

Space Details

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Available Pages

- Home 
 - 02-August-2012
 - 04-August-2011
 - 05-July-2012
 - 07-July-2011
 - 08-July-2010
 - 09-August-2012
 - 11-August-2011
 - 12-July-2012
 - 14-July-2011
 - 14-June-2012
 - 15-July-2010
 - 16-June-2011
 - 17-June-2010
 - 24-June-2010
 - 01-July-2010
 - 19-July-2012
 - 21-July-2011
 - 21-June-2012
 - 22-July-2010
 - 23-June-2011
 - 26-July-2012
 - 28-July-2011
 - 28-June-2012
 - 29-July-2010
 - 05-August-2010
 - 12-August-2010
 - 30-June-2011
 - Activities
 - Films in the Forest
 - News
 - Opportunities to Go to Sea
 - Schedule
 - DOEST Agenda

- This Week
- 4th August 2011

Home

This page last changed on Jul 19, 2012 by [linda](#).

This is the home page for the Summer Interns space.

Schedule

Refer to the Summer Intern Calendar (Outlook Public Folders)

Weekly Updates (Please Report by noon Thursday)

- [14-June-2012](#)
- [21-June-2012](#)
- [28-June-2012](#)
- [05-July-2012](#)
- [12-July-2012](#)
- [19-July-2012](#)
- [26-July-2012](#)
- [02-August-2012](#)
- [09-August-2012](#)

02-August-2012

This page last changed on Jul 31, 2012 by [adjunaedi](#).

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.

Comments

Damn it! While posting one day in advance I was hoping to be the first one to post (for once!). But no,

Audrey is faster than me 😊.

So I decided to post today because tomorrow Sam and I will spend our day inspiring young women to become scientist (aka boogie boarding).

I was off on Monday since I had to drive me family to SF.

Now, my family is gone (sad) but I am back at the housing with the other interns (glad).

On Tuesday I gave my talk and now I have a meeting planed with educators and tech people at the aquarium (which I am really glad for!! That is exactly why I wanted to present at MBARI!). Thanks to all the interns who attended my talk, nice support guys!

And then today I am finishing the side tasks in order to keep as much time as possible to focus on my presentation and report. I am ready with the structure of my talk and my report. I "just" need to write

the report and create the presentation 😊

Feeling quite nostalgic as I wrap up my project...

All for this week... and next week will be the very last confluence :/

G

Posted by [gfauville](#) at Aug 01, 2012.

This week has been better than the last two for my project, though I am definitely feeling like I am not where I want to be in terms of progress. The good news is that I have data from Sam's LISST-HOLO analysis, and by all indications we should be able to tell something from the comparison of that data set with the LISST-100X data. Right now it's just 24/7 Matlab work. I am frustrated about my skills in Matlab. I realized this week that working with Matlab is still something of an emotional rollercoaster - at one minute I make a breakthrough in understanding and presenting data effectively, and that rocks, and the next I feel like I know basically nothing about the programming language. I had hoped to be more comfortable using Matlab at this point in the project, but from everything I've read and experienced with it, it just takes patience and practice to really master all the syntax and shortcuts. I have been making a lot of progress while working with Dorota, and big thanks to Dongsik for his guidance in the program.

Time to get back to work and knock this project outta the park.

P.S. Can I just take a minute to appreciate Geraldine's intro? Could that be the theme of the week? 😊

Posted by [dwyse](#) at Aug 02, 2012.

I was putting off starting formal preparations for my presentation until this week because I didn't want to think about wrapping things up, but it had to happen at some point. I'm please to report, though, that

it hasn't been too bad so far. I've been doing a lot of spectral analysis of all the data I collected with the laser Raman and, as I go, I've been pulling out pieces that will be useful/interesting to explain in my talk. I've also made plots for a lot of the data that I had analyzed earlier (TOTALLY agree with you on the Matlabbing, Diane...), so I feel like things are coming along nicely. I met with my mentors about what I am going to focus on and how I'm going to present the information, but I'll still feel better once I've put a bit more of it together and there's a cohesive storyline. We've also discussed running one or two more experiments... not sure when that would be happening, but it's a possibility...

Glad to have Geraldine back with us, but I'm missing having Evelyn and Francisco around the suite. And packing to head to the new place needs to happen tonight, I suppose! (Where does the time go?!)

Ok, off to Land Use now, then back to work!

Posted by [agallagher](#) at Aug 02, 2012.

better late than never...

This week was another busy one. Most of my time was spent outside the office, again. I finished the fill in plate hole-drilling and installation on Monday. Tuesday and Wednesday I spend making some other submerged plate modifications (grinding off the anchor mount and sanding it down) and, since the last one broke during deployment, made a new bridal out of spectra rope to be used during the testing in the Test Tank. In order to create the new bridal I had to learn something new, a rope eye splicing technique where the rope is fed into its own core and tightens on itself if as tension is applied. The tricky part was making all four legs of the bridal the exact same length, to ensure that the plate doesn't swing or turn when lifted. Then I did a tension test on each bridal leg individually, to ensure they wouldn't snap during testing. Tension testing caused the ropes to stretch, which changed their lengths and required splice reworking to rematch all the lengths. When that was finally completed, the submerged plate and testing equipment was moved to the test tank. Today I worked on setting up the testing rig. Everything was ready to go by lunch, until the string potentiometer (device used to measure hydraulic ram position) broke! The rest of the day was spent taking it apart, putting it back together, realizing it was permanently broken, and then disassembling the PTO and retrieving the stringpot inside to replace the broken one. We should be running the tests tomorrow so if you guys wanna pop in and take a look, maybe take some pictures (Michael), come check it out!

Posted by [pcorrbarberis](#) at Aug 02, 2012.

Didn't make much forward progress this week. COAMPS wind is still a bear to work with, but I'm focusing down to the final steps. Midweek I realized I was averaging the wind vectors incorrectly and basically had to start all the way over. Now I'm on the second of five steps in the conversion process, but the next few steps should go rather quickly. Hopefully I'll be creating geotiffs of 3-day wind composites by the end of the day. Its just been very frustrating. But I'm determined to get it done!!

I met with Leslie to discuss analyses for all these layers I am making. We narrowed down to three: 1) Use a prepackaged analysis in the MGET toolbox to find strong sea surface temperature gradients (fronts), which could select out upwelling regions; 2) rotate the vector components of current to determine cross-shore and along-shore water movement 3) use zonal statistics to monitor SST, chlorophyll, current, and wind (if i complete wind) within MPAs over time. It seems daunting, but hard fast work is what I love.

Posted by [jadelaars](#) at Aug 03, 2012.

Geraldine, I loved your funny post! Glad to hear you are almost done and ready to write your paper and presentation. Hopefully, it'll be "just" as easy as making a tomato salad.

Peter, I forgot my camera today, but I'll stop by the test tank before noon and see if anything is still going on.

I think my project is wrapping up. This week I made some interdata comparisons between the wave glider, Dorado AUV, Fulmar underway and CTD casts, and the M1 mooring. Plotting the temperature and salinity data from these different platforms revealed that they produced comparable results and observed the same water masses and mixing regimes. The more interesting question, however, is whether the pCO2 data across platforms are comparable. I found that the wave glider and M1 pCO2 had excellent correlation (with a slope near 1 and an intercept near 0). Wave glider and underway pCO2 values (at the same time and position) didn't compare very well, but when all measurements were plotted

versus temperature or salinity, they lied on the same line. It seems then that the wave glider pCO₂ measurements do give reliable results.

The last part of my project is to model what happens to the CO₂ system during the relaxation of upwelling. The wave glider observed very high pCO₂ values (>1000 ppm) and also very high CO₂ fluxes (short-lived). Over the course of two weeks, the high pCO₂ values eventually dropped back down to atmospheric levels (~400 ppm). The question is whether surface CO₂ flux (gas exchange) or biological uptake was more important in bringing down the CO₂ levels.

I played around with a CO₂ drawdown model that is based on biological uptake, surface CO₂ flux, carbonate precipitation, and nutrient-carbon relationships (from Redfield ratios). I haven't found the right conditions that match closely with observations so far. I tried a scenario where there was no biology and just pure gas exchange. The initial decrease of pCO₂ was too fast, and then it leveled off so that the final pCO₂ was still much higher than observed. (Putting the biology in causes too much of a decrease.) I will talk with my mentors to see if they have any ideas.

Posted by [mfong](#) at Aug 03, 2012.

