer and special thanks to George and Linda for making this possible and also Brett and Ben for the guidance throughout my experience.

To follow the lead of the above confluence posts, Here is my contact information:

Email: robert.adam.chavez@gmail.com
Mailing Address: 402 West st. Salinas, CA 93901
Phone: (831)229-0508

Also, [here](#) is the link to the 2015 intern contact information google spreadsheet.

Posted by [rchavez](#) at Aug 13, 2015.

Week ten:

This week has had a mix of feelings. First, I was in a hurry to finish my presentation. Then, nervous to make a good presentation and even more so people could understand me. And finally, excited about how I could explain part of the work that I developed during my internship. Moreover, the interview was interesting. In a minute to say something in Spanish about my work, and I could not the first time....I

might think that it is because I improved my English at this time 😊. Well, but now I need to finish my paper and wait for my Mom!!.

Muchas gracias y no olviden que son bienvenidos en Colombia!!!

Carrera 27 # 57-49 Apto 301 Edificio Las Mercedes
Palmira (Valle)
Colombia
Phone: 57 3016377563

Posted by [bmejia](#) at Aug 13, 2015.

I really can't put into words how incredible I think this summer was...but I'll do my best. One word that broadly sums this experience up is life-changing. This was life-changing in every single way and I can not be more grateful to have gone through it with the greatest group of people I've ever had the pleasure of working with. Everyone's presentations were amazing and, to be the Drew of the party, I am proud to have known you all before you go out into the world and do amazing things. You are all so bright

and passionate, there isn't anything you can't do and I believe that wholeheartedly. I'm going to dearly miss walking the halls of MBARI almost every day, but all good things must come to an end and I am so thankful to have had something in my life that I would miss this much. Please don't be a stranger and feel free to email me or call/text me! Also, my house is your house if you ever find yourself in Monterey



Now go out there and change the world!

Cellphone: (661) 992-1149

E-mail: mheard@csumb.edu

Address:
2756 West Ave. N-4
Palmdale, CA 93551

Posted by [mheard](#) at Aug 13, 2015.

It's difficult to come to terms that the internship has actually come to an end. I just want to thank you all for making my last 10 weeks, the most amazing and memorable. I have learnt a lot, improved a lot and made some amazing friends. Each one of you is gonna do something amazing ahead and I just hope at some point our work and life intersects. All of you made me a better person than before and I am really thankful for that. Keep in touch

Phone no :+91 9717126620

J-1357 Palam Vihar
Gurgaon, Haryana-122017

Email: prateekmurgai64@gmail.com

Posted by [pmurgai](#) at Aug 14, 2015.

This summer was more than words can describe. I'll miss all of you so much and I wish the best for you wonderful people. Again, thank you George and Linda for the wonderful internship. To the interns, you are all capable of accomplishing great things. I hope our paths will cross again.

EMail (personal): OliviaA8383@gmail.com
EMail(school): oliviamarredondo@student.hartnell.edu
Cellphone: (831) 297-0074
Address: 706 Ambrose Drive, Salinas Ca, 93901

Posted by [arredondo](#) at Aug 14, 2015.

Week 10:

This past week I focused on my presentation, and though I was very nervous, with constructive comments from Steve, George, Lynne, Danielle, and Darrin, I think it went very well in the end 😊 Now as for that paper....

10 weeks can sure fly by, but I think we made the most of it! I'm thankful to all of you for a truly amazing summer and for all of your sage life advice. I'm lucky to have met such accomplished people and to be able to take advantage of your experience as I try to figure myself out. Thanks also to George, Linda, Steve, and all MBARI for affording me this opportunity to learn and grow. And, of course, add Houston and Pittsburgh to the list of places where you are all welcome to stay! If our paths don't cross again by chance, we should make it happen anyways with a reunion 😊

Email: kbeittenmiller@gmail.com or kbeittenmiller@cmu.edu

Address: 537 S 3RD ST, Bellaire, TX 77401-5003

Posted by [beittenmiller](#) at Aug 14, 2015.

I never wanted to imagine the day I would have to write this final confluence because I knew it meant the internship was finally done 😞. I am almost done with my final paper (I promise I will send it to you tomorrow night!) I just have to add to the conclusion. I really enjoyed giving my final presentation this week but it was very difficult to say goodbye to everyone after. I really enjoyed my time here at MBARI and learned so much from everyone. I hope one day soon I can return and work for MBARI again! In the mean time I can be reached at:

1302 Salem Run, Crownsville MD 21032
smpeart@ncsu.edu

Posted by [peart](#) at Aug 14, 2015.

from Sarah Black

10861 SE Stern Lane
Hobe Sound, FL
33455

sblack20@my.fau.edu;

Posted by [mage](#) at Aug 18, 2015.

13-June-2013

This page last changed on Jun 05, 2015 by [kgomes](#).

14-July-2011

This page last changed on Jun 05, 2015 by [kgomes](#).

This has been a week of good progress as I finished and tested a prototype version of my key for deep cydippid ctenophores. Over the past few days I have expanded upon this base by adding images in both the stomadael and tentacular place, to provide a visual method to verify the classification.

I have also merged my key with a table of characters that Steve created for the described species. My aim for the rest of the time here is to gather the same level of morphological detail for the described species so that they can be fully integrated into the key. Hopefully I will have time to perform a similar process for the undescribed deep lobate ctenophores also, rounding out the key and bringing it closer to completion.

14-June-2012

This page last changed on Jun 05, 2015 by [kgomes](#).

I am testing this

15-July-2010

This page last changed on Jun 05, 2015 by [kgomes](#).

16-July-2015

This page last changed on Jul 15, 2015 by [mheard](#).

Speaking to the TCLers at the MBA was such a great experience and I hope to continue public speaking – it's so rewarding! Aside from that great start to the week, I have been working on my experimental setup for my abalone project. Starting on the 16th, I will be in the lab practically all hours of the day to sample and take AWESOME pictures of my developing abalone! Looking forward to finishing up this part of my project and begin data analysis!

Comments

What a week! It has been a lot of fun talking to the TCLers at MBA and really good practice for educational speaking. I haven't gotten a lot of time to work on my research so I know that this evening, tomorrow and Sunday will be pretty crazy in regards to working on my MBARI project. I have begun working on my paper and I am still waiting for the final pulse images to be uploaded to VARS so I can finalize my data collection.

I had some pretty amazing conversations this week with MBARI staff, Tina Swanson, MBA staff and the other interns. I think I am getting a more solidified idea of what steps I would like to take in the future regarding my career and I feel very fortunate that I have been able to develop these ideas during this internship. I do wish there weren't so many interesting things to do in life, there just isn't enough time to do, see and learn about things!

Posted by [jwhelpley](#) at Jul 16, 2015.

Week 6:

Project update: I haven't yet looked at my stained samples from the cruise on the nice land microscope, so that's still to be done. I have been working on 3D reconstruction in MatLab a fair amount, but if anyone can help me understand linear algebra, that would be a lifesaver! That's the biggest roadblock right now to getting a 3D model from the SEM images. I found example code that I think I can modify for my purposes, but it's very old and uses functions that don't exist anymore, which is a challenge to figure out on top of the math itself. I want to focus my project on the 3D modeling and take a closer look at some of the smaller rads from the cruise as initial examples...much to do!

Fortunately/unfortunately, I haven't had much time at my desk this week! Monday, we returned from the cruise, then Tuesday we spent the morning offloading lab equipment and went on a behind the scenes tour of the aquarium in the afternoon. Wednesday we spent all morning preparing food for the barbecue (a great success! Go Drew!), and today I'm presenting to the TCL group at the aquarium! Maybe I can make up some time on the weekend, or just read up a bit on linear algebra to make work go faster? We shall see...

Posted by [beittenmiller](#) at Jul 16, 2015.

On time, Oh Yeah!

The BBQ dominated my week, and as such I've not gotten as much done on my project as I would have liked, but c'est la vie.

I have finish writing my machine learning algorithms in Matlab, and they seem to work pretty well with both the made up data sets that I give it, as well as the actual rover data, which is really encouraging. I know have to translate the code into ruby so that the rover will be able to utilize it.

I'd still like to build off the machine learning code and work on some fault detection with the rover, but the internship is almost over and it may to much to attempt in such a short time.

In addition while I was out on the western flyer with the smith gouger I was able to play around with some of the rover current data and discovered a few things that I think will be very valuable to the team going forward. I would also like to summarize these findings regarding the physical environment and present them to the team along with some recommendations. A lot to do in not so much time.

Posted by [dburrier](#) at Jul 16, 2015.

Week Six:

Wow, the weeks are just flying by. I have had a few discussions with Ben and Brett this week about project Ideas. At the end of last week Ben and myself met with Hans Thomas from the Dorado group and we discussed potentially applying the Xg measurement and moment arm calculation procedure to Dorado, we were able to have Hans agree to partially fund the scales we need for the project. I spent some time reworking my written procedure and am still working on a more general AUV procedure as the LRAUV has certain advantages which simplify the process. I have been working on chock design ideas as well as the frame assembly for the scale positions to try and decide on the best designs. With the end of the internship quickly closing in, I hope to have the scales arrive and my LRAUV chocks, and scale frame all complete by the end of next week. I still need to work on drafting up a spreadsheet which takes inputs in a sequence and calculates the desired values. Just hoping it will all comes together in a timely manner.

Posted by [rchavez](#) at Jul 16, 2015.

So the data that I'm working on is all cleaned up and null byte free! The next thing to do is make a loop to have the program read through all of the float numbers and, via `thredds_crawler`, read all of the profiles for the floats. So this is where I start getting into the data reading stuff where I will finally be able to do some calculations! Sweet B) then from there I will read the World Ocean Atlas data where I will compare it to the Argo data in order to calculate a correction factor. This will then be applied to all of the Argo data to have a quality controlled data set, something the oxygen data lacked and is the reason why I'm working on this!

Posted by [jramirez](#) at Jul 16, 2015.

Hello all you beautiful people.

This week has felt as though it's been mostly dominated by deadlines for Hartnell. I've had to send in my project abstract as well as finish the rough draft of my poster. The poster is looking nice so far (at least in my opinion). For my project I'm finding myself installing more applications for Django and STOQS. Of course, these installations are fussy and need additional commands in order to work. For the fun events this week! The MBA tour was very interesting, but it would've been better had we all been given complimentary otter pups. It's okay though, I'm only a little heart broken. The BBQ was delicious (all thanks to Drew). Also, shoutout to Paris for his charitable work in the cleanup crew. Not all heroes wear capes.

Posted by [arredondo](#) at Jul 16, 2015.

Week 6:

On Monday, I talked to Jen who is in charge of the data sources that CeNCOOS links to from their website, and we talked about two datasets from NOAA ERDDAP that could easily be brought in to the CeNCOOS ERDDAP and linked from the CeNCOOS site, CalCOFI and the NOAA rockfish surveys. (I did look through the Rockfish data on Week 5 and realized it only has 4 years of data and I won't be including it in my data (at least not yet) because it will not add a lot of new insight). On Tuesday, I finally finished a regression plot of oxygen over space and depth. It tells me where along the Line67 transect the decrease in oxygen over a 15 year period is the greatest. I also talked to Reiko of the Chavez group about outliers and threw out a bunch of outliers in the data I'm working with, as well as provided Reiko the list of suspect values (and their cruise, ect). On Wednesday, I worked on a regression plot over potential densities over space. I had to throw out more data from my analysis. On Thursday, I finished the regression plot over potential density. On Friday, I will likely work on the ROV data comparison, which is a leftover task from Week 5. I also may to model output analysis along Line67. If not, I will do the model analysis this weekend from the dorms.

I have also begun learning Python this week (thanks Prateek). We have spent some time working at the dorms (again, thanks Prateek!). I also drew myself a phytoplankton key the previous weekend in preparation for Open House - and rewatched some Plankton Chronicles videos from the TARA expedition. Hopefully all of those phytoplankton genus names will stay in my head until 5 o'clock on Saturday.

Posted by [aren](#) at Jul 16, 2015.

Haha nice look on the shoutout Olivia.

Yesterday I went on my Rachel Carson cruise and spent the morning helping the crew clean out the refrigerator and pantry. I also did a good amount of sleeping and watching "How I Met Your Mother"... awesome trip!

Can't believe I planned a month ahead and still got stuck doing kitchen duties.
Cleaning up is lame.

My poster is just about finished.
Stop by the Geology tent during Open House to see it!!!

Posted by [psmall](#) at Jul 16, 2015.

I completed the 4-20mA current loop transmitter test, the thermal test and the parallel test. The instrument simulator can now communicate to the terminal with 2 ports. I am able to simulate all ports at the same time. The project is more complete now. A lot of problems were solved through initializing the setup. I am going to start on my paper and research on ways to improve the design and find theoretical ways to support my design.

Posted by [achen](#) at Jul 17, 2015.

I got data back from sensor number one this week! The data looks good and I am currently waiting for dissolved organic carbon data to be able to validate my data. I am still in the process of building the second sensor, which will hopefully be done sometime before the next confluence. In unrelated news, I now have a smaller brace, which makes typing and soldering much easier! Last, my mentor is gone next week to go to NYC for the X prize announcement.

Posted by [wolfe](#) at Jul 17, 2015.