Ufff,I can believe that the internship is ending. My project is almost done, and now I can download the in situ measurements in STOQS in Matlab. On thursday my mentor allow me to shear his project update, thanks Mike, and make a first presentation of my internship project and how to use the tool developed during it. Thanks to everyone for coming. I hope to have some feedback from the people who come, specially John Ryan, Monique Messi and Brian Schlining and then incorporate it to my project. The next week I will focus in write my project. That's a very difcult task for me, cause write it in English is going to be hard.
Enjoy a lot the new housing and have a very nice weekend.

Posted by [flopez](#) at Aug 04, 2012.

Guess this is my second last confluence. It feels like it's almost time to wrap up the internship project, but wait... Didn't I just start my project? 😞 Anyways, Confluence. My sea surface currents prediction based on a historic HF radar dataset did not work well for the GA coast data. My mentor and I generated some plots and movies to analyze what was wrong or what went wrong from where. We couldn't really figure out why, so we asked for some help from my research project advisor who visited MBARI last Monday and gave a talk about my last field experiment in Long Bay, SC. She is a physical oceanographer, and my mentor thought we might be able to get some input from her to resolve the issue we were having. Magically, she found that one of the EOF coefficients picked up wrong tidal frequency for some period of data. Then, I actually found that the tidal frequency of my HF radar data got corrupted for that specific period. I'll ask my mentor to confirm this, and will fix it and rerun the simulations. Hopefully, everything runs okay this time.

I had a long meeting with my mentors and my advisor last Monday to discuss what I have done and how we will develop this internship project towards some part of my Ph.D. thesis. I think we came up with a nice idea, and you'll hear about this on my presentation (hopefully...). 😊

Posted by [dchang](#) at Aug 05, 2012.

Hello everyone!
Sorry to be so late!

Week 8? No way! It can't be true!

This week was unusual for me, as I refrained from participating in any of the outreach activities, and did very little else aside from working on my summer project. I needed to seriously turn inward even more intensely than I had expected for Week 8. This is due to the fact that I found out that a portion of my work is being incorporated into an abstract that the Clague lab is presenting at the upcoming American Geophysical Union (AGU) Conference. The deadline for the abstract is the 8th of August, so this pushed my deadline in a wonderful direction that was different than I expected. I am now working very closely with Julie Martin, who is writing this particular abstract and running calculations for magma viscosity based on the crystal fractions I have been collecting from my project's microscope work. It should also be noted that everyone in my mentor's lab is writing at least one abstract for this upcoming conference, and the mood in the lab has been very exciting!

Despite the push and forward progress; however, I confess that I am going to have a difficult time completing all of my work on time. For reasons that would be too time-consuming to describe, I had to change one of my methods last week, and sort of do a bit of work over again. I also have a huge amount of mapping to do with GIS before my project can be considered complete...I will definitely be here late and on weekends, if anyone wants to share a vat of coffee!

I did have the pleasure of attending Geraldine's seminar on Tuesday. It was so great to hear about what she is doing in Sweden! Awesome work, Geraldine! Thank you for sharing with us!

So, I missed participating in the various outreach activities this week, and really enjoyed the ones for which I have participated. I look forward to the NASA-Ames visitors next week...and it will be good to practice speaking in front of people in the Pacific Forum! Yikes!

Good luck with all of your work during Week 9, everyone!

-Patti

Posted by [pclark](#) at Aug 05, 2012.

I know, really late confluence.... oops!

Last week was pretty productive! Got most of my testing done and all three of them (Jason, Diane, and Brandon) zipped through the data that needed to be analyzed. Was really surprised! So the end of the week was mostly just organizing that.

Young Women in Science was a lot of fun on Thursday and the girls were pretty amazing. Plus we had burritos for lunch (which was a treat) and they were delicious! Only bad thing about that day was that I found out I won't be going on the Western Flyer for the next week :/ There's a leak so it needs to get

repaired... no squid and jellies for me 🙄 Steve was talking about still doing some blue water dives though so I may be joining him on those... not sure... we will see what we see.

Might as well fill you in on the weekend:

The weekend was good! Had a blast with my friend John visiting from New York. Good break from working so much.... And the night at the aquarium was GREAT! Loved the behind the scenes!!!

This week will be work work work! I have to run some tests on AVED and finish my presentation and paper.

May have an additional test subject as well 😊

Posted by [speterson](#) at Aug 06, 2012.

The meeting at NPS went well. We looked at the measurement equipment they have available. Due to the limited time available on both ends we will be running a set of steady state flow visualization tests. This involves making a scaled model 9in in wingspan and embedding 0.06 in diameter tubes to inject dye into the flow. The tunnel we will be using is a low speed water tunnel capable of producing Re numbers need for the scale of our model. Since the curves of the model are relatively complex the model is going to be sent to an outside company to be FDM rapid prototyped in ABS plastic. If all goes well we will be ready to test by Friday. Currently I'm still finishing up the model to send to protocafe (the rapid prototyping company).

Posted by [jtucker](#) at Aug 06, 2012.

Mostly just continued work on writing functions to deal with over-current, over-voltage, and under-voltage conditions on the LVLS board. Figured out the logic of the existing circuits and verified that the hardware was performing as expected. I still get some funny read-outs from the current sensing circuits.... either something is up with the hardware, or the ADC is acting up. I plan on figuring this out later today when Chad stops by. Overall, it wasn't the most productive week, since I have been sick (missed work wednesday) and had moving on Friday.

Posted by [jperotti](#) at Aug 06, 2012.

Oops, looks like I'm really late this time. Well, my project is wrapping up - I finished the Google Maps page and formatted it and linked it all up properly, so this week I'll be working on my presentation. Taking screen recordings takes a long time and a lot of patience, as I found out last year, because you

have to do everything correctly all the way through and figure out how long something takes to load so you can plan what to say during that portion. And of course there's the paper to work on. Writing a paper about the DSG is hard because it's so different from a scientific paper - the whole thing is results and there are no physical materials or methods, just a laptop and typing. But it's not going to write itself, so I will press onward!

Posted by [ecurles](#) at Aug 06, 2012.

04-August-2011

This page last changed on Jun 06, 2012 by [kgomes](#).

05-July-2012

This page last changed on Jul 05, 2012 by [dwyse](#).



It's Thursday.

Comments

It's hard to believe we are nearly through Week 4. My project is progressing, and after meeting with Jim and Yanwu last Thursday to discuss various optical devices for better understanding bloom dynamics, we came up with a team strategy for a larger project. I feel better about how my work fits into the bigger picture now. We had a productive meeting with Dorota on Monday, and I am looking forward to working with her on sleuthing out how to re-process the LISST data so that I can identify which combination of LISST channels can be used as a surrogate for chlorophyll fluorescence data, and how those combinations vary spatially in the bay. I haven't spent as much time as I would have liked this week working with the Matlab scripts, but that is my plan for today and tomorrow.

Posted by [dwyse](#) at Jul 05, 2012.

My mentors were gone last week, and this week has been relatively quiet as well. I've spent a lot of time playing around with visualizing data with various methods (Matlab or Ocean Data View). Previously, I had generated some plots on Ocean Data View, and I wanted to try to recreate them in Matlab, which proved to be somewhat difficult but possible with a free mapping toolbox called `m_map` (which Dongsik told me about). It took me a weekend to learn how to use `m_map`, but I find it quite useful now. However, I went back to Ocean Data View for generating my plots, because the Matlab gridding functions (`griddata` and `TriScatteredInterp`) do not produce very smooth results compared to the DIVA gridding algorithm in Ocean Data View. Francisco pointed me to a gridding function available online that may help me, but I haven't experimented with that yet. If anyone knows of good Matlab gridding functions, do tell me.

I have made surface plots of temperature, salinity, oxygen, pH, and sea pCO₂ (collected by the wave glider), but this week, I merged wind data from the wave glider meteorological station as well as the M1 mooring station into my dataset and used these two different wind data products to calculate CO₂ flux. The two wind data products give slightly different results. Part of this variation may be due to the height at which wind speed is measured--10 m above the surface in the M1 station (standard) and 1 m in the wave glider. I will need to look into the literature to see if I can standardize the wave glider wind speeds to the 10 m measurements.

Late last week, Francisco expressed interest in collaborating with me on my project. Francisco had the exciting idea of comparing outputs from the ROMS-Cosine model to the observations collected by the wave glider. We talked about this Gernot, one of my mentors, and he thought it was an excellent idea. I hope this can move forward, as I would love to learn more about ocean models.

Posted by [mfong](#) at Jul 05, 2012.

It was hard this week with Brian on vacation and having to delve into a whole new area - testing and monitoring memory use. I've been doing a lot of code clean up/annotating to prep the project to be made external. I've also been looking into how to do testing for the database connections and using Java VisualVM to observe what's using memory and how much memory the DSG as a whole uses over time. The purpose of all this is to find the "memory leak," which basically means the connection to the database isn't closing somewhere, so it causes the server to hang because it takes up too much memory. This has to be fixed before the DSG will work externally, but there are a lot of database methods and I'm not entirely sure what I'm looking for without Brian to explain things!

Posted by [ecurles](#) at Jul 05, 2012.

Well this week I completed the conversions of SST and chlorophyll into ARC GRID formats, which my mentor and I are very pleased about. Now I am on to the bear of HF radar. These data are in hourly observations of the *u* (east/west) and *v* (north/south) components of current. My first task is to create a Matlab code to implement a 3-day moving average over the observations and aggregate the 8784 hourly observations into 365 daily observations (of which are 3 day averages). So if anyone has a moving average code I can take a look at, I'd be very appreciative.

Posted by [jadelaars](#) at Jul 05, 2012.

Here I am!!! The week of the 4 of July. I was very excited about it, and I enjoyed it a lot. Morning parade and BBQ & Firewoeks during the night.

I have written the code to make a query to the STOQS database from Matlab and get all the information of a database from Matlab too. Now, the next step its to move to the model output side, and try to combine both. During a talk with my mentor two weeks ago, I expressed him the wish to join my project with another intern project. In this way both project could be improve. He said that it was a good idea, so I talked with Michael, who like the idea too. This week I have had a meeting with Michael and his mentor, and he likes the idea too. So I hope that we will have a happy end. Michael and me are very excited about it.

Posted by [flopez](#) at Jul 05, 2012.

Rough week for me so far.

Chad and I have spent most of the week trying to resolve the issues that I detailed in my last entry. We did a thorough inspection of the hardware with the oscilloscope and did find a few problems. One problem was what must have been a faulty logic gate; the chip select signal coming from the CPU board was inverted. Also, the buffer gate appeared to be malfunctioning. So, we bypassed the gate and found another work around to invert the chip select line. A new logic gate has been ordered. However, these hardware fixes did not resolve the communication issue – although they were a step in the right direction. At least the CPU can now recognize the other boards on the backplane even when the LVLS board is plugged in now. We started doing a more thorough inspection of my code and the signals on the SPI bus, which revealed a couple more problems, such as an error in the way I initialized the remappable pins. However, there remain more issues to resolve, because even though the oscilloscope shows bus traffic, the CPU still isn't able to communicate with the LVLS board. I'm starting to wonder if perhaps the PIC is bad, so as we speak, my mentor is replacing it with a new one. Worth a shot... fingers crossed.

Update: Replaced the PIC, didn't make a difference. Looking pretty hopeless without the help of a more experienced embedded programmer. Perhaps the one guy here experienced with PICs (Mike?) will be less busy in the coming weeks so he can help me. So, I've decided upon a new strategy: give up on the backplane communications for now, and focus purely on getting the peripherals on the LVLS board communicating with the controller. Instead of using the CPU as a debugging terminal, I can use the LVLS' own RS-232 port to communicate directly with my PC for debugging. That way, I can get every other component on the board working, before I decide to take a look at the backplane comm issues again.

Posted by [jperotti](#) at Jul 05, 2012.

Jason I have a 25-hr low-pass filter code you could take a look at if you're interested. If you come across a 3-day moving average code, please do pass it along. Have you tried Mathworks?

Posted by [dwyse](#) at Jul 05, 2012.

It has been a bit challenging this week to figure out all my lab procedures. I finished working with the new culture and am now adding background seawater samples collected last Friday to copepods in culture. There are many directions my project could go, so I'll have to narrow it down a bit.

This week, I met with one of my mentor's collaborators. He is working on predicting biological phenomena from AUV data to work towards an adaptive sampling plan. We also had our first lab meeting since I have been here, and it was great to talk to the others in the Vrijenhoek lab.

I will be doing computer work while my mentor is away the rest of this week, and deciding what questions I'll have to ask him when he's back!

Posted by [adjunaedi](#) at Jul 05, 2012.

Sorry for the lateness, the holiday threw me off a bit - I got back from LA last night, it was a great little vacation but a long drive for just a few days.

Anyway, there's somewhat less to report about this past week than there has been for the others (three-day weekends and Fourth of Julys tend to get in the way of productivity), but I did manage to get some work done. I've been running a set of experiments to compare the sensitivities of the two laser Raman systems that my group uses - one that's permanently on the lab bench and another sea-going one.

The idea is to figure out if the results we get in lab can be easily translated to predict what we'll find in the deep ocean and how accurate the two measurements are. Peter Walz and I wrapped up these experiments on Tuesday morning and I spent the rest of the day analyzing the data - it seems as though the sea-going system is significantly more sensitive than the benchtop one... good news. Today will be a bit of a catch-up day - I have a bit more analysis to do and there's always more to read, of course 😊

On another note, I took Geraldine's advice and downloaded Mendeley - I'm finding it to be a good tool and very easy to use so far, would recommend it to anyone who's curious.

Posted by [agallagher](#) at Jul 06, 2012.

Hello all! Sorry I'm a bit late...

This week has been interesting for me. It started out pretty well with my plankton identifications and was flowing smoothly but as the week went on, the project's end goal started to confuse me and interfered with where I could go from there. Needless to say, it all got figured out and everything's back on track.

We ironed out the kinks and Danelle steered me back in the right direction 😊 So, now I have a better idea of the final direction of my project and more data to run through. We've changed things up a little bit as well. We're actually going to be running 2 types of tests because the mediums are so different. So the LISST-HOLO images are going to be a self consistency test (more on that later, while the other two (holothurians and nanomias) are still going to be human vs. machine.

The 4th was fun, went to a fair and almost got sick on a few rides and rode a mechanical bull. Always fun!

Posted by [speterson](#) at Jul 06, 2012.

This week I finished my project! The Pop-up Buoys have been altered to accommodate longer and thicker rope and are ready for the next deployment. Unfortunately, that won't be for a while, definitely not while I am still here. So for now they go into storage, and I begin my new project: increasing the drag coefficient of the submerged steel plate. This requires first some analysis of the motion of the Buoy (data taken from an onboard IMU) and the piston positioning (measured by a string pot). Analyzing the two motions coincidentally, I can find the difference and attribute it to plate movement (which is ideally zero). If the data analysis warrants plate modifications, I will first model them in Solidworks, calculate weight and buoyancy, and then apply structural analysis using Solidworks Simulation. Next will be materials ordering, building, and installation. Once the modifications are complete, we can perform a drag test on the new plate in the test tank, and calculate its new drag coefficient.

Posted by [pcorrbarberis](#) at Jul 06, 2012.

Ok I guess I am the last one, sorry about that!

So this week, of course 4th of July and very interesting to see how many fireworks you can have in a city with huge signs with "NO FIREWORKS" and cops everywhere... Family here, enjoying every second of the Californian life style.

So but there was also work this week. First was the great news about me spending a week on the

Western Flyer, I am sooo looking forward to it. Just hope I am not gonna spend my week vomiting 😊

I will let you know 😊 Never been on a cruise before so any advice is appreciated and Brandon already offered to help me. Thanks for that!

So now social media business: Have been working on FB and Twitter mainly. Interesting since the way to use those SM are completely different: twitter you need to tweet often during the day while on FB you need one good post a day.

The social media application hoot suite is finally becoming useful and saving us time to be more present on Twitter.

On Fb, I think I start to see what works and what doesn't. I need to design a testing schedule to test my hypothesis. We have had some success with popular post reaching a fair amount of people and triggering engagement from the fans.

I also analyze the data from the survey I sent to the FB fans and it is interesting to see that they are as much interested in the MBARI science (new special, cool video) as they are about what is happening behind the scene here.

I also worked on the MBARI history that will be displayed on FB after the Open house.

All for this week... We are finishing week 5 (right?) this is soooo scary. In this place, time is acting weirdly... flying away faster than anywhere else...

Posted by [gfauville](#) at Jul 06, 2012.

Geraldine, we are finishing week 4.

Posted by [pcorrbarberis](#) at Jul 06, 2012.

Ok. Let's see who gets the last Confluence post between me, Justin, and Patti. :-p Sorry for the late post, by the way.

With a long weekend and a holiday in the middle of the week, my work progress is a bit disappointing, but is still slowly moving forward. With my HF Radar data for the ocean off the Georgia coast, I successfully generated empirical orthogonal functions (EOFs) out of the dataset and made plots to analyze. Today, my mentor said the plots look good and we are ready to move on.....But, wait...I spent the whole week trying to generate those plots, but don't even understand what those plots mean/represent!!! So, this weekend I'm planning on spending some time looking into his code that generates all the plots as well as the process of how the EOFs are generated. Next week, I'll try to train a prediction model using the EOFs obtained out of the dataset and see how it comes out. Hope next week would be more productive.