Had many brainstorming sessions with my mentor this week, so just love the progress in my project. We have finally decided to work on two different classifiers working in parallel to solve the same classification problem. The only difference is one classifier is an acoustic signal based classifier while the classifier that works in parallel is a deep learning image based classifier which works on the spectrogram images of the acoustic signals (calls of the different species). We hope to get better results and performance with this kind of architecture. Also having classified blue whales and fin whales, I am introducing more diversity into my classifier (right now Cuvier's beaked whale and porpoise). Also this week I got a chance to meet the people at Hopkins who study whales using acoustic tags by tagging them and studying the data from the tag.

Posted by [pmurgai](#) at Jul 17, 2015.

I am late again with my confluence and I feel so bad! I apologize. My time here is going by incredibly fast, sometimes I forget what day of the week it is. Time please slow down!

However, this week I have been able to make progress on translating Brian's scala example code into Matlab. It is all ready to run, all I need are the camera parameters, which I have two out of four. The other two: alpha, the height of the image in radians and beta, the width of the image in radians require a bit of math to solve. I currently cannot finish that math because I have to get the distance of the ROV camera from the calibration board when it was on the Western Flyer. Hopefully, I will be able to get that measured on Monday when the Doc Ricketts is back aboard the ship....and hopefully grab a sweet Doc

Ricketts t-shirt while I am on board 😊

Posted by [peart](#) at Jul 17, 2015.

Week six:

In this week I could finish to watch all my videos. I joined to another stage of my project where I needed to get all my data, clean and start playing with it. I am finding interesting things that are happening in the deep sea in the Gulf of California.

On the other hand, the MBA tour was great. Have the opportunity to see everything behind the scenes is a privilege. Also, the BBQ was excellent. It was a mixture of tastes, smells and colors. Even Cuban music was the best complement to this activity. Thank you Drew for your wonderful idea.

Posted by [bmejia](#) at Jul 17, 2015.

I'm at the scope counting phytoplankton slides we collected this spring. The eDNA samples were shipped to Stanford for sequencing and we await the results. The intern bbq was a success. Open house also

went really well. Quite a few people were asking some great questions about the plankton. And thanks to Brian for hosting a Matlab session.

Posted by [Iziccarelli](#) at Jul 20, 2015.

Last week was pretty busy as I began processing all my gas spectra. On Monday, Tuesday, and Wednesday, I spent a lot of time searching the literature to identify unknown peaks in my sample spectra, which appeared mostly to be different vibrational modes of hydrocarbons I already knew that I had, plus CO₂. On Wednesday, I really enjoyed meeting Tina Swanson. I have been considering pursuing advocacy later in my scientific career and have read a good amount on NRDC, so she was really great to talk to. I've been through all my spectra with one version of my Matlab code to integrate all the peaks (manually setting integration limits each time) and started integrating everything with another version of code. I'll have to see which version gives more precise results.

Posted by [kmccone](#) at Jul 20, 2015.

Last week was a very busy week. I got to go on the Rachel Carson which was amazing! I am still trying to refine the code to pick out more jellyfish accurately in the videos. Right now the code is picking up things that are not jellyfish so I am in the process of writing the code to make sure it doesn't count anything as jellies with areas smaller than a certain number. Once I get this I can really compare the manual and code data together to see the accuracy!

Posted by [sblack](#) at Jul 20, 2015.

Alaska was amazing but it feels good to be back in the swing of things and on a routine. This week has been marked by a very crucial decision to terminate automatic kinematic extraction and instead turning to manual extraction with a bamboo pad. This decision was made due to the finicky nature of the videos from past ROV cruises and Matlab's unwillingness to compromise. While I am a bit disheartened, I am also excited because I know that manual extraction will be successful which means one step closer to results.

Posted by [abaumer](#) at Jul 30, 2015.

16-June-2011

This page last changed on Jun 05, 2015 by [kgomes](#).

Please leave your notes here (what did you do this week and what will you do next week)?

17-July-2014

This page last changed on Jun 05, 2015 by [kgomes](#).

I was glad to not have gotten seasick on the Rachel Carson this Monday -- staring at the horizon really does help. The highlight of the day was seeing both Pacific whitesided dolphins and right whale dolphins swimming in front of the boat!

Back on shore, I'm excited that my code generates data. It'll be exciting to run lots of data through it to see longterm trends in ocean activity.

17-June-2010

This page last changed on Jun 05, 2015 by [kgomes](#).

To add your update, add a comment. Things to put in your update: What you did this week, what you think you are going to do next week, what is going well or isn't going well and, for this first update, what you would like to get from your 10 weeks here at MBARI.

24-June-2010

This page last changed on Jun 05, 2015 by [kgomes](#).

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01-July-2010

This page last changed on Jun 05, 2015 by [kgomes](#).

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18-July-2013

This page last changed on Jun 05, 2015 by [kgomes](#).

18-June-2015

This page last changed on Jun 18, 2015 by [arredondo](#).

Comments

Week 2:

No problems to report (besides the two decomposing seals on the beach...yuck). The week flew by quickly and I feel as though I've gotten many things accomplished. Some of the biggest issues with both the samples and exhibition database have been taken care of with the help of Joe Gomez. Now all of the hyperlinks work on the exhibition database and you can view all 19,677 samples stored in the sample database at once. If you want to see how everything is looking so far here are the links:

New Server (WIND):

Sample DB: <https://wind.shore.mbari.org/samplesDB/Queries/>
Expedition DB: <https://wind.shore.mbari.org/cruises/>

Highlight(s) of the Week:

My new cat mug. Meow.

Posted by [arredondo](#) at Jun 18, 2015.

This week marks my first real week of work at MBARI, and all has been great so far! I have learned a lot about the acquisition of the gas samples with which I'll be working this summer through watching film of the ROV dive in the video lab, looking at maps of Eel River Canyon (where the Brewer Lab collected the samples), and reading about gas hydrates. I learned how to operate the Raman system in our lab and practiced acquiring spectra of different minerals and liquids. Based on the peak shifts in a spectrum, I am able to identify the chemical components of a material, which will be very powerful once I begin to study the Eel River Canyon samples. Most excitingly, two members of the lab and I drew out a system that will allow me to compress the gas samples to high pressures to mimic the deep sea conditions where they were collected before taking Raman spectra. We built the system yesterday and began checking it for leaks, and I'm hoping that we'll be able to test it in conjunction with Raman today. I've also been learning a lot about other projects at MBARI and got the opportunity to see the CO₂ seawater enrichment tank at Hopkins that is crucial to the shallow water Free Ocean CO₂ Enrichment project. Seeing extent of collaboration within MBARI and with other research institutes really inspires me!

Posted by [kmccone](#) at Jun 18, 2015.

This week is going by so fast it's almost scary. Other than that I've been having a great time. On 20150615, I was given the scope of what I'll be doing this summer which, in a nutshell, is creating a program that can fetch float data from an online database and have the program spit out some specific info (such as the percent saturation of oxygen the float collected). The program will then compare the data it retrieved to another database and calculate the correction (in terms of differing oxygen data) between the two. Eventually, Carole would like me to have some sort of map with all the locations of the floats where the user can click the dot and then it will do its magic and show the data. It all sounds super cool, because I've never done anything of this magnitude. When I first started typing out the code for it I simply had the program store the url of the database into a variable and then have the program read the variable to then store its contents...but for some reason it can't parse the data correctly and it gives me some errors. I then downloaded the file onto the computer to have it run locally instead of making the program fetch it over the web. Funny enough it worked offline. So basically I'm trying to make the code run locally first and then transmute the code so it can run online. Its pretty cool nonetheless.

The DOEST reception at the end of Tuesday was a pretty interesting experience, meeting some of the board members and talking to them was a nice experience. Granted it took me some time to muster the courage to talk to people, because I'm a pretty awkward/antisocial person if I don't know you. The barbeque was also really cool (I just love me some food).

Posted by [jramirez](#) at Jun 18, 2015.

Early this week, I found a method in which I was able to effectively measured twenty-three lengths on the color calibration board, both on VARS and the physical board. Right now I am repeating the method

on VARS so that I have thirty measurements of each of the twenty-three measurements I made, to determine the precision of each measurement. I imagine it will take me a little while to make all thirty measurements, as I am currently only on my sixth...mainly because yesterday I enjoyed a day at sea on the RV Rachel Carson and got to watch very skilled pilots attempt to recover a buried sediment trap with the ROV Ventana! But once I finish the thirty measurements, I will measure the angle of each of these lines from the laser line (so if anyone has a protractor I could borrow please let me know!).

Posted by [peart](#) at Jun 18, 2015.

This week has gone really well. I have now purchased or found all of the parts to start building a second CO2 sensor. The code that runs the existing sensor is now mostly operational, and I discovered pretty much everything wrong with it was my user error. Next week I hope to build the second sensor and start doing some calibration on the existing sensors. They will eventually be placed in Elkhorn slough to collect daily CO2 data.

Posted by [wolfe](#) at Jun 18, 2015.

This week I think I have actually made some progress on my project. Last week I was quite overwhelmed with all the work (aka Matlab) that I had to do to actually get results from my project. This week however, Kakani sat down with me multiple times and we set clear goals to be accomplished for the week, which made this week a lot better. I began with looking at videos captured of jelly fish from the LRAUVs and then picking out the videos with higher concentration of jellies in them. Each of the videos are only about 60 seconds so I used code from a previous intern to look through each frame of the video rather than just going through them quickly. Now my job is to manually find the orientation of these jellies in the video. The previous code already found the orientation of them so we are trying to see the accuracy between the code and the manual calculations. I am still getting comfortable with Matlab but the more I try things on it the less daunting it becomes (hopefully)!

Posted by [sblack](#) at Jun 18, 2015.

I've made a great deal of preparations for next week. The scope is now ready for the phytoplankton counts and I have reviewed relevant material to begin genetic analysis of CANON15 samples. MATLAB is still the bane of my existence and I have had to pass the torch to Reiko, but I will continue trying to learn the language. Also, I enjoyed talking with Eric Hartwig again at the DOEST reception.

Posted by [Iziccarelli](#) at Jun 18, 2015.

June 18, 2015

Week 2

This week has been incredibly busy and I can't get over how quickly the time has gone by. I have continued reviewing the tripod time-lapse images from Station M and become more familiar with the VARS software thanks to the help of Brian S.

The majority of my lab group is out on the R/V Western Flyer for 10 days so I spent a portion of the beginning of this week helping them load and unpack their gear. It is really amazing to see the amount of equipment that Ken's lab takes to sea and having the ability to be part of this process has provided me with a glimpse of the organizational skills required to be successful in this field of research.

On Wednesday I went on the R/V Rachel Carson with Sam, Katie, Beatriz, Alice and Alexa. They were using the ROV Ventana to locate and attempt to recover a sediment trap that had been buried. Unfortunately, the equipment was buried too deep and they ended up having to cut the cable to release the buoys so they lost the equipment and the data.

Posted by [jwhelpley](#) at Jun 18, 2015.

I did some research on the noise that I was getting from the electronic load on Monday and found out there was oscillation at the output of the electronic load. I spoke to Chad about it and he asked me to do some research on ways to reduce the noise level. I did some research on Tuesday and Wednesday, we decide to add a low pass filter, a gate resistor and some capacitors to filter out the noise. The component that I ordered arrived yesterday and so I was able to get started on the other part of the project. So far, I have been making a lot of progress on the project. I really enjoyed the reception on Tuesday! I spoke to several people and it was a lot of fun hearing what they have to say. I also enjoyed the BBQ we had yesterday! I had fun cleaning up as well!

Posted by [achen](#) at Jun 18, 2015.

Larvacean Log, Week 2: Took a trip on the Rachel Carson this week! On Wednesday we left sharply at 7am and were greeted by sea otters, sea lions, and humpback whales on our way out. We were looking for a buried sediment trap around 1280 meters deep. Even though it was located with the Ventana, turns out it was buried super deep and thus could not be extracted... Everyone on the Rachel Carson is completely wonderful and hilarious. On the way back, we saw a plethora of whale tails and a massive pod of dolphins. In other news, I have eliminated two more methods for tracking the larvacean motion and am closing in on a third. Matlab skills are getting better at a faster rate this week, which is a big improvement. And we go on our certification dives this weekend! Super excited to dive in the ocean.

Posted by [abaumer](#) at Jun 18, 2015.

Week 2:

On Monday and Tuesday, I made into Matlab files data from the Biological Oceanography Group (BOG) database. On Tuesday, I met with Steven Bograd of NOAA (in Monterey, with Dave Anderson and Mike Jacox of NOAA), and we discussed my summer project. On Wednesday, I went on the Rachel Carson to retrieve a sediment trap, (well, I watched others attempt to do this). I also finished reading a classic paper on upwelling in the California Current by Adriana Huyer that I should have read already. On Thursday, I met with Francisco Chavez (with Dave Anderson) who will also be helping with my summer project. I also gathered and almost completed my preliminary list of all observational datasets that have O2 data in this region. I will focusing more on understanding the datasets that I have retrieved and making them into intuitive, usable form (likely through matlab). By Friday, I should have a good understanding of the BOG database.

Posted by [aren](#) at Jun 18, 2015.

So just backing up a bit, I am working on the acoustic classification of underwater mammals(whales,dolphins etc) i.e classifying them using their vocalizations. Most of my last week was spent learning python, supervised machine learning basics and also extracting audio specific features(around 25 features) which are an essential part of the classification process.