Posted by [dchang](#) at Jul 06, 2012.

Short week but I actually made some headway!

From the preliminary look at control systems, power requirements, and scientific instruments it looks like the primary technology driver for this project is the aero/hydrodynamic structure. Currently I'm trying to figure out a quantitative way to compare a tandem wing design and a reverse delta wing design. Over the past week I've worked mostly on getting a better handle on airfoil/hydrofoil design. I've started learning XFLR5 (a 3D derivative of MIT's 2D XFOIL software). Unfortunately the software dramatically limits the types of body shapes possible. However it seems to be effective in generating a ranking order between design efficiencies. To get a better Idea for more complex shapes I've also briefly looked at Autodesk's CFD package but it seems like it will be a little more tricky to set up for meaningful results from external flows. From what I've read so far it seems like getting truly accurate CFD values in the ground effect zone will not be possible. This means the propulsion system shouldn't be sized purely off these values. By the end of next week I hope to have finished the comparison between the aero and hydro dynamic efficiencies of the two air foil options and selected one so that we can begin physical validation of the lift and drag values.

Posted by [jtucker](#) at Jul 06, 2012.

It was a shorter week this week, but I still finished going through a good amount of dives. Some of the dives did not have complete annotations, so it took longer to go through the complete dive in real time. Also, a Davidson Seamount dive had a genus of primnoidae I had never seen before which was very interesting! I'm excited to have my mentor return (as he was on vacation) and work with him to figure out how to best organize and bin all the data that has been collected so far. As a side note, I look forward to moving in with the rest of the awesome interns this week!

Posted by [ebyer](#) at Jul 07, 2012.

Patty, where are you? 😊
if anyone is interested.. You can follow along at our teacher workshop at <http://www.mbari.org/earth/2012/schedule12.htm> we update the webpage frequently during the day with photos, lectures, etc...
hoping that I don't melt out there.
George

Posted by [mage](#) at Jul 07, 2012.

Oh no! I am very sorry for my very late post...

I vow NOT to be the late this week! (:>)===<

It sounds like we all had a wonderful, but intense week with out projects!

I can't believe it was Week 4!

Time is going by soooo quickly!

I am realizing that I need to create a timeline, to make sure that all three components of my project are complete in time. It feels like time is already getting short, with the Open House, BBQ and all....

I feel as if the work on my project really kicked into gear this week...

I started digging into additional conceptual details pertaining to the textures of volcanic rocks, and did a bit more reading this week. There is an entire language dedicated to such things. I expected this, but it still caught me off guard! New vocabulary! Fantastic! Looking at rock samples through the microscope is just one component of my project, but I find myself immersed.

On Wednesday and Thursday, I switched tracks and started helping the lab prepare for the Open House. We are creating a video loop of recent research for the geology tent. I spent some time in the video lab, in order to select cool clips from the Log of the ROV Ed Ricketts during the study of the Alarcon Rise on the 2012 Expedition to the Gulf of California. It was so great to see the seafloor! There is so much going on down there!

That is it for now.

All of you are such incredible scientists/engineers!

I am so inspired by you!

Have a GREAT week!!!

-Patti

Posted by [pclark](#) at Jul 09, 2012.

07-July-2011

This page last changed on Jun 06, 2012 by [kgomes](#).

Weekly updates for July 7th

08-July-2010

This page last changed on Jun 06, 2012 by [kgomes](#).

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09-August-2012

This page last changed on Aug 09, 2012 by [flopez](#).

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 the 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?????

Comments

Well, we now officially only have 6 days until the presentation and 9 days until this internship is over... and I am Not done with my project. To be honest, I'm very thankful I did not go on the Western Flyer this week (still stinks that the boat is officially gone and on its way to the shop though) because if I had, I would have been in trouble next week.

Starting last night, I had to rerun all of the tests that I had run on Monday and Tuesday because there's some training library that is messing up the whole system... So I kinda have to start from scratch with the holothurians and find where the problem is... which means running a lot of things..... Really not helpful when I have a presentation in 6 days and a paper that I have to write in there somewhere.... Blah!

But in other news, the plankton data is together. Finding some interesting things in that... But you'll have to wait for the presentation for that one 😊 I'm just glad that that is working...

This past weekend at the Aquarium was awesome. Really had a lot of fun and was totally geeking out with the behind the scenes tour... and the mola mola in the open sea tank. 😊 Back hurt a little bit afterward but that's the price you pay for fun.

Not looking forward to next week being the last week. we need to slow down time somehow...

Posted by [speterson](#) at Aug 09, 2012.

Last Confluence?! Say it isn't so!

This week I have made a ton of headway in my project, which is fantastic news, though there is still much to be done to finish and get my presentation and paper together. At the same time that I'm feeling much more comfortable with the direction and progress of my project, I am feeling the stress of the time crunch. Jim and Dorota have been immensely helpful in helping me learn the finer intricacies of programming and Matlab, and they have been available to help in my interpretation of my data. I finally feel like I have real ownership over my Matlab scripts, and I've been successfully plotting different datasets together and it looks pretty cool. I now need to decide which datasets to use to tell the story in my project, so the complicated part of the analysis is here.

Meeting the NASA interns was cool, though I wish we could have spent more time meeting with them. Maybe that tour could be scheduled earlier in the program next year. It was nice meeting with the

Aquarium interns and having dinner when we had a bit more time to socialize earlier in the summer. Still, it was cool to meet all the different groups that came through this summer. I am thankful that we have had multiple opportunities to stand on the stage of the PacFo' and talk, however briefly, about ourselves and our projects. Each time I'm up there I feel a bit more comfortable figuring out how to talk to a large group and not be completely distracted by the view.

Here's to the final 100m sprint of the internship project. Time to turn it over!

Posted by [dwyse](#) at Aug 09, 2012.

So much to do, so little time. This week I spent all my time almost exclusively on MATLAB, plugging through testing and deployment data. I've accomplished a lot on that front, but still need assistance with some of the deployment data. I'll be going over that with Rob McEwen on Monday. As for the presentation and paper, I'll be coming in tomorrow to continue working on those. Don't have much more than that to report. I wish this internship was longer!!

Posted by [pcorrbarberis](#) at Aug 09, 2012.

Diane: PacFo'... abbrev approval.

Aw, the end approaches. I've been busy preparing my presentation and paper all week, though when I start to work on something, it tends to remind me of something else that I have to do! I guess that means there's a lot of information to process and summarize. Oh well, I'm actually enjoying it despite the stress. There haven't been any major crises yet, definitely something to be thankful for. It's also rather nice to be able to step back and look at how everything fits together (or try to figure it out, at least...).

Let's see, what else is there to say... the Aquarium sleepover was a blast last weekend, as far as I know all who went had a wonderful time. And the nice weather earlier this week was also great (I had almost forgotten what sunshine was like!), though it's easier to stay inside and work more without it. I'm hoping there will be at least a bit of nice weather/a bit of time to enjoy the area this weekend as it's our last one here. I can't believe we're leaving so soon, it doesn't seem like we should be finishing up already! Looking forward to seeing everyone's talks next week/finally hearing about what people have been working on all this time 😊

Posted by [agallagher](#) at Aug 09, 2012.

Sleepover was a blast, was also nice to see George doing his education/diving show! Wrap up the last things at the beginning of the week and started writing my report. Still have data from Facebook to process. Wednesday I went with Lonny from the video lab to see him give the mystery of the deep show and I really wonder why it doesn't end with a slide "Follow us on Facebook" because at the end of the 15 minutes you have a auditorium full of people excited by MBARI!! Well as the other interns I cannot believe this is the last week!

Posted by [gfauville](#) at Aug 09, 2012.

Its with great pleasure to report that after two and half weeks of grappling with the COAMPS wind data (almost giving up two or three times) I've finally generated wind rasters in ARCMAP that worked!!! This completes all the conversions I set out to accomplish during this internship... SST, Chlorophyll, currents, and wind all executable in ArcMap!! BOOOOOOO YAAAAA!

Now its time to run a couple of analyses to demonstrate what can be done with these data and prep like a madman for the presentation and paper. I cant believe this internship is virtually over. There is still much to be done next week and in a very short period of time, but thats what sets true scientists apart. Good luck everyone on finishing up and I look forward to seeing all of your presentations.

Posted by [jadelaars](#) at Aug 10, 2012.

I seem to get the most work done on "off" Fridays...also, I figured out why I was going a bit stir-crazy yesterday. I just needed a good sound track to keep me going! Listening to Enya and Saint-Saens right now.