Just to give you an idea about how a classifier or any supervised machine learning algorithm works, consider an enthusiastic novice chess player, yes he knows the rules and the idea behind the game but doesn't exactly know the best way to proceed and win the game (due to no experience with chess) , but as he plays more and more he gets better at it(learning from previous games) and thus increasing his accuracy(or winning percentage). Similarly an acoustic classifier is equally bad(or worse maybe) when it doesn't know how to classify , so we need to feed a lot of data to it so it knows how a beaked whale, dolphin, blue whale etc sound like. The classifier learns from this data and whenever it comes across a new acoustic encounter , the classifier should predict the class(beaked whale, blue whale, dolphin etc.) to which the acoustic encounter belongs, but remember the classifier will make mistakes! (and also the chess player).

Currently I am working on the extraction of data (from the data set given by the Scripps Institute of Oceanography) and putting it into a suitable format so that our classifier can read this data and learn from it.

Posted by [pmurgai](#) at Jun 18, 2015.

I hope that this will post, as I am writing from station M. The seas are currently 5-10 with wind gusts around 20, but it is true what they say, the Western is a stable ship, and one hardly notices the pitch.

We arrived on station over the Benthic Rover early this morning, and while we were able to communicate with the vehicle, we were unable to trigger the weight release. After exhausting all options and taking advantage of the best weather conditions we are likely to see, the decision was made to send the ROV doc ricketts down to release the weights manually. It takes about 4 hours for Doc to reach the 4000M depths, and after sorting out some navigation issue with the ROV, the crew successfully pulled the pin releasing the rover which is currently make it's 2-3hour ascent. Once at the surface our real work will begin.

I will be taking as much video as possible to document this trip, and will hopefully have some cool stuff to show for my time away from the island.

Posted by [dburrier](#) at Jun 18, 2015.

Week Two:

This week although seemingly short, has been both challenging and productive for a number of reasons. I started the week off with retrieving my computer system from Zorba, for which I had submitted a Help ticket last week to have a drive with windows 64-bit installed in order to allow for operation of Solidworks 2015. Following the physical setup of my new machine, I managed to track down MBARI's Solidworks 2015 Network License and install Solidworks, which took quite a bit of running around. I also was able to speak with Todd about gaining read/write privileges to the project libraries I need to access. Brian Kieft went over the LRAUV's current ballast and trim procedure which gave me a much better understanding of the existing process, and somewhat of a starting point. Jon Erickson has been an enormous amount of help this week with all things Solidworks, including setting up the solid model of the pressure hull assembly as a starting point for a portion of my project which would include adding phantom masses to the model to more accurately represent the actual center of gravity of the LRAUV. The challenges this week would definitely include the lack of support in my lab as everyone but Brian has been on vacation starting last week. Being that Brett is currently in Indonesia, it took a couple of days to hear back about which path to take in addressing my project goals. In the coming weeks I am looking forward to diving into the project a lot more and hopefully accomplishing a significant portion of the project goal.

Posted by [rchavez](#) at Jun 18, 2015.

Finally got those files converted! Lonny from the video lab was able to find some time to reformat most of the ROV data I needed to continue my research here at MBARI. Earlier this week I entered, and now that the week is over I guess one can say i'm exiting, phase two of my summer research project. Phase one was reviewing the archived ROV data Dr. Charlie Paull et al. collected from Arctic dives in the years 2010, 2011, and 2013. I used VARS to mark whale marks as I saw them in the video files. For phase two I'm almost done analyzing and collecting my observations into a dataset which is growing pretty large! Hopefully by tomorrow I will be finished with my dataset and can move on to phase 3... the actual research part of my internship. I need to use my dataset to first decide what whale specie/species is making the depressions. Then I will start the process of coming up with an idea for why they are attacking these areas... Ohh and sum stuff about tracking the distribution of the whale marks. Looking forward to a great week 3.

Posted by [psmall](#)s at Jun 18, 2015.

Week two:

In my second week I was going deeper in the sea. I found some amazing organisms which I could identify using my knowledge, which made me really happy. It is unimaginable how the deep sea organisms can show us so many adaptations to live in that environment. I could see at a fish closely and noticed his eyes are looking for food or maybe being alert when there is a depredator and movements including walking and jumping. Also, I had an extraordinary adventure on the Rachel Carson with other interns. We went and recover a sediment trap using the ROV Ventana and we had the opportunity to watching all the procedure and some species that were there.

The rest of the week I am focusing on organizing my biological and environmental data to start working in the analysis to see differences among the places visited in the Gulf of California.

Posted by [bmejia](#) at Jun 18, 2015.

Week Two:

At the beginning of the week, I found a super plausible explanation of how the radiolarians could form their geodesic structures (it's so elegant, ask me about it), and now I'm working on finding a stain or other method by which we can look at them and see if their microstructure supports that explanation. This is proving harder than I thought, though...more research to be done there. But MLML emailed us back about using their SEM, so either next week or the week after we'll get to take more pictures (and get more data!).

I spent Wednesday out on the Rachel Carson, which was awesome. We saw sea lions, otters, whales, dolphins, jellyfish, and crabs! I also really enjoyed meeting and talking to the crew and watching the whole process of trying to find the lost equipment and then decide if and how to recover it.

On Thursday I was in lab all day long (that's my excuse for forgetting confluence lol). I learned how to find samples in the -80 freezer in building G, isolate DNA from the samples, quantify the amount of DNA we got, perform PCR to multiply a desired segment of DNA, and do gel electrophoresis on the DNA. I also got to see the Sanger sequencing machine and learn how it works. Busy day. I also really have to pay attention because I've found that after I learn something once, the next time I'm expected to do it by myself!

I'm learning so much in so little time. And I didn't even include activities outside of work this week!

Posted by [beittenmiller](#) at Jun 19, 2015.

This week has been very busy but I have enjoyed every second of it.

Monday was the first day of working with my mentor, Charlie Boch, because he was at Woods Hole last week. That day was a little bit overwhelming because I had to prep for my project within 3 days and I still did not know what I wanted to do yet, and in the meantime I assembled 110 Falcon tubes that required the lids to be hole punched in the center (a lot more work than it sounds like) and a complementary 65 micron Nytex mesh to keep the fertilized embryos from falling out while being incubated.

Tuesday we did everything to prepare for the big fertilization experiment the next day, and I was busy learning how to take care of abalone and keep them content.

Wednesday was a 16 hour day of non-stop experimenting. I was rushing to set up my own project that tests the development of abalone in different environmental conditions that are commonly associated with ocean acidification, such as low pH and low dissolved oxygen. I'm still surprised how our team of 10 was able to perfectly execute our complicated experiment (I won't confuse you with the details) and my first shot at setting up my own experiment has a few problems but now I know what to work on for our next iteration of abalone spawning experiments in July.

Thursday was the day I took some of my abalone embryos (my beloved babies) and fixed them with formalin for science. I'm not too proud of it and I feel like a bad mother...but it's for science!

Posted by [mheard](#) at Jun 19, 2015.

19-July-2012

This page last changed on Jun 05, 2015 by [kgomes](#).

19-June-2014

This page last changed on Jun 05, 2015 by [kgomes](#).

2-July-2015

This page last changed on Jun 28, 2015 by [mage](#).

Just add comment below for your update

Comments

Monday was really busy - I finished acquiring Raman spectra of Eel River Canyon gas samples from my lab and am looking to analyze some samples from the same area from the Paull lab. It will be nice to have more data to work with, since I have developed a method that works and would like to try it on samples from more dives. I won't be able to work with Paull lab samples until we get more information from their technician, so I've spent a lot of time looking into how to deconvolute peaks so that I can integrate them separately for the different compounds. There are some really complicated algorithms to do so but we'll see what works best... At high pressures I can see propane in some of my samples which I find exciting! I got to go out on the Paragon and help retrieve a wive glider (super fun!) and go surfing this week, and I'm really happy that I'm taking more advantage of opportunities to get out on the water! The BBQ at Hopkins was fun and I got to meet a lot of new people, including my mentor's wife and dog!

Posted by [kmccone](#) at Jul 01, 2015.

Week Four:

So this week is a short one but I have been able to make a few steps forward toward completing a portion of my project. Monday with the help of Jon Erickson, I was able to come up with a center of gravity scale design that would offset the load of the AUV by creating a mechanical advantage; this was done because finding a hanging scale with the capacity and accuracy necessary was incredibly expensive and very difficult. By using this offset we are able to distribute only an eighth of the mass of the AUV to the scale which made it much simpler to find a less expensive and more accurate scale option. Tuesday I modeled the entire design and placed and order with McMaster-Carr for the scales and necessary hardware. Today I refined the design of the Solidworks model and the ordered items arrived around 3pm. Looks like I will be ready to make a few more parts and have this balance ready for use sometime next week. Also looking forward to having Brett and Ben back from their vacations next week. Have a Happy 4th!

Posted by [rchavez](#) at Jul 01, 2015.

Larvacean Log, Week 4:

A short week this week! But incredibly busy in terms of workload. My Matlab code works!!! I could have cried yesterday after fixing the last few problems and seeing exactly what I wanted for the output. Now I will be putting all of the videos through the code to extract the swimming kinematics. I still have to figure out how to outline the organism when it is swimming in its house successfully but I have some really good ideas to make that happen. Cannot wait to be done with the programming aspect and move into some hands-on work. Today, I leave for Alaska for ten days so I will miss work next week. Excited to spend the 4th of July there and see my family.

Posted by [abaumer](#) at Jul 02, 2015.

Finished extractions for 18S and started PCR. In Matlab, Alice found a way to convert all my cruise names to strings, so the N15 code finally runs all the way. Thanks Alice!

Posted by [Iziccarelli](#) at Jul 02, 2015.

Week four:

I am surprised how time passes very quickly; almost I complete a month here. This week has been very important and decisive in my work. I needed to determine how to continue my work to get done in time. The good news is that I found a way to finish watching my videos next week. So, I can continue to analyze my data and progress in my project.

Moreover, on Tuesday I received an email to start my course MATLAB. More work, but also more opportunities to improve my professional skills.

The BBQ at Hopkins was amazing. I could meet new people and share with them my knowledge. At times like these it is when all the things we are doing as scientists make sense!

Posted by [bmejia](#) at Jul 03, 2015.

Sorry, second week in a row...

Now that I am back from the cruise I have been spending most of my time trying to grasp as much as I can about machine learning. My first attempt to utilize it will be to write a program for the rover to learn from it's course corrections, and compensate for any trends that develop over the course of a deployment. With increasingly longer deployments this could be a useful ability for the rover. If I am able to do this successfully I would love to expand on some fault detection.

Happy 4th to everybody, I hope you all have fun this weekend.

Posted by [dburrier](#) at Jul 03, 2015.

Glad the weekend is finally here! It's been a busy week with plenty of project updates due for my REU. Yesterday I gave a presentation on my project results to date... and I have to admit I have some work to do. The results are there but based upon the feedback I got back my presentation skills are poor, mainly how I'm organizing my talk. Good stuff to know! I have another talk at the end of the REU a few days before the MBARI symposium. I plan on being ready by then.

Posted by [psmall](#)s at Jul 03, 2015.

Glad the weekend is finally here! It's been a busy week with plenty of project updates due for my REU. Yesterday I gave a presentation on my project results to date... and I have to admit I have some work to do. The results are there but based upon the feedback I got back my presentation skills are poor, mainly how I'm organizing my talk. Good stuff to know! I have another talk at the end of the REU a few days before the MBARI symposium. I plan on being ready by then.

Posted by [psmall](#)s at Jul 03, 2015.

Week four:

Although this was a short week, I did manage to make some progress on my code. I have managed to get a code to plot an ellipse around jellies in a video frame and now I am trying to plot the points that I manually obtained on the same video frames. I think I am very close to getting that done. Other than my Matlab, I have been doing some surfing and it has been wonderful. Hope everyone has a fun and safe long weekend!

Posted by [sblack](#) at Jul 03, 2015.

I start working on the transceiver of the instrument simulator. The arduino due had too much current when I was testing it...so I had to get another arduino due to test the instrument simulator. I am still trouble shooting the pH sensor data. I was able to output successfully, but I cannot get the data format that I want. I am also working on researching the compensation resistor and capacitor for the electronic load for my write up.

Posted by [achen](#) at Jul 05, 2015.

Apologies for this week's lateness, I was thrown off by the much longer weekend. The week was focused on learning Django, a web framework software. I'm going to be the test dummy to see how easy it is to learn and whether it fits the databases. I'm still trying to learn it's structure, hopefully I can start implementing the software by the end of this week. Also, I can't wait for tomorrow!

Posted by [arredondo](#) at Jul 05, 2015.

Week four:

This week was a short week! On Monday, I was able to plot some BOG data for different isopycnals; I do get a trend, especially on sigma-theta 26.8, which is consistent with what the Chavez group has seen.

(Also, it is their data ... makes sense). On Tuesday, I learned more about the BOG data from data-keeper, Reiko, of the BOG data. I also met with Lynn Dewitt of NOAA who answered some questions about ERDAPP and possible data sources. On Wednesday, I obtained BOG data for "M1" stations and plotted, and was in the middle of obtaining rover CTD data for "M1" using the STOQS database, but that didn't quite work out. I tried again on Thursday, but this will have to be completed in week five.

I have been reading about the natural history of the Monterey Bay Sanctuary and trying to memorize some phytoplankton. I wrote a couple of lines of code with Z, and it was fun, right Z? 😊

Posted by [aren](#) at Jul 05, 2015.

It was a fun week! I learned how to weld batteries together, which I will be using for my sensor. It was also the first time I was able to go out on the Paragon to pick up a wave glider as well as one of the Whalers to clean a mooring in Elkhorn. My project is moving forward. I was able to calibrate one of the sensors that will be able to be deployed hopefully this week. I also hope to build the second sensor.

Posted by [wolfe](#) at Jul 06, 2015.

Week Four:

I spent the week helping the lab pack up for the cruise and attempting to create digital models of radiolaria from SEM images. 2D is pretty simple, but I need 3D for it to be worthwhile, so that's going to be a challenge. I also ordered stains and prepared other supplies for a couple experiments while on the cruise. I have no idea how successful they'll be, but I'll get to try my hand at keeping radiolarians alive and fluorescence microscopy! In non-work news, I got to show my boyfriend around MBARI and Monterey, and we spent the long weekend up in San Francisco. Overall, an excellent week!

Posted by [beittenmiller](#) at Jul 06, 2015.

This is my first late confluence and it makes me sad T-T anyways, my project thus far is going pretty smooth. Previously I had my project working by reading the files locally, because I couldn't get it to work via online; however, I'm at the point in my project where I need to make it work online so I can proceed. Should be fun!

Posted by [jramirez](#) at Jul 06, 2015.

Since the last time I posted, I was able to complete and understand the statistical analysis (thank you Kathy)! We found that error had a significant effect both length and angle. However, we also saw that there is a strong relationship between length and angle, so strong that it leads us to believe it is just making it seem like there is a significant relationship between error and length. We say this because when plotting angle and error there is a clear pattern shown, but when plotting error and length there is no pattern present. So now looking forward our next couple steps is to better define the relationship between error and angle, then incorporate this into an algorithm.

Posted by [peart](#) at Jul 06, 2015.

This past week I have been busy setting up for my lab's next abalone spawning experiment which is scheduled for this upcoming Wednesday, July 8th. I also presented my research to my REU group this past Thursday (which is why I forgot about confluence, sorry Linda and George...), but I think my I did decent. I've noted things I need to work on, but for my first presentation I think it went pretty well. Finally, after a strenuous week, I celebrated the holiday weekend in Santa Cruz with lots of waves and good times to be had for all.

Looking forward to the Chavez CTD cruise on Tuesday!!

Posted by [mheard](#) at Jul 06, 2015.

Week Four:

Last week was pretty busy especially since we only had three work days. I spent my time trying to cram in as much data collection as possible. I am so close to finishing reviewing the time-lapse images and

now that I have 2gb more of ram it is going much faster (thanks Zorba 😊)! My brother and his wife came by earlier in the week so it was really great to show them around and spend some time with them since I rarely get to see them. Sorry for the confluence delay!

Posted by [jwhelpley](#) at Jul 07, 2015.

20-June-2013

This page last changed on Jun 05, 2015 by [kgomes](#).

21-July-2011

This page last changed on Jun 05, 2015 by [kgomes](#).

21-June-2012

This page last changed on Jun 05, 2015 by [kgomes](#).

How was your week?

22-July-2010

This page last changed on Jun 05, 2015 by [kgomes](#).

23-July-2015

This page last changed on Jul 23, 2015 by [Iziccarelli](#).

Much calmer and more productive week than the last. I started writing the paper and learning QIIME. Met with Mary Silver and Kim FB to explore new avenues for job hunting. I also met with Andy Moore at UCSC for his wise words on Matlab and physical oceanography. Still need to finish counting those QP samples!

Comments

There was a problem with the DIC sensor so I am unable to validate my data from the first sensor deployment. It will be deployed again tomorrow and hopefully that data will be able to be validated. I am still hopeful that I will be able to complete building sensor number 2 during my time here but that looks potentially problematic. I can't believe how close we are to the end, can I just have another 10 weeks here?

Posted by [wolfe](#) at Jul 23, 2015.

This week has gone by really really fast! Mostly I have spent it refining my Matlab code so that my data can be as accurate as possible. The noise on the baseline of the spectra is tricky to deal with when I have tiny peaks from propane, iso-butane, etc. Another complication is that because the methane is in the gas phase, rather than dissolved in oil as the Brewer lab has looked at before, it has more rotational/vibrational modes available. This creates a whole slew of little peaks that overlap with some of the other hydrocarbon peaks. Thankfully, I've been making improvements by calculating a more consistent baseline and by using peak height, rather than peak area, ratios to determine relative concentrations of the gases in my samples. I'll probably be taking a couple more standards samples next week, but I'm just about ready to finalize the code and crank through the data!

Posted by [kmccone](#) at Jul 23, 2015.

This week has been pretty productive. I am almost done comparing my manual data with the code data. I have successfully gone through the code data and essentially picked out the data only where jellies are identified and saved all the information in those frames. Knowing the frames I then could go through my manual data and collect corresponding points. The problem when comparing the jellies identified in the code and my manual identification was that the code gave centroid positions and I got the head and tentacles position, so I had to average my points so they could be compared to the centroid. I now have to go through that data and see if the centroid and average values are in-between some threshold and if they are then I can assume they are the same jelly! After this I will really be able to see the difference between the code and manual orientations of the jellies!

Posted by [sblack](#) at Jul 23, 2015.

This week I revisited the ASP code for the Samples Database. The bug in which an error page appears whenever there's no images is still standing. I've been trying to fix the code so the error page wouldn't come up but to no success. I haven't revisited the Expedition Database as there are no longer any major bugs.

For the Django portion of my project, I mostly been making small edits for SampleDBLoader.py through the terminal.

My Progress:

https://github.com/livyliv83/stoqs/blob/samples_database_load/stoqs/loaders/SamplesDBLoader.py

Posted by [arredondo](#) at Jul 23, 2015.

Week 7:

This week I took a look at those stained samples from the cruise. Unfortunately, not much to see 🙄 I've also been continuing progress on my projective reconstruction code. Big thanks to Prateek and Steve for helping me understand the deadly linear algebra + 3D geometry combo. I was able to eliminate the functions that I found online (I understand enough to make my own version!), and I'm getting results that at least look like the correct shape. I know that they're wrong, but I'm working on the triangulation

and essential matrix calculations to improve them. Another issue is that my camera calibration was a huge approximation, so next week I'm going back to the SEM specifically for reconstruction images, so I can be careful to know where the cameras are in relation to each other and rotate about the center of the sphere. This is probably definitely what I should have been working on all along, but I didn't find the idea until halfway through the internship :/

I also learned this week how to make alignments and trees showing the relationships between gene/protein sequences, specifically the silicatein-like sequences from radiolarian transcriptomes. Pretty cool what kind of information that sort of analysis can give, and what misinformation if you don't look carefully!

Posted by [beittenmiller](#) at Jul 23, 2015.

Week 7

In week 6, I finished the regression plot with observational data. I started working on converting all of my data into micromol/kg instead of ml/l (for whatever reason, people use almost 5 different units for dissolved oxygen concentration, but micromol/kg is the SI unit), however, I found that the density in the database is not reliable. Thus, I should just use the density that I calculated for all of my analysis and figures, but I was under the assumption that the database values would be the most accurate and have used those densities in some places. A mess.

On Monday and Tuesday, I made a regression plot with model output data. It shows a different pattern than the observational data, but after talking with Francisco, I have some possible explanations and great ideas to move forward and test some of those explanations. I am trying to finish the ROVCTD oxygen comparison this week, but I'm not sure if I can. I talked to Marguarite and Jose about the way that they have done their oxygen comparisons, which was very useful. Mostly I am limited because I do not know how to make the SQL queries, and am going through a UI which "dumbs it down" for me, but I can't figure out all of the functionality - really simple things I don't know how to do through the UI.

I downloaded a particle tracing software written in Python from GitHub which I will test and try to run next week. If I can get it to run, I can test hypotheses about changes in ventilation in the North Pacific and changes in the strength of the California Current or Undercurrent, all of which are prime suspects in the changing dissolved oxygen mystery.

Posted by [aren](#) at Jul 23, 2015.

I'm really really excited with my project right now, because the code is finally reading through the data and I'm finally getting to the calculation part of the code so I can finally compare it to the WOA data so I can finally finally calculate a correction factor from the 2 data-sets that I can then apply it to the Argo data...finally B)

Posted by [jramirez](#) at Jul 23, 2015.

What an excellent week! I accomplished a lot more than last week and I am feeling pretty good about my project. I have started writing my paper and thinking about the presentation. I have to keep reminding myself there is still plenty of time to do everything! I am pretty excited because I will be using MATLAB this weekend and hopefully Brian's tutorial will help me figure out how to analyze the POC flux data from Station M.

Posted by [jwhelpley](#) at Jul 23, 2015.

It's been a slower week than usual. Most of my time has been focused on trying to perfect my abstract for submission to AGU by August 5th. I think it's almost there, but there are definitely still a few things that could still use some tidying up. I'm well beyond the 250 word limit suggested by most academics, but within the 2,000 character limit set by AGU. Perhaps I'll use the longer one for the AGU and shorten for the paper?

Amy did a nice job tricking me into taking her spot in today's outreach program. I was given 5 minutes notice before having to sit on a panel, judging a hypothetical land use scenario given by Watsonville high school students. It was a lot of fun though those kids did terrific.

I really want to take some time this weekend to work on the introduction and methods of my paper. My discussion section isn't going to be as thorough as I hoped because I didn't get the OK from Charlie's

collaborator to consider the depressions to be a major geohazard. I can still talk about the possibility, although its going to be a pretty weak case.

Posted by [psmall](#) at Jul 23, 2015.

Week Seven:

Whoa, end of week seven this is getting close. I worked to filter all of my potential scale options no longer limiting my search to McMaster-Carr as their selection was fairly limited and a bit more pricey than the selection available on the vast internet. I presented the most fitting options to Brett and was able to get the order placed for two of these scales. Additionally, I feel the vehicle chock design and material selection has finally been narrowed to the point where we can start to order my materials and fabricate the chocks. I'm hoping to have all of the materials and the fabrication/assembly work complete by mid-to-late next week so I can begin to utilize the measurements and finalize my procedure. A lot to do, time is closing in!

Posted by [rchavez](#) at Jul 23, 2015.

I started the paper on Monday and spend most of my day writing the paper. I did some testing on the oscillation issue on the load that I designed. I worked on the presentation and have the outline done. I spend a few hours on drawing the system diagram of my project and including that in my paper. I also did some research on the oscillation problem and organized all the research I did in the past few weeks. So far, so good!

Posted by [achen](#) at Jul 23, 2015.

This week was really interesting as I finally introduced more classes(more than two species) into my classifier. I wanted the problem to be more challenging so that it can be a complex classifier rather than just a binary classifier. My classification system finally has four species namely Cuvier's beaked whale, Porpoise, fin whales and blue whales. The first two vocalize at high frequencies(25Khz- 100 KHz) and the other two vocalize at low frequencies (20-50 Hz). I have used two classifiers(SVM's and Random Forest Classifiers) just to compare their function. I achieved pretty amazing results with both of them, just that random forest classifiers seem to work better than svm in the case when you remove some acoustic features(as Random Forest Classifier selects a fixed number of best features). I am planning to augment more data(that is create more data using the data we already have , which works pretty well and improves classifier performance). Lets see how it goes.

Posted by [pmurgai](#) at Jul 23, 2015.

Week seven:

All this week I was analyzing my data and organizing my results. I would like to do more, but time is short ?. So, I was defining with Linda my goals within the internship. The rest we will continue later. Also, I started reading more literature about benthic communities and oxygen minimum zone to understand better my results and finish to write my paper.

And to close my short week, I was in an amazing tour for Western Flyer. It was excellent to know face to face the ROV (Dc Ricketts) that gave me all my data!!!

Posted by [bmejia](#) at Jul 24, 2015.

Hey gang,

Been under the weather this week but have still been able to get a lot done. I fixed a bug in my code written for matlab that was presenting the algorithm from finding a negative slope. I then went about translating that code into ruby, and am in the process of making the code actionable so that the rover can implement it.

In addition to the rover machine learning project I'm also putting together a summary of the physical environment from the rover's current meter.

Posted by [dburrier](#) at Jul 24, 2015.

This past week I have been trying to solve for the last two parameters I need to run my code: beta and alpha, the width and height of the image in radians. This has been very frustrating because I have already calculated these parameters twice already, was so excited when I got it, and then we realized there was something else we weren't considering so now I will have to take measurements again and recalculate these parameters. So my next step is to find a way to take pictures with the ROV camera, underwater with a 4.1 zoom, and the calibration board at a known perpendicular distance to the camera. Once I have this image and know that distance I can resolve for beta and alpha, run the code, find a way to relate this code to the measurements I took in the beginning of the summer, and finish my paper and presentation all within three weeks! I really want to get this all done!

Posted by [peart](#) at Jul 27, 2015.

Week Seven:

This week was spent collecting data for my experiment. I counted ~4500 fixed abalone embryos over two days, but I am now done with my data acquisition and moving onto Excel to create a graph comparing my three treatments.

Posted by [mheard](#) at Jul 27, 2015.

The past week has been marked by a lot of drawing. While manual tracing is proving to be more effective than attempting to manipulate the videos in Matlab, it is tedious and time consuming. I am nearly done with the tracing and will begin applying different rotation and translation matrices to get an idea of variability in swimming cycles between organisms.

Posted by [abaumer](#) at Jul 30, 2015.