Geraldine, they advertise Jelly Watch at the end of the Jellies auditorium show, so they should definitely advertise the facebook page at the end of the MoD show 😊

I agree with Sam on the lots-of-work-to-do-still thread...
And thanks, George, for organizing a great BTS tour!

Posted by [adjunaedi](#) at Aug 10, 2012.

Diane, you can make one more post on Confluence if you would be happy with that. :-p By the way, it is so sad that my MBARI internship is almost coming to an end, but I would gladly face the fact that this is my LAST Confluence update.

This coming week is the last week of my MBARI Summer internship. Now, I am working on my slides and paper report, but also still trying to develop an idea for my project. I've spent too much time to figure out why our model doesn't work the way we think it's supposed to. After 2~3 week investigation, we found some of our data was corrupted (bad tidal frequency), and some part of the code was not able to handle NaNs in an appropriate way. It took so long to figure that out, but now it looks like it works. Hopefully, I can use this algorithm for my next field experiment in 2013! Apart from that, me and my mentors also tried to develop some ideas for evaluating ocean currents prediction in terms of autonomous underwater vehicle navigation. We've already come up with something, but I still don't think this is the right moment to wrap it up. I need more time... 😞

Posted by [dchang](#) at Aug 11, 2012.

I had a freakout on Thursday when I realized I did not use the right equations for calculating u-v wind components. (I had switched the sines and cosines.) I thought this meant that all my CO2 flux calculations were wrong and that I needed to remake all my wind vector figures as well. Luckily, this was not the case, as I left out the negative signs as well. My equations were essentially equivalent. Sometimes, stupidity is harmless, when luck is on your side.

On Friday I worked more with the CO2 drawdown models and tested various scenarios at several stations in the bay. I looked at how long it would take the outer bay and offshore waters to decay down to the low pCO2 levels (~200 ppm) seen in the inner bay, where productivity is high. The analysis gave some interesting preliminary results about the fate of the high pCO2 upwelled waters. You will need to see in my presentation...

Today (Sunday) I am putting together my PowerPoint slides after selecting all the figures I want to present on. I hope to finish a rough draft of the slides today and start working on the paper tomorrow. Good luck to everyone on finishing things up, and thank you to George and Linda for taking such good care of us this summer!

Posted by [mfong](#) at Aug 12, 2012.

Week 9?
You must be kidding!
Oh noooo!

This is not really our last Confluence post, is it? I thought we had one more!
I refuse to say, "Goodbye" to you wonderful people. I just won't do it.

I am feeling a bit nervous as we head into Week 10, as I am way behind schedule, and pushing to catch up! My project has felt very much like a roller coaster ride, with a series of ups-and-downs for the last couple of weeks, and it sounds like this has been true for other interns.

One of the, "ups" of Week 9, was that one of my mentor's researchers, (Julie), submitted an abstract to the upcoming AGU meetings. She charitably put my name on the poster, which was very nice of her. I am so happy to see that Francisco has written an abstract for this conference as well! Does this mean you will be back in December to present your poster? I hope so, as I will be there for at least part of the conference, and would love to see you!

The night at the MBA was so great! It was really cool to see George in action with his kelp forest dive program, and the behind-the-scenes tour was a once-in-a-lifetime look at the MBA!
Thank you so much, George!

I also want to thank Sam for her help organizing this event!

It was great to meet with the NASA/Ames interns, and hear their stories!

I agree with Diane, in that it has been awesome to get practice talking to people in the Pacific Forum (Pac Fo' (:>)).

I will be happy if I do not pass out on the little stage on Wednesday...

I really cannot believe our internship experience will end this Friday! I think that we would have done well with a 15-week internship! Okay, well, 12 is realistic, right?

In any case, ten weeks was just waaaaay too short!

It sounds like everyone is turning the corner into the home stretch with their projects!

I wish you all the best, and I look forward to your presentations!

See you soon!

-Patti

Posted by [pclark](#) at Aug 12, 2012.

Late again... sorry.

Last week I mostly worked on writing various commands that could be inputted serially (either through HyperTerminal on a PC, or from the CPU board itself) to perform various functions on the LVLS board. Some of these included: setting the threshold for over current, over voltage, and under voltage conditions, turning the relay on and off, and resetting the circuit breakers. I also had to rewrite some code for the digital potentiometers to make them write to non-volatile memory instead of the volatile memory (that way settings are saved even when the device is turned off).

I played around with the serial commands for a while and tried to figure out the logic of how the board would react to various conditions. While playing around, I discovered a problem in the design of the circuitry (not my fault! lol). I fried the potentiometer three separate times trying to figure out what was going on. Apparently when I closed the relay, too much current was flowing back to the potentiometer (something to do with a built in RC time constant that is adjusted by the potentiometer... I'm not a hardware person so bear with me). Chad suggested that until the hardware is fixed (probably not until after I leave) that I just use lower voltages (under 7 volts) and keep that potentiometer's wiper set to full scale to prevent any more mishaps.

Now, I have to finish the very last part – software handling the various conditions. My thought was to enable the I/O expanders interrupt-on-change capability, which generates a pulse to the microcontroller every time one of the OC, OV, or UV pins changes state. Then, an interrupt would be generated on the microcontroller, which would then immediately handle the situation. HOW the situation will be handled remains to be seen, as the logic still has me a bit perplexed. We shall see.

Posted by [jperotti](#) at Aug 13, 2012.

And I'm late again...sorry guys. Well we're in our last week now, I can't believe it! Last week was all about finishing up small tasks that could be done quickly, including adding a map to let people see the boundaries of the different zones annotations are placed in. Once more zones are added, this feature will be very useful to people who don't work here and therefore don't know exactly where our ships go. I've been working on the presentation as well, of course, and today will be about taking screen recordings of the functions of the DSG for the presentation. And doing some work on the paper too. Then tomorrow will be all about practicing for the presentation!

Once again, the ten weeks was too short! I am certainly going to miss everyone here at MBARI a lot, but I'm sure I'll be back to visit!

Posted by [ecurles](#) at Aug 13, 2012.

Well I guess Brandon still has me beat 😊

Last week I finalized the model to be physically tested at NPS. The model was sent out on Thursday to be rapid prototyped, they should have it finished up today and shipped. With any luck it will be here for the Wednesday presentation. After sending that model out I started going back through the older model versions and generating HD renders for the presentation. At this point I have most of the geometry

renders but still have to do the CFD renders. Unfortunately this seems to have surpassed the limits of both my computers. Each orbital render takes about 6hrs assuming the program doesn't crash... Other than that I've been working on my presentation.

Posted by [jtucker](#) at Aug 13, 2012.

11-August-2011

This page last changed on Jun 06, 2012 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.

12-July-2012

This page last changed on Jul 12, 2012 by [jadelaars](#).

Halfway point!

Comments

This week consisted of more hurdles and more victories. After creating 3-day composites of the HF radar derived u and v components of sea surface currents last week, I was tasked with getting them all into raster format. I spent the first two days monkeying around with writing the Matlab arrays into ArcGRIDs but they would not line up correctly with the CA coast. After hours spent troubleshooting I figured out that this particular grid has rectangular cells, which is a no-no for the ArcGRID format. So I had to reluctantly revert back to GeoTiff formats, which are often clunky in ArcMap. The GeoTiffs exported correctly and the layers lined up perfectly with the CA coast. Victory! I spent the remainder of yesterday creating a model to tune the layers so they behave the way i want in ArcMap. Now im off and running again! Victory! Today will be spent playing with the layers in ArcMap and figuring out the best way to display sea surface current.

Once these layers are finished my final dataset to convert will be COAMPS Wind data. This dataset will be my toughest challenge, according to the CeNCOOS Matlab guru.

The big highlight of the week was the tour of the Western Flyer! I've been on several ROV cruises, on much smaller vessels; including the fishing vessel Donna Kathleen (docked next to R/V Zephyr). Our control room fit 3 people (pilot, navigator, photo-taker), shoulder to shoulder, on a single bench a half meter away from the displays. The Dock Ricketts control room was everything I dreamed it would be and more! The pilots/copilots "thrones" were soooooo cool. And the controls for the robotic arms were awesome! Great set-up!

Kayaking was a blast too. Michael is a paddling machine! I pretty much let him do all the paddling and I just steered, and the guide kept telling us to slow down.

Posted by [jadelaars](#) at Jul 12, 2012.

It's been another fast week!

On Monday we all experienced the Elkhorn Slough on kayaks. Amazing! Our guides were very knowledgeable about the animals and history of the slough. My favorite experience of the week was having an otter and her pup pop up right next to my kayak. In addition to otters we also saw harbor seals, sea lions, white pelicans, cormorants, and other birds.