23-June-2011

This page last changed on Jun 05, 2015 by [kgomes](#).

24-July-2014

This page last changed on Jun 05, 2015 by [kgomes](#).

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25-July-2013

This page last changed on Jun 05, 2015 by [kgomes](#).

25-June-2015

This page last changed on Jun 28, 2015 by [mage](#).

Comments

Can't believe I'm writing another confluence post, it feels as though I wrote the one just a day or two ago... I still have things I need to figure out with the WIND server web pages. The Sample Database is more problematic in comparison to the Expedition DB. Could be because of all the images. Anyways, I'm doing okay.]

Highlight(s) of the Week:

Seeing an otter (almost) everyday of the week.

Posted by [arredondo](#) at Jun 25, 2015.

I got a lot done this week. I solved the oscillation problem that I was having for a week last week and was able to implement it onto the proto board. I did the testing for all 4 electronic load and was able to output constant voltage with no oscillation. I also completed the 4-20mA current loop. I testing the 4-20mA current loop with and without a digital to analog converter (DAC) and was able to get the results I want. I am in the process of proto typing the circuit so I can have it in my instrument simulator. So far, I have been able to complete the tasks asked by Chad. I went surfing two days ago and it was a lot of fun. I really enjoy taking breaks on the beach after completing my tasks.

Posted by [achen](#) at Jun 25, 2015.

I am clueless how we are already finishing week three. This week I have been running tests on some of the parts I ordered last week such as CO2 and water permeability. I have also discovered some glitches in the code. When measuring CO2 the ppm are usually around 300-500 range. My sensor will randomly say that the CO2 ppm is 42, I think I have discovered the meaning of life. This weekend off to Yosemite and next week I hope to have my sensor mostly built.

Posted by [wolfe](#) at Jun 25, 2015.

Week 3 almost complete...basically 1/3rd of the way through...why must summer want to leave so quickly. I know I keep repeating it, but gosh darn it time is going by fast and I want to enjoy the summer here as much as possible!

Anyways, onto the project! The code I made for the offline version of the argo_active.txt file works perfectly; however, I made an exact copy of the code so I can use it for the inactive file, but the code doesn't work. The files look exactly the same and I'm a little confused as to why it doesn't work the same. There's also this argo_all.txt file that's a combination of the active and inactive file, but that doesn't work either (I'm guessing it's because the inactive one is in it and the inactive one also gave me a hiccup so the all file will give me some hiccups as well). So that's what I need to work on.

Other than that it's been smooth sailing.

Posted by [jramirez](#) at Jun 25, 2015.

Week 3:

I think I am just as shocked as everyone else that week 3 is almost over. I am still reviewing pulse images for ents. and this morning finally got my hands on a copy of adobe so I can zoom in on images. Some of the animals I am looking for are located in the very back of the camera's field of view and while I can make them out from their distinct pattern of movements I would like to have a higher quality image to look at their lepensspuren. Today and yesterday my computer has been running at a glacial pace which is extremely frustrating since I am working with files that contain ~6000 images. I am hoping to work through the weekend and put a bigger dent in this project prior to the long holiday weekend next week... we will see how that goes!

Posted by [jwhelpley](#) at Jun 25, 2015.

Week 3:

Trying to pursue several lines of inquiry at the same time is a little difficult to manage. I've been trying to write/interpret code to match sequences of sponge silicateins (proteins needed for silica deposition) to transcriptomes of radiolarians, and it's been really frustrating. In addition to my own lack of programming ability, the database is missing one of the necessary files (even though the online search had it?), and the MBARI scripts are mysteriously malfunctioning (or I'm using it wrong, who knows). Luckily, I don't have to do that all the time, and this week I learned how to use the SEM over at Moss Landing Marine Laboratories. This means I can get more pictures of the structures themselves and spend some quality time with ImageJ. Modeling the spheres has kind of fallen by the wayside, but more data should help move that in the right direction, too. The SEM also lets me look at the structure more dynamically, and just yesterday we noticed some interesting patterns of irregularity that I'll try to investigate more today.

Aside from work...looking forward to Yosemite this weekend!

Posted by [beittenmiller](#) at Jun 25, 2015.

Week 3:

This week I accessed the BOG database using SQL, through Matlab. People at MBARI have written scripts so that you can type SQL commands in a Matlab function which will return your query into Matlab, which is great.

I also met with Rich Schramm and Mike McCann to access ROV/CTD data that has O2 measurements. There are a lot of data (32 million?). An added little project for me will be to compare the ROV/CTD data (which has never been calibrated with bottle samples & Winkler titration) to the BOG data (~700,000 O2 CTD cast data points there). I using the STOQS database, with the browser UI interface. It is amazing - for the amount of time it can save scientists, for saving me scratching my head writing SQL queries, for the beauty of the UI. People should totally try using it ...

I met with Francisco this week to discuss scientific questions, and prioritized a set of figures to complete first. I joined the CeNCOOS weekly meeting and discussed a final data product I can give them of O2 in the region.

I have signed up for Open House for the Chavez microscope booth and the CeNCOOS booth. I will need to learn/update my plankton classification skills, a nice side learning project, before Open House.

Posted by [aren](#) at Jun 25, 2015.

This week I finished measuring (found a protractor btw!) and have been working on our stats. I am finding the statistical analysis to be very stressful. I do not have the strongest stats background so I have definitely been struggling a lot and having to read online/teach myself a lot. Kathy has also been really helpful and great about answering all my questions.

To be honest, I felt a little discouraged during the week because I felt like I was asking her for a lot of help. Even though I know it is not bad to ask questions, I would feel more productive and helpful if I could get a lot more done on my own. As frustrating as it is, I am glad I am struggling through the stats because I think I have learned so much already and hopefully by the time I finish I will feel more confident in my statistical abilities.

Posted by [peart](#) at Jun 25, 2015.

This week I finished off testing gas standards and mixtures on the pressure booster system that I'm coupling with laser Raman to examine deep sea gas samples collected at Eel River Canyon. Looking at some of the mixed gas samples, I've been able to see the interesting peak features of methane, ethane, and probably propane. A critical part of my setup will be making sure the system is flushed and evacuated so that I don't have cross-sample contamination. I've been continuing to work with one of my mentors on improving the vacuum and sealing, and I get the whole system down to a pressure of about 0.12 torr, which is great since after acquiring a spectrum after evacuation I see no residual methane. I got to meet Dr. Brewer on Monday, which was fantastic. He's been giving me papers to read on jellies and Raman spectroscopy of water, because for the lab's next big project he would like to examine how jellies convert liquid water into gel, presumably using very little energy. It's been a lot of fun working with all members of the Brewer Lab this week. Just this morning, I used the laser to look at my first Eel River Canyon sample at a variety of pressures! Looks like there is a complex gas mixture in the sample cylinders. The fact that the sample gas is wet complicates things a little further, but I'll

just have to make sure that I clean and flush everything thoroughly between testing samples. I'm really excited to be working with these deep sea samples now!

Posted by [kmccone](#) at Jun 25, 2015.

Progress! On monday I started using ArcGIS to create maps of the section of the Arctic Charlie surveyed while he was doing his methane search dives. Well, to be honest a good amount of the data I needed to make my maps was already there, it took some minor tweak-age to view the sections I wanted to see. Still, it's been really cool learning how to navigate through some new software. As party of the geology team, I have to do make a poster to present at next month's open house. I will likely present my project findings up until this point and will spend the remainder of the day gathering information to put on my poster. If I do a good enough job I can view this as an early head start and rough draft for my final poster project.

Posted by [psmall](#)s at Jun 25, 2015.

Larvacean Log, Week 3:

Lots of progress! I've gotten my Matlab code to successfully trace the boundary of the larvacean as it moves through time. This was a rather monumental step considering where I was last week. However, now the problem has become figuring out orientation and how to stabilize the head of the larvacean for all the frames. Hopefully, this can be figured out early next week... if so, then the kinematic extraction will be done by the time I leave for Alaska.

We leave for Yosemite in just over 2 hours. We will be staying on the northern side of the park, in Tuolumne. I cannot wait to see the "range of light" of the Sierra Nevadas, as John Muir referred to them. I'm sure we will come back with plenty of new stories to share.

Posted by [abaumer](#) at Jun 25, 2015.

Since the last Confluence update, I have been busy taking care of my developing abalone embryos. I worked this weekend to collect samples and preserve them for later analysis. Unfortunately, the amount of 10% formalin we decided to use to fix my samples was too low of a concentration to successfully preserve them and now I have 45 samples of unidentifiable abalone embryos. Since Tuesday, I have been quickly planning for the next step to recover from my loss of data. We are ordering gravid abalone from Davenport today and acclimating our newest members to the Barry team in tubs we rigged for two weeks. Sometime in the middle of July we will start the next iteration of our development experiment and will have a new game plan for fixing our samples so they are able to be identified through the microscope – although, we're still scratching our heads on what to use after many trials.

Nonetheless, I am very excited to start this abalone aquaculture process from the beginning and I just hope I will be able to collect and analyze all the data before intern presentations on August 12th (which I am also very excited for!!)

Still loving MBARI and the people I am working with! This summer has been a blessing and I don't want it to end!

Posted by [mheard](#) at Jun 25, 2015.

Week Three:

Another week in the books, I agree with Olivia it seems as though time has been flying by. The week started off with George giving a more thorough tour of MBARI for the REU students (Paris and Madison and myself) since we missed the orientation tour; it was amazing to me just how much is really going on here at MBARI, from the lobby you wouldn't have any clue. On Tuesday Sarah and I went out with Brian Kieft, Tom O'Reilly and a few others on the Paragon to deploy the LRAUV Makai and retrieve a waveglider, it was a pretty nice experience and my first boat trip here at MBARI. I was also able to go back out on the Paragon yesterday with Brian and Jordan Stanway using the launch and recovery system to retrieve Makai as it was not diving as it should have been. I had the opportunity to meet with software engineer Rob McEwen and he set me up with a few documents and spreadsheets to help with my calculations. I have been looking at scales from McMaster-Carr and considering the different setups of the Center of Gravity / Center of Buoyancy tool and the design of the AUV chalks I will need to make. I have some ideas but I have been meaning to meet with Jon Erickson again to get some input on them;

it seems as though he has been out of the office for the past few days, I will look into meeting with him on Monday morning after the Intern meeting. Aside from that I feel as though I have a much better view of the first half of my project, I just need to button down some specifics regarding the tool design as I am not sure about the project budget and some of the scales I have seen can be pretty pricey. The most difficult thing so far has been getting in contact with the necessary people and making continuous forward progress without having a lot of guidance, being relatively new to everything it can be difficult to know what the next best step would be and what decisions I can make in the process.

Posted by [rchavez](#) at Jun 25, 2015.

Week 3:

This week was amazing just like the other weeks. However, this week was more interesting because I have identified more species, which makes my work more complicated, but at the same time more wonderful. Prior to the start of the internship I was more knowledgeable about fish, now, because of this work I have substantially increased my knowledge of other taxonomic groups!. Also, I had the opportunity to go to the lab and identify organisms preserved in alcohol. Although I have a lot of work, it is necessary to rest and to enjoy beautiful landscapes. For this reason I am going to close my week in Yosemite!!

Posted by [bmejia](#) at Jun 25, 2015.

Week Three (yikes)

I cannot believe we are already three weeks in! Like all weeks, it has been another great week at MBARI. I got to go on the Paragon again, which was really fun. We launched an LRAUV and retrieved a Wave Glider. Other than my little field trip I have been working on my jellyfish orientation code. I successfully manually found out the orientation of jellies in different video frames and I just (with the help of Prateek) finished the code to retrieve the Centroid, Major Axis Length, and Orientation of jellies from a previous interns code. The next step will probably be to compare the manual data and the code data. Yosemite is only 50 minutes away and I cannot wait. Last weekend was great in the water but spending a weekend on ground has never seemed so nice.

Posted by [sblack](#) at Jun 25, 2015.

Finally! I have been successful in extracting the acoustic call data of both the fin whales and the blue whales (both are mysticetes (bandwidth decimated down to 1 to 1.6kHz) from the huge Scripps Dataset, I am currently working on the low frequency data(high frequency is 100kHz-160Hz- dolphins,sperm whale etc). As such a data extraction task was new for me I found it really exciting and it improved my python skills in the process. Currently I have 4977 samples extracted for Blue Whales and around 415 samples for the fin whales.Also recently I was able to generate acoustic/audio specific features (MFCC,Spectral Centroid, Entropy of Energy,Spectral Roll-Off , Energy , Zero Crossing Rate etc.) for both the whales , You can read about various audio features at :

<http://yaafe.sourceforge.net/features.html>

I also started working on the SVM (Support Vector Machine) classification algorithm . I have tried out the classifier for some basic example(which are already present in the python datasets) , just to get an idea about its working. Next I will be trying out the algorithm on the extracted features for both fin whales and blue whales and to try to design a classifier which can distinguish between the two species. A lot will be revealed once I get the whole system going.

and now off to Yosemite!!!!

Posted by [pmurgai](#) at Jun 25, 2015.

Lisa Zicarelli's update -

First day in the lab for my project this week. Kris and Kevan helped prepare for and conduct extractions for the Chavez eDNA samples. These samples will be used in addition to the quantitative phytoplankton counts to characterize diversity and I'm looking forward to the comparison. Also, some small successes in MATLAB with Reiko.

Posted by [mage](#) at Jun 28, 2015.