A couple other interns and I went to the documentary "Green Fire" hosted by the MBA on Tuesday. The film is about Aldo Leopold and his idea of a land ethic, which I found, can also be applied to the ocean.

As for work, the pace has really started to pick up as now I have just two weeks left. Most of this week has been spent working on a way to organize the data I've already collected. Using Google Refine and a script that Lonny made, I've been able to successfully get a sum of populations per size class for each type of coral, per dive. Now off to annotate more Davidson Seamount videos.

Happy Thufriday!

Posted by [ebyer](#) at Jul 12, 2012.

This week I worked on analyzing CTD data collected from the Fulmar cruise. I made a bunch of TS plots and compared it to those generated with the wave glider data. The comparison will allow me to get an idea of how the surface is mixing and also the source of the water masses. From the CTD data, I found that the upwelled water is coming from about 50 m.

Posted by [mfong](#) at Jul 12, 2012.

Hello and goodbye Week 5! This past week I have really felt like there are not enough hours in the day to get everything done, but maybe part of that is anticipating next week's business. Last Thursday I went to MLML and picked up books on programming, Matlab style, modeling, phytoplankton pigments, and correlation and spectral analysis for engineering. Needless to say, I want to read through all of

these right now, but have only really worked into two of these books. It was a productive move to pick up those books, because I find myself getting caught up in the codes within my scripts and don't feel like I'm getting very far with them. I also had the brilliant idea to look into chl/fluorescence analysis via satellite oceanography and remote sensing, mostly to see how those instruments work and take measurements and to see how they compare with our LISST instrument. I had a business call with my father (meteorologist at Goddard) and he suggested what I had already considered - that exploring the satellite oceanography ocean color data analysis techniques is beneficial for accounting for the multitude of variables in an in-situ study. The big component of satellite oceanography is accounting for the atmosphere, and to a lesser extent upwelling radiance. I really got to thinking about considering the atmospheric physics and dynamics that can contribute to bloom events, though I don't know how much of that I will have time to include in my summer project, especially given that the AUVs sample at depth at not only in the surface waters. Anyway, I have made some headway in my Matlab techniques, thanks in part to Dorota and Dongsik, but still feel like I have a long way to go to effectively describe which combination of LISST channels can serve as a surrogate for chl/fluor measurements.

Jason - who is the CeNCOOS Matlab guru? Is it Jenn Patterson? I'd like to meet this person, as I will be back to CeNCOOS work this fall.

Michael - I'd love to see the plots/script where you determined the origin of the upwelled water.

Posted by [dwyse](#) at Jul 12, 2012.

Diane - its Fred Bahr. He's been here the longest.

Michael - I'd like to see your upwelling info too!

Posted by [jadelaaars](#) at Jul 12, 2012.

This week has been a busy one for Brian, talking to a bunch of people in IS and working on the security for the external server we will be hosting the DSG on. It's been less busy for me. I've mostly been working on getting the code production ready and making sure everything works on the "external" dsg (it's exactly the same as what's going to be external once we make sure all errors are fixed and that the web and data base sides of things are functioning as expected). I'm very excited for it to truly be made external!

Posted by [ecurles](#) at Jul 12, 2012.

I feel like writing on confluence every day!!! That is freeky!

So here I finally start to find my way through the tones of Facebook metrics. I now know how I want to analyze them in a quantitative way. We decided what parameter to test and which one will not. We will measure the impact of 7 different kind of posts posted in the morning or in the afternoon which means 14 combos. We need at least $n=6$ for each combos so I will need about 16 weeks!! So I am staying here a bit longer (I wish). No but I will keep collecting data after the end of the internship and hopefully have the data I need to present my master in December. I will also do a qualitative analysis of the content of the comments.

I came up with a spread sheet that everyone in ITD can check to coordinate the post on Facebook and to make sure it stays relevant with new release on the website or major MBARI event. So this will hopefully help to have a better social media coordination at MBARI.

I am also working on define clear social media goals based on the MBARI strategic plan. Only with a clear goal we could evaluate if we reach our objectives or not.

We have been increasingly active on Twitter and I believe it has had an important impact but I need to find some ways to get our Twitter metrics and it is not an easy task...

And last but not least, tomorrow I will start my very first cruise!!! So excited, and also a bit afraid to be sea such but Brandon gave me a lot of advices and I will make sure I follow them.

Jason lent me a book about social media and I am taking it onboard, I am very looking forward to reading it!

Apart from that, very nice interns activities this week with kayaking and visit of the WF. My family is having a blast here and my daughter loved painting cups that will go under water. She is now asking us all kind of weird questions about "what happens if I send a table/a biscuit/my ukulele under water?" Life

is good here!! 😊

Posted by [gfauville](#) at Jul 12, 2012.

Let me start by saying that I hate that this is the end of week 5! This is going way too quickly for my liking. Does anyone know how to slow down time? That'd be helpful 😊

Anyway, this week has been very productive for my project. We've put together the files to test for self consistency with the LISST-HOLO images, so that's one BIG task out of the way (no more staring my eyes seeing what kind of diatom is on the screen, now that'll be someone else's job 😊). Also, I'm finally going through the Nanomia videos and the Holothurian videos are being processed for a 3rd time to make sure they get EVERYTHING!

Things are going really well 😊 We're hoping that next week, by the latest on Wednesday, we'll be starting the testing of everything. So YAY!

I realized that this project is extremely ambitious.... Danelle kind of put it into perspective that the amount of data I've been processing is usually done in a span of a few months... and I've done most of it in a few weeks. Whaaa! Go me! 😊

Other than my project, this week has been pretty decent. House sitting for Craig Dawes has been really fun. Taking care of these animals is easy as pie and I'm really enjoying the television 😊 (missed my fix of awful tv shows!) But I am definitely missing my roomies and living at CSUMB... not the same without them 😊

Posted by [speterson](#) at Jul 12, 2012.

Wow... There is a surplus of smilies in that ^^ ^^ oops.....

Posted by [speterson](#) at Jul 12, 2012.

Whew, let's see. I didn't have any data collection to do this week and all of the preliminary processing of the spectra I had collected was done, so I've entered some unfamiliar territory.

I've been playing around with MATLAB to import and plot my data, deciding on the most effective way to present the findings. Since I have very little experience with the program, it's taken some time to get used to, but I've been able to make good progress, I think. I've also been helping one of my mentors write a code to convert a series from the dataset we have from CO2 pressure to dissolved CO2 concentration. This sounded simple enough to all of us at first - we thought we just needed to look up one constant and then plug everything into a simple formula, but it turns out that our solubility system is more complex than that. And, since we are working at very high pressures, a few of the equations need to be modified. So it's actually involved tracking down papers with a lot of math that I vaguely remember how to do in them, deciphering the equations and the meaning of their coefficients, and taking what we need to put into the program. We're slowly getting there.

And this morning, for a change of pace, I got to go observe/work in the machine shop to help make a part we need to attach to the Raman instrument for a new method of deep sea spectral data collection. Definitely out of my area of expertise, but it was fun to see the other side of the work my group does and to get some experience using the machinery.

Kayaking on Monday: lovely. So was the tour of the Flyer. I'm excited about all the activities coming up next week!

Posted by [agallagher](#) at Jul 12, 2012.

My 5th confluence! Reading my co-interns' confluence has been so much fun, and looks like everyone's

work is well sorted out and progressing. My work is going smoothly too. 😊 Let me check where I left last week... Okay. This week, I successfully(???) trained a prediction model using EOFs I generated last week and did quality controls on the outputs. But, somehow the outputs looked not right, and my mentor and I agreed that the units of the water velocity in the data he used and my data are different. So, I need to change the codes so it can convert the water velocity unit in my data to agree with the one he used. Hope this solves the problem. To verify the prediction outputs, my mentor ran drifter simulations, but this time we are planning to do something different. I suggested running a station keeping marine vehicle this time, and my mentor liked the idea. Later, I am actually planning to integrate the dynamics of the glider

into this simulation, but for now we will go simple with a ideal perfect vehicle. Hope this idea turns out cool later.

Posted by [dchang](#) at Jul 12, 2012.

What??? Again confluence?? Ok, let's go ...

Funny activities

Kayaking -> Was very very fun, with all the otters, seals, ... and so close to the kayak.
Tour WF -> It's incredible that a ship has been built around a ROV. Now I understand how they could record the awesome video that we can watch at the lobby. I really enjoyed it a lot, and was one of the thing that I wanted to do during my time at MBARI.