26-July-2012

This page last changed on Jun 05, 2015 by [kgomes](#).

I've spent most of this week out of the office. Since the aluminum plate arrived from Lusk on Tuesday, I've spent most of my time in the machine shop, laying out hole locations, drilling holes, and deburring edges. The 12 fill in plates are done, and now I'm working on the submerged plate itself. That is proving to be much tougher than I originally anticipated. I'm planning on spending the rest of today using a portable electromagnetic drill press to get through the A36 steel that a standard hand drill just can't handle. If all goes according to plan, the plate will be ready for testing in the test tank by the end of next week. Remaining tasks to complete before testing include: creating a new bridle for the plate (since our last one snapped), moving all the testing equipment (HPU, accumulator, manifold, valve, and hydraulic ram) to the test tank room, making a new mounting bracket for the string pot so we can measure the linear position of the hydraulic ram, and creating some bumpers for the corners of the submerged plate to protect the inner wall of the test tank.

26-June-2014

This page last changed on Jun 05, 2015 by [kgomes](#).

Last week's update, which I somehow deleted:

At work on Monday, I realized I wasn't getting lost in the building as frequently, and that I'd identified some favorite tea selections: sure signs of feeling more at home here! I'm excited to get going this week. My mentor and I refined my personal project (standardizing image analysis algorithms for the Sedimentation Event Sensor), and I learned some C over the weekend, so I can't wait to start coding. I'm looking forward to helping Rich work on the rovers later, which have to be ready for their deployment next week!

This week's update:

Yesterday, Jen, Jon, Ben, and I accompanied the benthic rover team on the Rachel Carson. I had only ever been seasick once before; I lasted four hours until I had to lie down and sleep through the rest of the trip. I did get to see a some whales and Risso's dolphins (Jon was jumping up and down with excitement). Fortunately, I lasted just long enough to see the rover sink underneath the surface, followed by the ROV. All in all, a very exciting day and every bit worth the queasiness that accompanied it.

27-June-2013

This page last changed on Jun 05, 2015 by [kgomes](#).

28-July-2011

This page last changed on Jun 05, 2015 by [kgomes](#).

Wow.. Week 7 is upon us! Linda and George are taking off, but please do post your update as we hope to be able to check in from afar. There will not be an intern meeting on Monday Aug 1. George will be back on Weds sometime - not sure when I'll get into work. Have a good week.

28-June-2012

This page last changed on Jun 05, 2015 by [kgomes](#).

test

29-July-2010

This page last changed on Jun 05, 2015 by [kgomes](#).

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05-August-2010

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12-August-2010

This page last changed on Jun 05, 2015 by [kgomes](#).

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30-July-2015

This page last changed on Jul 29, 2015 by [mheard](#).

Week 8 has been busy but productive, nonetheless! I finally processed all of my data from my fixed samples and now have a beautiful graph to show my results! I still need to do some statistics and clean up my findings a bit, but everything seems to be coming together! I'm so happy to see all of the work I've put into this project start to become something.

Also, NASA was really cool (thank you George!!) and I'm looking forward to winning at the soccer game this weekend!

Comments

My project is officially done! At this point I'm writing out the report, presentation, and poster (for Hartnell). There's so much I have to do!

Also, NASA was amazing and I had a great time!

Posted by [arredondo](#) at Jul 30, 2015.

My project is nearing completion. I am currently working on quantifying values of interest for the swimming cycles of the bathochordaeus sp. I am hoping to be done with fitting a traveling sine wave to the tail motion tomorrow. Spent Monday on the R/V Rachel Carson doing deep PIV... it was amazing.

Posted by [abaumer](#) at Jul 30, 2015.

As week 8 comes to end so does my project. I am still having some problems with comparing my values with the values the code gave, so I am trying to find a threshold that works. Once I do that I can compare the orientations and then plot them all. I am looking to get this done by tomorrow, so I can focus on my presentation and report. Besides that, I went on the Rachel Carson which was awesome per usual and NASA was very interesting!

Posted by [sblack](#) at Jul 30, 2015.

My code has been touched up, with the help of Mike, to shave off lines of code by taking those lines and making modules to make the code a little smaller and easier to understand. At this point the code can run a loop that will read all of the profiles for all of the floats that fit the criteria and from there I can insert the data calculations in that loop so it all can be done during that run. Aw yis.

Posted by [jramirez](#) at Jul 30, 2015.

Week 8:

Every week is so busy toward the end 0.0 Monday morning I took more SEM photos down at MLML, and my dad visited Monday and Tuesday! It's nice to show off how cool MBARI is and what I'm actually doing out here in CA. Tuesday, NASA was amazing, and I will definitely apply there next summer 😊

As for my project, I'm still working on the projective reconstruction code. I'll have to start alternating working on it and filling out other subprojects since it isn't really imperative that I get the code fully working (it'd just be really cool if I did). Kakani is going to take a look at it tomorrow, and I think a set of fresh eyes will help a lot. In between, I'll work on taking and synthesizing ImageJ data of my beloved triangles, and mess around a bit more with genetic trees to see if there's anything more there to contribute to the silica conversation. Always so much to be done!

Looking forward to a friend visiting and the soccer tournament this weekend 😊

Posted by [beittenmiller](#) at Jul 30, 2015.

Today, I did the layout for the SeeStar project and completed it because I was done with my project. I have completed the rough draft for my final paper and my mentor is reading it now. I have worked on

the presentation and did final testing of the electronic load. I was able to solve the oscillation issue with a theory proven by my professor. I will be taking more test data if needed and modify the paper tomorrow.

Posted by [achen](#) at Jul 30, 2015.

This week has been awesome! I was sad to miss NASA on Tuesday, but that day I was able to finalize a calibration curve for my methane/ethane peak height ratios with an R squared of 0.99996 and error in the slope less than 1%, which is a threshold that I had been aiming for. Since Tuesday, I created a standard gas mixture to look at methane/CO2 and methane/N2 peak height ratios and did my final laser Raman analysis on the mixture this morning. I have the gas content of all my samples fully analyzed and have even analyzed some additional spectra from in-situ experiments as a comparison to the spectra that I took. Woohoo!

Posted by [kmccone](#) at Jul 30, 2015.

Week 8:

On Monday I worked with Mike McCann to discuss the ROVCTD data. The project seems to be rather large, however, so I will probably work on it on weekends and after hours. On Tuesday, Wednesday, and Thursday, I converted by data to micromol/kg (using the correct potential density values!) and have been finally removing outliers from my analysis dataset - this has taken much longer than I expected. I remove data if I have a good reason, and at times the problem is not obvious, for example the salinity or temperature casts have been off, thus giving an anomalous oxygen value in micromol/kg and especially when looking at density surfaces. Someone told me the BOG data was already clean ... thus my procrastination here and high levels of stress because I waited until week 8 to do this!! Tomorrow I will be playing catch-up again remaking plots with oxygen displayed in the correct units, making clean figures, cleaning up my dataset, and so on. I still think I can do some additional analysis - that is my goal, got to turn it up a gear though.

Posted by [aren](#) at Jul 30, 2015.

Nasa very cool, and an interesting seminar this week

I'm wrapping up my project, trying to make visualizations for the talk, which has been met with mixed success.

Still need to work on a summation of the physical environment but i'm not sure if I will include that in my symposium talk (i suppose it depends how much I get done).

Posted by [dburrier](#) at Jul 30, 2015.

Almost forgot about confluence this week!

My project has been surprisingly fun to work on. Beluga Whale!!! Bowhead Whale!? Narwhal Whale!? Whales!!!!

I'm at the point now to where I really need to pinpoint a species for determining cause for the depressions that I am seeing in my ROV video footage. After that I'm free to focus on completing my paper. More of a side problem I'm having right now is try to find locations for my depressions. If I can get lat-long data for all the depressions I can put them on some really cool ArcGIS maps. This id not something that is necessary but it can help to bolster my results and would serve as a nice visual during my presentation.

Posted by [psmall](#)s at Jul 30, 2015.

I worked a lot with QIIME this week and counted a couple more samples. We celebrated Alice's birthday this tuesday.

Posted by [Iziccarelli](#) at Jul 30, 2015.

I got lots of work done this week, still tons more to do! Had some amazing meetings with people outside of MBARI- a professor from USCS and the seminar speaker, Caitlin. I am constantly amazed by all of the

people I have been meeting and it has been really fun developing additional projects outside of the work I am doing for the internship.

Posted by [jwhelpley](#) at Jul 30, 2015.

This week has flown by. I have been organizing my data into what will hopefully be a presentation. My sensor will be deployed again tomorrow and it will be collecting data for the following ten days. Meaning that it is very likely that I will not be able to include all of my data in the presentation, and the paper will likely be a more complete look into the summer. I am still hopeful that I will be able to get my second sensor functioning before I leave.

Posted by [wolfe](#) at Jul 30, 2015.

Week 8

This week was all about augmenting new data using the current dataset. The reason we need to augment data is because sometimes an overfitting problem occurs with the classification process i.e. the classifier might work really well with the current test and training data but fails if we bring in new acoustic data (this occurs due to small datasets). The way I augment new data using the same dataset is to superimpose noise randomly from the hydrophone recordings I already have from different locations. As the recordings are from different locations in the bay, we get different noise, thus augmented data is more diverse. I implemented data augmentation with my current system and guess what, the classifier performance falls on an average by 0.1-0.2 percent which according to me is really good. The Random Forest Classifier works better than svm after adding the noisy data so I will use that for my classification purpose.

Posted by [pmurgai](#) at Jul 30, 2015.

Almost there! This week I made (with a lot of Brian's help) awesome graphics on Matlab that show every pixel in the demarcations of the photo the ROV took in respect to the Canadian grid. So when looking at the graphic it shows that pixels at the top of the photo are small and more distance is shown compared to the bottom of the image where pixels are bigger and less distance is shown. These will be great graphics for the presentation and the paper we are hoping to publish! Speaking of presentation and paper, I have almost completed my presentation I just need to add a bit about the algorithm and I have also been making a lot of progress on my paper. The last step of my project is to tie in the data I collected in the beginning of the summer into the code, I will be meeting with my mentors today about this and hopefully I can wrap up the project this weekend/next week.

Posted by [peart](#) at Jul 31, 2015.

Could I have 10 weeks? I would like to continue working on my project. Last week I thought my project was ready, but I needed to make some adjustments to my data. Nevertheless, this week I've been writing my paper and organizing my presentation. On the other hand, NASA was great!!

Posted by [bmejia](#) at Jul 31, 2015.

Super late update, but here it is. So last week we had an awesome tour of NASA Ames. I also spent a significant amount of time working on corrections to my scale chock design as well as scouting out the UHMW I will need to use in the machine shop. I also measured the kerf that is caused by the water jet during cutting to see if that would have a significant impact on the rightness and accuracy of the design. Other than that I gave a lab tour to the REU students Friday and showed off a few of MBARI's toys. Coming too close to the end, pretty nerve racking,

Posted by [rchavez](#) at Aug 03, 2015.

30-June-2011

This page last changed on Jun 05, 2015 by [kgomes](#).

The last week has been really interesting, and as usual very fast paced!

This Week:

- Read about Ocean Acidification
- Plotted pH and O2 mooring data and looked for a correlation with physical parameters
- Researched aquaculture companies in the CenCOOS region, and data platforms near the farms.
- Designed a survey for shellfish growers at next weeks workshop.

Next Week:

Attend a workshop on ocean acidification and shellfish growing. Ask lots of questions, and meet lots of people. Take careful and complete notes!

31-July-2014

This page last changed on Jun 05, 2015 by [kgomes](#).

scroll down and click on the add comment button to post your update

9-July-2015

This page last changed on Jul 08, 2015 by [achen](#).

Comments

This week, I worked on temperature testing and parallel testing on the electronic load. I did some research on the oscillation issue I was having with the electronic load and simulated the circuit in LTspice. I am still reading up on control system, stability and compensation resistor and capacitors. I still need to figure out how to receive the pH sensor data through the UART. Other than that, everything is good! I will be heading out on Rachael Carson tomorrow.

Posted by [achen](#) at Jul 08, 2015.

Week Five:

I was able to access rov ctd data on Monday and make a preliminary plot comparing the data to cruise ctd cast data. On Tuesday, I looked at the calCOFI data of Line 67 which is off of Monterey Bay. I was able to confirm the U-shape in oxygen at depth that others have found in data from S. Cal and from denitrification and other analyses. This suggests that decadal variability is a fairly important component in fluctuations of oxygen on this coast. On Wednesday, I tried to get a spatial regression plot going in one day of coding. I currently have a headache. I attended the weekly CeNCOOS meeting and met with Francisco Chavez; a "half point" check-in for the internship. On Thursday, I will try to get my regression plot to work, and I will look at rockfish survey data, and I will tie up loose ends looking at the rovctd data. (Or, I will complete at least 2 out of those 3 items).

I am at an exciting point in my stay here because I am transitioning away from data collection and moving towards data analysis including comparisons with model data, and model data analysis, which is "on schedule," but I am tired!

Posted by [aren](#) at Jul 08, 2015.

This week has come as a bit of a shock. With half of the internship over and lots to do left on my project it seems like it has come too soon. Luckily I am putting the first sensor on C1 today so i will be able to begin collecting data. Sensor number 2 will hopefully be in the water by the end of week 6. I am interested to see how soldering goes one handed, but i am sure it will make for an interesting product.

Posted by [wolfe](#) at Jul 09, 2015.