Work

During this week Michael and me had a meeting with Francisco Chavez to explain our idea. He likes the idea to work together but the time it's running fast and we have too much to do, so I don't know how it will end. My mentor still is on Holiday and will come back the Open House day. Now I am working with Brian Schlining. He have a lot of experience with Matlab and developing open source project, so he gave me very good advices about how to organize my code and my project. Now I am organizing my code and starting to look for a way in Matlab to get the value of a point in the middle of a 3D Mesh.

Posted by [flopez](#) at Jul 12, 2012.

Haha! What a week. All I can say is there is no sweeter sound that that of a relay clicking after many hours of frustrating silence. Any other programmer who is reading this knows what I mean...

It took quite a bit of blood, sweat, and tears getting to this point, though. On Monday, I was still having difficulty getting any SPI clock or data out of the PIC. Well, after many hours of probing the hardware and software for problems, Chad and I decided to call it a day. Not a very encouraging way to end a Monday, no less. However, Tuesday morning provided us with an important breakthrough. Despite having looked over my code probably a thousand times, I decided that I would check (again) to see if I had set up the re-programmable pins associated with the SPI2 bus correctly. Surprise! I had actually configured the re-programmable pins for the SPI1 module, instead of the SPI2 module (which is the one I was using). Finally, I was able to get clock pulses and data out of the MOSI (master out, slave in) line. Joy of all joys!

Unfortunately, that wasn't the last of my problems. The digital I/O expander, which is the device I was trying to talk to, wasn't responding when polled for data through the MISO (master in, slave out) line. This meant 1 of 2 things; either I wasn't "talking" to the I/O expander in the way it was expecting, or I still had issues with my SPI2 configuration. Yesterday, Chad and I (once again) went through my code, the hardware, and the I/O expander's datasheet... nothing. I even searched the Microchip forums for any discussion about this particular I/O expander, but was unable to glean anything useful... other than a link to some example code, written by Microchip engineers, for a demo board that used this part. This code did reaffirm that I was formatting my read/write commands properly (at least for normal reads of the GPIO registers, which control/tell me the state of all the I/Os of the device). However, when it came to setting up the various control registers, I was still lost, because the example code set up the chip to work in a different way from what I wanted. Also, the datasheet for the I/O expander just plain sucks!!! Whoever wrote it made it extremely unclear about the way in which we were supposed to set up control registers (not to mention the fact that they placed more focus on the I2C version of the chip instead of the SPI version). Sadface.

So, much of yesterday and today was spent trying to work out these last few kinks (thankfully it was only a few). One thing that the demo code did for me was figure out an issue in the way I configured the SPI2 module's clock. I had the CKE bit set low in the SPI2 control register, which means that the output data changed on transition from idle clock state to active clock state. I actually needed this to be the other way around. After setting this bit high, I was finally able to perform reads on the I/O expander! However, despite being able to read from various other registers, I still couldn't read from the GPIO registers (the most important ones).

I have to stop here just to give a shout out to engineer Brian Kieft. Since Chad is away on vacation, he has been the one helping me work out the problems in my code. He had the brilliant realization that helped me fix this last problem. This I/O expander chip has two different banks of I/Os - GPIOA, and GPIOB. However, by default these registers are mirrored together; in other words, they are logically "ORed" together. For my application, I need these two registers to not be mirrored, since each of them have different functions. However, when you have the registers mirrored, their addressing system

changes from when they aren't mirrored. It turns out that I have to initially configure the chip using the mirrored addresses, instead of the non-mirrored addresses, even though I'm simultaneously telling the chip not to be mirrored (ok, that was a mouthful, but it really was that confusing). So, after many hours of frustration, I was FINALLY able to read the values on the GPIO registers! Huzzah!

So... that is why I waited so long to update confluence. I wanted to wait and see if I could give you all a positive update... which finally, I have. 😊

Posted by [jperotti](#) at Jul 12, 2012.

This week was spent mostly doing more CFD. Due to XFLR5's limited capabilities in modeling double curved surfaces, I'm forced to use a more complete CFD package. This is a bit of a bummer since this literally takes 100-1000 times longer to run a simulation to convergence. I think I'm now up to speed on Autodesk's Simulation CFD software for single trials. I was able to get a couple test designs inputted and back out lift and drag coefficients. I'm not entirely sure if my boundary condition for the bottom wall of the simulation is correct for modeling ground effects. I need to do some more reading on this. I also still need to learn how to integrate my Solidworks CAD model with the CFD software to automatically optimize the configuration of key geometry values. If all goes well I should be able let the system chug away on a few batches while I'm on the boat next Tuesday. Lots to do in the next couple of weeks!

Also started working on open house stuff figuring out replacement shaft adapters for the BYO ROV booth.

Posted by [jtucker](#) at Jul 12, 2012.

Not enough time to do all the work that needs to be done, and the setbacks have been a bit frustrating...transferring copepods with a cat whisker is a painstaking task! I'll be depleting my copepod culture further as I filter them to use with water samples collected south(-east-ish) of M1.

However, kayaking was great with my personal bird ID-er Patti :) and the tour of the Flyer was a definite highlight. I also visited cube-land today and had mint cookies at Poseidon's Fortress (??), thanks to Diane.

I have a lot of water to process, lots of pictures to analyze, and am getting ready to collect more water next week on Tuesday. With the intern BBQ Wednesday and Thursday's outreach, it will definitely be a busy week.

Posted by [adjunaedi](#) at Jul 12, 2012.

Hi Everyone!

It was another incredible week at MBARI, wasn't it?

Monday's kayaking trip on the Elkhorn Slough was fantastic! It was so beautiful out there, and so much wildlife to see! Audrey was an impressive, double-kayaker, who kept me in line! It was fun to be out there as a group!

The tour of the Western Flyer was another highlight of the week. It was so cool to see the control room, as I have been viewing and listening to a lot of audio/video of the ROV dives in the Gulf of California. It must have been so great on be on that cruise! I loved the way that Linda showed us the vessel as she told us about life aboard an oceanographic cruise. She is obviously optimistic about all of us experiencing such a voyage someday!

I want to wish a Bon Voyage to Geraldine, who will be going to sea tomorrow! Have a GREAT time out there! Fair winds and following seas!

I am really looking forward to the day cruise aboard the Fulmar on Tuesday! Thank you for arranging this, Linda and George!

This week, I also worked on a video loop for the Open House, and made some headway on my project, but time went waaaay too quickly!

I can't believe that we have reached the halfway point of our internship! I really can't, and to be perfectly honest, I am starting to feel little bit concerned about my project. I am going to come in on Sunday, and try to make some headway!

See you next week, everyone!

-Patti

Posted by [pclark](#) at Jul 13, 2012.

So I am definitely last this time...

Week 5: Another short one. Kayaking on Monday was a blast! There is so much to appreciate. Tuesday I went out to sea, again! As of Sunday, the PowerBuoy had stopped producing the amount of energy it should be, given the wave conditions. When we retrieved the system we learned that the bridle attaching the submerged plate to the tether line had snapped. The plate was hanging in a vertical orientation, instead of being in the horizontal orientation it should be in, to provide adequate resistance and thus drive the piston and turn the generator. So we recovered the whole system, and brought it back to MBARI. Further tensile strength and fatigue tests to ensue. The rest of the week I spent working on SolidWorks and MATLAB, making and testing the new fill in pieces for the submerged plate.

Posted by [pcorrbarberis](#) at Jul 16, 2012.

14-July-2011

This page last changed on Jun 06, 2012 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 13, 2012 by [linda](#).

I am testing this

Comments

My first few days have been spent mostly on getting acquainted with everything I'll be doing for the next ten weeks. I've been reading papers related to my project with Peter Brewer and his fellow researchers, Peters Walz and Ed Pelzter - some are broad overviews, while others discuss small details of the methods I'll be using in lab. I've also been learning how to set up, calibrate, and run the laser Raman spectrometer, which is the instrument that I'll be using to study the chemistry that goes on in the deep ocean (carbon dioxide and methane being primary focuses). And finally, I've started to learn how to use MATLAB... no major issues with it yet so I can't complain!

It's been a good first week (hasn't it flown by?!), hope you all agree.

Posted by [agallagher](#) at Jun 13, 2012.

I've jumped right into lab work, spending a lot of time with my mentor to go through the procedures I'll be using for my project. So far, I've prepared reagents and plates for the lab work we'll be doing in the future. I have enjoyed meeting with MBARI staff (sometimes, as I get lost in the hallways...), and am excited about learning/contributing along with our awesome group of interns!

Posted by [adjunaedi](#) at Jun 13, 2012.