This week I've been working with command line to set up GitHub (an open source, project development service), Stoqs (a geospatial database software), and Django (a web framework software). The only problem during the installation of the software was creating a ssh (secure shell), which is crucial for encryption. The solution was to downgrade VirtualBox (a virtual machine, or an emulator of different operating systems) and Vagrant (software that creates development environments, often used with VirtualBox).

Posted by [arredondo](#) at Jul 09, 2015.

Last week I mentioned that I ran the files I'm working with locally, because reading it over the web wasn't working. Well it turns out that it wasn't working, because there are null bytes in the file when being read into IPython. Here's an example:

-In # = input line #

-Out # is what's being outputted

```
In 1: data = urllib2.urlopen("http://argo.jcommops.org/FTPRoot/Argo/Status/argo_all.txt").read()
```

```
In 2: data = data.split()
```

```
In 3: data0 #The 0 signifies to fetch only the first row
```

```
Out 3: '\xff\xfeW\x00M\x00O\x00,\x00T\x00E\x00L\x00E\x00C\x00O\x00M\x00,\x00T\x00T\x00Y\x00P\x00E\x00,\x00M\x00Y\x00_\x00I\x00D\x00,\x00S\x00E\x00R\x00I\x00A\x00L\x00_\x00N\x00O\x00,\x00D\x00A\x00T\x00E\x00O\x00,\x00N\x00O\x00T\x00I\x00F\x00_\x00D\x00A\x00T\x00E\x00,\x00M
```

```
\x00O\x00N\x00T\x00H\x00O\x00,\x00Y\x00E\x00A\x00R\x00O\x00,\x00L\x00A\x00T\x00O\x00,\x00L
\x00O\x00N\x00O\x00,\x00S\x00H\x00I\x00P\x00,\x00C\x00R\x00U\x00I\x00S\x00E\x00,\x00D\x00A
\x00T\x00E\x00_\x00,\x00L\x00A\x00T\x00_\x00,\x00L\x00O\x00N\x00_\x00,\x00M\x00O\x00D\x00E
\x00L\x00,\x00F\x00U\x00L\x00L\x00_\x00N\x00A\x00M\x00E\x00,\x00E\x00M\x00A\x00I\x00L\x00,
\x00P\x00R\x00O\x00G\x00R\x00A\x00M\x00,\x00C\x00O\x00U\x00N\x00T\x00R\x00Y\x00,\x00A
\x00G\x00E\x00,\x00A\x00G\x00E\x00_\x00W\x00E\x00I\x00G\x00H\x00T\x00,\x00G\x00T\x00S\x00,
\x00P\x00R\x00O\x00F\x00I\x00L\x00E\x00S\x00,\x00D\x00M\x00P\x00R\x00O\x00F\x00I\x00L\x00E
\x00S\x00,\x00G\x00T\x00S\x00P\x00R\x00E\x00S\x00S\x00,\x00G\x00R\x00E\x00Y\x00L\x00I\x00S
\x00T\x00,\x00C\x00Y\x00C\x00L\x00E\x00_\x00T\x00I\x00M\x00E\x00,\x00D\x00R\x00I\x00F\x00T
\x00_\x00P\x00R\x00E\x00S\x00S\x00,\x00P\x00R\x00O\x00F\x00I\x00L\x00E\x00_\x00P\x00R\x00E
\x00S\x00S\x00,\x00O\x00X\x00Y\x00G\x00E\x00N\x00,\x00F\x00L\x00U\x00O\x00,\x00T\x00U\x00R
\x00B\x00I\x00D\x00I\x00T\x00Y\x00,\x00R\x00A\x00F\x00O\x00S\x00,\x00C\x00D\x00O\x00M\x00,
\x00B\x00E\x00A\x00M\x00,\x00B\x00A\x00C\x00K\x00S\x00C\x00A\x00T\x00T\x00,\x00D\x00O
\x00W\x00N\x00W\x00E\x00L\x00L\x00,\x00S\x00S\x00T\x00,\x00S\x00S\x00S\x00,\x00P\x00A\x00L
\x00,\x00O\x00T\x00H\x00E\x00R\x00,\x00I\x00C\x00E\x00_\x00D\x00E\x00T\x00E\x00C\x00T\x00,
\x00A\x00C\x00T\x00I\x00V\x00E\x00,\x00B\x00E\x00A\x00C\x00H\x00E\x00D\x00,\x00R\x00E\x00T
\x00I\x00R\x00E\x00D\x00'
```

Yeah all that \x00 and what not in between the letters and numbers is hex code (which Mike thinks it's because it was written in C and this is how IPython is interpreting it)

Here's the other example:

```
In 1: data = urllib2.urlopen("http://argo.jcommops.org/FTPRoot/Argo/Status/argo_all.txt").read()
In 2: data = data.split()
In 3: print data0 #The 0 signifies to fetch only the first row
Out 3:
??
WMO,TELECOM,TTYE,MY_ID,SERIAL_NO,DATE0,NOTIF_DATE,MONTH0,YEAR0,LAT0,LON0,SHIP,CRUISE,DATE_,LAT_,L
```

There is actually an extra blank line that's being outputted after the last line of words. At first I thought it was nothing I should worry about, but Mike was telling me it was another null byte line of characters. Oh and the symbols in front of "WMO" is another example of IPython trying to output special characters not known in Python. So yeah that's my life right now, but there is a light at the end of the tunnel. I can have the program take out the backslashes by using the .replace function. The only problem is that I can't do it all at one time, only row by row so I have to make a loop that will go row by row and do it. Should be fun!

Posted by [jramirez](#) at Jul 09, 2015.

MARY SILVER!!!!!! Also, Kris and I nearly finished prepping the eDNA samples for sequencing. We should be able to send them off to Stanford monday or tuesday next week. Wiley, Jose and Madison joined me with team Chavez for a CTD cruise. Rienecker gave them a brief intro to the CTD and ROV.

Posted by [Iziccarelli](#) at Jul 09, 2015.

This week I got 5 additional sample splits from Charlie Paull's lab and ran them with the Raman pressure booster system. I also have started modifying the Matlab code that I will need to process my data. Thankfully,

our lab has started code that's been used to take difference spectra and integrate peaks from other types of samples. It will probably take a long time to figure out the best method to process my spectra, since so many of the peaks

that I need to look at are overlapping. I look forward to getting into some hairy Matlab. Next week I will be the only one here in my lab, so I need to make sure that I am set up to go through all my data before the day's out.

Posted by [kmccone](#) at Jul 09, 2015.

Week 5:

I cannot believe we are actually half way through; it's a little nerve wracking. Well this week was a pretty successful week. I was able to write a code that plots my manually selected points with ellipses that another code generated. Now I am working on essentially throwing out data that will not be useful, such

as when jellies are too close to the camera and only the tentacles can be seen, so the orientation cannot be accurately identified. This I have found to be a bit more tricky, but hopefully I will get it soon. Overall this week I have really felt that my Matlab skills are improving and I can begin to think more in the right direction when trying to develop some code!

Posted by [sblack](#) at Jul 09, 2015.

Week 5:

It's pretty amazing we are half way through but I definitely am feeling pretty good about the amount of work I have completed and the data I have collected thus far. I am so close to finishing reviewing the Pulse images and I am waiting for the most recent one to be uploaded to VARS. It was a pretty exciting week with the activities and the speaker. I am looking forward to Lobos tomorrow but I definitely know I will have to work on Saturday and Sunday in order to meet the goals set out by my mentors. I had a lot of good conversations with MBARI employees and visiting researchers this week. Since this project started I feel like I have a much better sense of the direction I would like to go with my future research and the kind of PhD programs I need to apply for.

Posted by [jwhelpley](#) at Jul 09, 2015.

Can't believe we are already half way through, but I love my project and the progress has been decent . In the last two weeks I have been working on building my classifier and get my classification system in place and running . I am employing a classification algorithm called as SVM(Support Vector Machines) for my classification purpose. Currently my dataset includes a bunch of fin whales and blue whales(Total 5214 samples). Running the classifier on these samples has given me a classification accuracy of 96% and an average precision of 99% which are really amazing results(I expected the classifier to fail at first) . I will be bringing in more data(or classes) , specially high frequency data (sperm whales,dolphins etc). I might be trying an image based classification on the spectrogram images(using deep learning) of the signals parallel to my acoustic classification method.

Posted by [pmurgai](#) at Jul 09, 2015.

It's been a pretty productive but short week here at MBARI. I had to work from home today because of a meeting I had to attend on campus and tomorrow is a MBARI off-day so no work; I'm still working on my poster for the MBARI open house and plan on showing it off throughout that day. The less text the better I'm starting to find out! Next week I will be spending a lot of time reviewing literature and learning as much as I can about whale benthic feeding habits. I still have yet to match an actual whale species to my data.

Posted by [psmallis](#) at Jul 09, 2015.

Week Five:

Well I must say it's great to have Brett and Ben back from their vacations, I feel as though I have had a productive week with significantly more direction than the last two or so weeks.

As far as my project this week, I started off by calculating the scale resolution needed given a 1/32" or 1mm shift in CG and wrote this up in a word document.

I Looked at the hydrostatic moment equations and determined what we could derive from the pitch moment and what we would need to measure.

I Worked on a draft procedure for locating Xg, Xb and Zg of the long range, and will work to generalize the procedure for other AUV's considering Dorado for example does not have a shifting mass or a buoyancy engine.

In the next week, I hope to have the scales purchased, work on the design and material selection of the vehicle chocks, and some adjustable format to account for the LRAUV with and without the ESP, as well as possibly making accommodations for use with Dorado.

I'd also like to clean up my procedure and make it applicable to the non-long range vehicles and create a spreadsheet and/or code which has these equations built into a sequence following this procedure.

Posted by [rchavez](#) at Jul 09, 2015.

Week 5:

I now have access to live radiolarians! As soon as they get uncomfortable, they retract into their capsules, though, so it's still difficult to work with any in their natural, "goopy" state. I've been staining them with an actin stain to see if/how far the animals extend into the colonial sphere, but so far there hasn't been much to see. The other stain that I wanted to do was a silica tracker, but I failed to pack a necessary solvent on Monday, so that experiment will be limited to the days following our return and will depend on how long the rads live. It's pretty disappointing to miss out on that, but there's nothing I can do now, and at least it's a learning experience :/ Plus, I can still work on the other aspects/subprojects of my project, so I won't be wasting any time! On the coding front, I'm trying to reconstruct a 3D model of the lattice from 2 SEM images taken at different angle. There are established methods for this, but they require linear algebra knowledge (that I'm trying to learn) and I've temporarily switched over from R to MatLab since MatLab is, y'know, for matrices. There's also the genomics subproject to return to after the cruise. Since we're halfway done, I'm starting to get concerned that my project isn't focused enough and I'm trying to look into too many aspects of the same thing at the same time, but Steve said that it's alright since they're thematically connected, so I suppose it's fine? I'm pretty happy with it because it means I'm getting to learn so many different things! I still need to think more about synthesizing my subprojects into a coherent paper/presentation though...

That said, it's kind of hard to worry about that when the cruise is so awesome 😊 It's nonstop activity every day, and I've learned how to use the video annotation software, operate the suction sampler on the ROV, transfer live samples, set up the trawl net, and so much more! There are blue water dives and trawls every day, and the ROV is out 12 hours a day, so there's a lot to see and so many specimens to observe all the time. Doesn't hurt that most everything collected is gorgeous and bioluminescent, either. They're even targeting the prettiest ones because there's two guys on board filming for a documentary. The time spent in the control room also means I'm learning more species names! Everything is very exciting, and I even managed not to get seasick 😊

Posted by [beittenmiller](#) at Jul 09, 2015.

Week five:

I am finishing to get all my data. I would have liked to have it ready this week, but you never know what will come in the next dive. Now, I have to watch videos from one more dive and so I can complete my data. However, as I have part of my data, I began to organize and do some analysis using ARGIS. It is very interesting and amazing how much information I can get from my study.

In addition to learn new things in ARGIS, I spent a few hours in MATLAB too. Although I had some knowledge of these two programs, it is always good to remember and learn more. I am very grateful to have this opportunity here.

Closing week, I will have an excellent dive in the Point Lobos!!!.

Posted by [bmejia](#) at Jul 09, 2015.

Yesterday I Spent the entire day out at the with Gene Massion of Kne Johnson's lab. Gene is working on a new design for a coastal profiling float.

We took the paragon out about 4 miles and then proceeded to hoist the float overboard. We also deployed a line with a weight attached that the float would traverse down to 60M before returning to the surface.

The line simply served as a fail safe should something go wrong. The float made 10 trips down to 60m and back, collecting ctd, oxygen, and fluorescence data.

Apart from that this I spent this week working on the algorithm that I will use to correct the rovers heading, which while progressing slowly, is progressing.

Posted by [dburrier](#) at Jul 10, 2015.

I've been incredibly busy setting up the second iteration of my abalone development experiment. I finally overcame the battle I've had with my abalone being impinged on the outlet mesh and am looking forward to running this next experiment with a completely different design. I've also been busy with REU activities so I'm trying to find a good balance between both of these programs. Diving at Point Lobos was absolutely AMAZING and I intend on diving there again sometime during the school year. I also

went to the sleepover at the aquarium where I saw the one and only, George Matsumoto, give a great impromptu presentation in front of the kelp forest exhibit. Memories of sleeping under the deep ocean will be cherished for my entire life; it was absolutely incredible. Thank you, George, for making this happen! Looking forward to week 7 is so exciting and I can hardly wait!

Posted by [mheard](#) at Jul 12, 2015.

Sorry for the late post!

Last week before leaving for the long fourth of July weekend, Brian sent me an algorithm that I was suppose to add new parameters to this week.

I was expecting it to be as easy as copy and pasting the code, inserting the new parameters, and running it in Matlab.

However, I really underestimated how difficult it would be...the language was a lot different than I expected. I am almost certain it is in a

different language and it has been very difficult for me to get a hold of Brian while he is away on vacation.

In the mean time, I have been trying to learn more about the code and potential new language. I have also decided to take more length measurements, in

which I isolate length from angle so we can just focus on the relationship (or lack of relationship) between length and error.

I finished the measurements on Friday and ran the stats on it. Turns out that there is a significant affect of angle on error (which we expected),

a significance of length on error, and no significance of angle on length (...which means I successfully removed angle as a factor so we could look at the relationship between length and error!). In graphing the data, it also appeared that as the lengths got larger so did the error and the precision decreased.

Now the next few steps are to: create equations that define the relationships between error and length, as well as, length and error. Then incorporate them into the algorithm.

Posted by [peart](#) at Jul 13, 2015.

Activities

This page last changed on Jun 05, 2015 by [kgomes](#).

Use this page to post information about after-hours activities

- June -August - Films in the Forest (<http://www.foresttheaterguild.org/index.cfm/films.htm>)
- June 17th - Center for Ocean Solutions seminar down in Monterey - "Suing the Service: litigation strategy to end the No Otter Zone"
- June 21st - kayaking with Monterey Bay Aquarium and students from Pajaro Valley High School - part of the Watsonville Area Teens Conserving Habitats (WATCH). 930-1130 followed by a short presentation by you at MBARI. Need four - so far: Rebecca, Hana
- June 25th - Tim Thomas - "The Last Whale Hunt and Other Fishy Storees"; Pacific Grove
- July 18th - Moss Landing Antique Street Fair (http://www.monterey-bay.net/ml/special_events/street_fair.html)
- July 23rd - 31st - Pacific Grove's Feast of Lanterns (<http://www.feast-of-lanterns.org>)
- August 5-8th - Steinbeck Festival (www.steinbeck.org)

Films in the Forest

This page last changed on Jun 05, 2015 by [kgomes](#).

Films begin at dusk, and no film is longer than 2 hours. The theater opens at 6:30pm if you care to picnic. Admission is \$6.00 for adults and children under 10 are free. Movies are subject to change without notice. Come early; a pillow is recommended for the hard bench, and dress warmly. The concession stand is open through intermission serving popcorn, desserts and beverages hot and cold. All profits benefit the Forest Theater Guild and The Michel Willey Youth Scholarship Fund. The Forest Theater is a non smoking facility, absolutely.

The 2010 Films in The Forest Program is a labor of love of Susan Willey & Megan Terry. The Guild wishes to acknowledge both Susan & Megan for their leadership, support and commitment to the success of the Forest Theater Guild. A portion of the proceeds of this program shall contribute to the Michel Willey Youth Scholarships.

Please visit the Films in the Forest website at www.filmsintheforest-carmel.org.

Tuesday, June 15

THE JAZZ SINGER sponsored by Visions Graphic Design & The Doggie Gazette

Wednesday, June 16

SLEEPER sponsored by The Beach Crowd

Thursday, June 17

CASINO ROYALE sponsored by Forest Theater Guild

Tuesday, June 22

VICKY CHRISTINA BARCELONA sponsored by Inns-by-the-Sea

Wednesday, June 23

CITY SLICKERS sponsored by Blue Adobe Mortgage

Thursday, June 24

LA CAGE AUX FOLLES sponsored by Wells Fargo Home Mortgage

Tuesday, June 29

REVENGE OF THE PINK PANTHER sponsored by Carmel Kiwanis

Wednesday, June 30

MOONSTRUCK sponsored by Kelly Productions

Tuesday, July 6

GOLDFINGER sponsored by Pine Inn

Wednesday, July 7

OCEAN'S 11 sponsored by Friends-of-Film

Thursday, July 8

MEN IN BLACK sponsored by Bank of America Home Loans

Tuesday, July 13

THE PRESENT surf documentary sponsored by Liquid Surf Shop

Wednesday, July 14

BEETLEJUICE sponsored by The Beach Crowd

Thursday, July 15

SHAPED local premiere of a documentary by Walter Georis sponsored by Carmel Valley Art Center

Tuesday, July 20

HAROLD AND MAUDE sponsored by Holly's Noir Night

Wednesday, July 21

MAMMA MIA sponsored by Keller-Williams Realty

Thursday, July 22

SHREK sponsored by Pebble Beach Company

Tuesday, July 27

HOTEL FOR DOGS sponsored by Diggidy Dog and Carmel Drug Store

Wednesday, July 28

MICHAEL JACKSON'S "THIS IS IT" sponsored by Carmel Stamp & Coin Shop

Thursday, July 29

ARTHUR sponsored by J. Lohr Winery

BBQ

This page last changed on Jun 05, 2015 by [kgomes](#).

Test

News

This page last changed on Jun 05, 2015 by [kgomes](#).

**This page can be used to post information that might be of interest to all interns.
Please begin each entry with the posting date.**

-

Opportunities to Go to Sea

This page last changed on Jun 05, 2015 by [kgomes](#).

If you are interested in getting out on one of the ships, you may be able to go on one of the following dates. More dates will be added, so keep an eye on this page! Let George or Linda know if you are interested (as far ahead as possible).

- June 17th - Melissa, Spencer, and Hank - need to be at dock by 0630
- June 18th - Point Lobos - Chaffey; Roman and Katie
- June 22nd - Point Lobos - Rebecca
- June 24th - Point Lobos trip: Aaron and John
- July 1st - Benthic ROV Cruise (six spots available); contact Linda or George if you are interested. Hana, Bartolome, Daniel, Sara, Katherine, Matthew

- July 1st - Zephyr - Sandeep

still need to get on the boat:

Isobel, Sandeep, Christopher

Before going out to sea (ask Linda if you have questions; there is some on her desk near the phone):
Dimenhydrinate (50 mg) - same thing as Triptone or Dramamine: 0.5 to 1 tablet before you go to bed

In the morning:

Another 0.5 to 1 tablet as soon as you get up (this needs time to work - if you wait until you are on the boat, it is way too late) along with 1 caffeine tablet.

Eat something bland like bananas, graham crackers, saltines, Ensure

NO coffee or juice (too much acid)

Four hours later (depending on how you feel - if it is very calm out there, you might be able to skip this)

Another 0.5 to 1 tablet, and 1 caffeine tablet

Eat something bland like bananas, graham crackers, saltines, Ensure

NO coffee or juice (too much acid)

Recreational Activities

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Schedule

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- MBARI closed: June 18; July 2, 5, 6, 16, 30; Aug. 13.
- June 14th - MBARI interns arrive and start their program
- June 14th - Summer Intern Cookie Break
- June 15th - MBARI Blood Drive
- June 16th - Glenn Chen Seminar
- June 17th - Center for Ocean Solutions Policy Seminar
- June 21st - Kayaking with MBA. 9-1130
- June 21st - Intern Meeting 0830-1030 in Tank View Conference Room
- June 21st - Project update. Josi Taylor
- June 28th - Proposal Workshop 11-12 in Pacific Forum, Linda in San Francisco
- June 29-30 - Day of Science, Engineering, and Technology/ MBARI Board meeting
- July 5th and 6th - MBARI holidays
- July 7th - Ari Shapiro Seminar
- July 11-16 - George out of the office
- July 12th - Project Update. David Clague. Submarine Volcanism
- July 19th - Project Update. Gene Massion. McSTAR, Linda in Washington DC (19-21st) for Deep-sea coral workshop
- July 21st - Interns host BBQ, Mark Abbott Seminar
- July 28th - Dijanna Smotherman Seminar
- July 31st - MBARI Picnic
- August 1st - MBARI Golf Tournament
- August 2nd - Project Update. Andreas Hofmann. Anthropogenic Ocean Acidification
- August 4th - Amber Mace Seminar
- August 14th - MBARI OPEN HOUSE
- August 18th - MBARI Intern Symposium at MBARI

DOEST Agenda

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looks better in the attached pdf

AGENDA

Day of Engineering, Science
and Technology

Tuesday, June 29, 2010

8:45 a.m. - 4:00 p.m.

Pacific Forum (except as noted)

Theme: Looking to the Future

Time Title Presenter(s)

8:15 - 8:45 Breakfast

8:45 - 9:00 Introduction Chris Scholin
President and CEO

MBARI Pushing the Envelope

9:00 - 9:30 Controlled, Agile and Novel Observing
Network (CANON) Francisco
Chavez

Senior Scientist

9:30 - 10:00 Vision for the technologies
of the future

Jim Bellingham

Chief Technologist

10:00 -10:30 Data from the depths around the clock
(MARS)

Craig Dawe

Technical Support Manager/

MARS Manager

10:30 - 11:00 BREAK

11:00 -11:30 The ocean in a high CO2 world,
from deep to shallow

Peter Brewer

Senior Scientist

11:30 - 12:00 How do we observe biogeochemical
cycles at the global scale in a
changing world?

Ken Johnson

Senior Scientist

12:00 - 1:00 LUNCH - Pacific Forum

Persistent Presence

1:00 - 1:30 Group 1 (Test Tank)

Long Range AUV

CANON Field tools

Moored ESP

Group 2 (Building D High Bay)

Benthic Imaging AUV

MBARI new vessel designs

Brian Kieft

Software

Engineer

Thomas

Hoover

Instrumentation

Engineer

ESP Team

Brett

Hobson

Mechanical

Engineer

Keith

Raybould

Chief Operations

Officer

1:30 - 2:00 Group1 and 2 switch

2:00 - 2:30 BREAK - Walk back to the Pacific Forum

A Look Forward

2:30 - 3:00 Extending an autonomous presence

(wave-powered buoys

and AUV docking)

Andy Hamilton

Systems Engineer

3:00 - 3:30 Ocean visualization

Dave Caress

Software Engineer

Brian Schlining

Software Engineer

Brett Hobson

Mechanical Engineer

3:30 - 4:00 Exploration and discovery: careful

plans and serendipity

Bob Vrijenhoek

Senior Scientist

4:00 - 6:00 Allhands reception in Atrium

Posters in the Pacific Forum

? Sediment traps and ROV operations under icebergs

? High-Resolution AUV Mapping Reveals

Structural Details of Submarine Inflated Lava Flows

? Topography within the axial channels of

Monterey and Soquel Canyons

? Development of a High-Resolution Shallow

Seismic Refraction Tomography System at

the Monterey Bay Aquarium Research

Institute

? Distinctive Fine-Scale Morphology of Hydrate Ridge

? Fine-Scale Morphology of Gas-Rich Sites on the Cascadia Margin Near Bullseye Vent

? Fine-Scale Morphology of West Mata Volcano

and the Northeast Lau Spreading Center, Lau

Basin from AUV Multibeam Surveys

? Connecting an Ocean-Bottom Seismometer

to a Seafloor Cabled Observatory: A

Prototype System in Monterey Bay

? Development of in situ Respirometers for Ocean Acidification Studies

? Time series analysis of six whale-fall

communities in Monterey Canyon

? Cataloguing biodiversity in the deep-sea:

tools, techniques, and challenges

? Remote Detection of Marine Microbes and

Functional Genes Using the ESP

? Brett Hobson

? Dave Clague

? Eve Lundsten

? Rich Henthorn

? Charlie Paull

? Hans Thomas

? Dave Caress

? Paul McGill

? Michael Risi, Craig Okuda,

Bob Herlien

? Kyra Schlining

? Nancy Jacobsen Stout

? ESP Team member

This Week

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WEEK TEN

9 am Test Tank

I. Review, preview, and updates

- Presentations: easiest to use Tempest/PacificForum for your presentations - check to make sure that they work.
- Future: Addresses and updates
- Presentations: easiest to use Tempest/PacificForum for your presentations - check to make sure that they work.
- Pronunciations?

II. Individual updates

- ? Check confluence for updates MISSING: ROMAN, JOHN, IZZY, AARON

III. Past events

- A. August 10th - Katie Lodes (10 am)
- B. AUGUST 14TH - MBARI OPEN HOUSE

IV. Upcoming events (see MBARI calendars and/or intern calender)

- A. Moving out
- B. Inventory
- C. Departing - rides?
 - Sandeep
- D. Intern T-shirts
- E. 2 hard copies, 1 electronic copy (my tempbox), id card, key card, evaluation....
- F. INTERN SYMPOSIUM

V. Seminars coming up

- B. August 17th - John Horne (1 pm)
- ◦ George will be leaving early most of this week (rehearsals)

Wednesday 2-July-2014

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Finally on time with this! Although this week has been short, it has also been very productive. Yesterday I ran PCR using tissue from a second species of squid (*Pterygioteuthis*), and today I'll move on to the third species (*Phylliroebucephalum*, not a squid but most likely has photoproteins). I also cut and processed some promising bands out of my *Dosidicus* gel, which will be sequenced sometime next week. Overall, my lab days have a pretty good rhythm now: plan out PCR, run PCR, pour gel, image gel, troubleshoot. Excited for the long weekend!

4th August 2011

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