I am working with Francisco Chavez and Gernot Friederich, analyzing the carbon chemistry datasets from the mooring stations in the Monterey Bay as well as from the wave gliders. The long-term mooring stations have collected an extensive amount of data over the last twenty years on pH, air/sea pCO₂, dissolved oxygen, temperature, and salinity to name a few. This week, I worked with a small two week dataset from one of the wave gliders and got familiar with how to use standard oceanographic packages like CO₂SYN and the Gibbs Seawater Toolbox for calculating carbon system and thermodynamic parameters in seawater.

Posted by [mfong](#) at Jun 13, 2012.

This first week has been a load of information to process and it's been fun so far. I started developing my project premise this week with Danelle Cline. We've decided to do a comparison of human and computer program's abilities to identify specific organisms within the video's taken over the last 20-some years. I've been reading background papers on comparable papers studying plankton identification as well as playing with the VARS identification library. Other than my project research, I've been slowly getting accustomed to using a Mac and finding my way around Canyon Head and the MBARI buildings. I've been enjoying meeting my neighbors around my cubicle and loving the never ending supply of coffee. Excited for this 1st 3-day weekend that we have and looking forward to the activities we have planned for the upcoming weeks.

Posted by [speterson](#) at Jun 14, 2012.

This first week has been really cool. Orientation was great, I was especially impressed that we stayed on time for everything and at the end of the day I felt like I could figure out my way around (by week 3 or 4). I met with my mentor the first day and we discussed project ideas with Yanwu Zhang and Sergey Frolov. I may be developing a project similar to what one of my former labmates at MLML worked on during her time at MBARI. Since then I met with Dorota Kolberg to discuss programming, and we mostly looked at CTD and UDAS data sets, though we also looked briefly at some AUV data. We also talked Matlab script and data presentation techniques, which was kind of fun because I had one of those moments where you realize you know a lot more about something than you originally thought you did.

I still think I have a lot to learn, so I'm happy for that opportunity. I think it's super cool and a little intimidating that AUV data files are massive. I'm really excited to start working with the data so I can ask questions of it to see what we can say about bloom and nutrient dynamics via the available physical

oceanographic data. I'm also looking forward to applying the data analysis skills I've learned at MLML during the past two semesters and becoming a Matlab wizard by the end of the summer. The rest of my time this week I have been reading papers related to AUV mechanics and data analysis and better familiarizing myself with the facilities and operations at MBARI.

Posted by [dwyse](#) at Jun 14, 2012.

This first week has been just fantastic with a lot to process (in term of information and food!). I met most of the members of the communication team and I settled down nicely in my office. Our first big meeting will be next Wednesday so in the meantime I am preparing this meeting. So I first drafted a timeline of this project:

1. Evaluate the MBARI social media situation today (pre-evaluation)
2. Clearly define MBARI SM goals
3. Design strategies fitting our goals
4. Apply the strategies
5. Re-evaluate the MBARI social media situation (post-evaluation)
6. Compare pre and post-evaluation to see if our strategies helped to reach our goals
7. Conclusion, recommendation, future direction

This timeline should be applied for the 4 social media used today by MBARI (Facebook, Twitter, Youtube and Tumblr).

Then I started evaluating the situation of each social media. I started with Facebook and dove into all their metrics and try to understand their meanings and focus on the ones that seem the most important and significant to me. I am now doing the same for Twitter but since Twitter is providing very few metrics and I looking at additional applications providing those statistics for Twitter account. I also found websites providing advises concerning the use of social media for non-profit (still need to read most of them) to give us some direction for our future strategies. I also thought about different strategies that I would like to test on different social media.

So in a nutshell, an intense and exciting first week, can't wait for the second to start!

Posted by [gfauville](#) at Jun 14, 2012.

I've accomplished alot in these first four days. Most of my time is spent working on mounting various equipment to the top surface of the buoy. This serves two purposes: 1) allowing me to re-familiarize myself with Solidworks and various machining equipment, and 2) preparing the PowerBuoy for presentation to the Board of Directors on Tuesday. I am particularly excited for deployment, the week after next. There is also much to accomplish before then. I have been assigned my own project, but have yet to start on it. My task is to design and then construct an acoustically triggered recovery system for the heaviest and most cumbersome component of the PowerBuoy; the 18' x 10' steel plate sitting 55 meters below the ocean surface. Seems challenging enough.

Posted by [pcorrbarberis](#) at Jun 14, 2012.

First of all, I would like to thank George and Linda for helping us have a very smooth startup. This first week has been fabulous with wonderful work environment at MBARI and our awesome group of interns. I have two mentors: Jim Bellingham and Sergey Frolov, and I am primarily working with Sergey. He's moved to NRL, so I might not be able to see him in person very often. But, we've been having a daily meeting on the phone so far, which is great and has been working out so well. Sergey developed an algorithm of surface flow velocity prediction based on historic HF Radar data and tested using the data collected at Monterey Bay. I brought a 5 year long HF Radar dataset for the ocean off the coast of Georgia, which was collected by Skidaway Institute of Oceanography. So, we are trying to figure out whether the data I have can be used to apply his algorithm. Currently, I am working on visualization of the data using MATLAB and also reading his paper. Hopefully things work out well so the transition to the next step can be smooth. We will eventually aim at running the prediction algorithm inside autonomous underwater vehicles.

Posted by [dchang](#) at Jun 14, 2012.

This has been quite a busy week, I like busy! Between orientation, settling into my office, and getting started on my project there hasn't been a dull moment. Orientation day was a blast... and filling! I look forward to the social events put on by the MBARI employees (cookie breaks, BBQs, etc) and getting to know my fellow interns. I am working with Leslie Rosenfeld in the CeNCOOS lab. I spent most of this

week getting familiar with my workspace, updating the computer, and reviewing literature pertaining to my project. We also had a meeting with Scott Hamilton (MLML) to discuss data sources and the utility of my project. My project goal is to aggregate historical time-series oceanographic data (sea surface temp, HF radar, chlorophyll, COAMPS) into 1-3 day averages and make them available for analysis in GIS. The scope of this project is the offshore area of the entire California coast! The products will serve as new variables for ecologists in evaluating factors that influence the distributions of marine animals. The challenge will be learning MATLAB so that I can create the bridge between oceanographic and ecological analyses. There is a lot to do in the remaining 9 weeks!

Posted by [jadelaars](#) at Jun 14, 2012.

I have had a great week so far. Thank you to Linda, George, Chad, and the other interns for making me feel so welcomed!

When I first arrived at MBARI, my project goals weren't entirely clear. I knew I would be working on something to do with the software and electrical systems on the swFOCE (Shallow Water Free Ocean Carbon Enrichment Experiment). This week, my mentor (Chad Kechy) and I decided on my specific focus for the project, which is to develop software for the swFOCE's Low Voltage Load Switcher. In a nutshell, this device prevents its accompanying scientific instrument from destroying itself by pulling too much current or being supplied with too little voltage. It also interfaces with the swFOCE's ground fault detection board, which detects low-impedance paths to sea water in the case of a pressure housing leak.

Most of my time this week has been spent familiarizing myself with the swFOCE's existing hardware and software. This includes other boards in the system, including the CPU board (which consolidates data from the chassis boards and sends it to the FOCE stack) and the environmental board (a daughter board which monitors pressure, temperature, humidity, etc. inside the housing). It is important for me to learn how these boards were originally designed to interface. The load switcher will communicate with the CPU in a manner similar to that of the environmental board. Therefore, I am modeling the load switcher's software after that of the environmental board, since it has already been written and tested.

I've also been familiarizing myself with the individual components of the load switcher. Most importantly, this includes the microcontroller that serves as the "brain" of the board – the PIC24FJ256GA106. I spent much of the day yesterday and Tuesday reading the PIC24FJ256GA106's datasheet, as well as the datasheets of some of the other important components (the I/O expanders, digital potentiometers, and analog-to-digital converters). I've also been looking over other documentation related to the board, such as previous interns' papers and electrical schematics.

This morning, I have been working on installing the compiler and IDE I will be using to write the board's software. After the developer and compiler are set up, I will begin looking at the code written for the environmental board in more detail. I may have to wait a while before I can begin coding for the load switcher, because the programmer (an ICD 3) that Chad ordered for me is still in the mail. For now, I will be kept quite busy just trying to decipher the code that the previous intern wrote for the environmental board.

That's about it! Thanks again to everyone who has made my first week such a great one!

Posted by [jperotti](#) at Jun 14, 2012.

Sorry to write it a little late.

This first short week has been incredible. The people so friendly and the other internship so lovely. Excuse me if sometime I don't understand what are you talking about.

I work with my Mike Mccann. My project have two parts, the first one is work with the STOQS system (Spatial Temporal Oceanographic Query System) and the other one is compare two outputs from the Monterey Bay ROMS model, one from JPL and another from USCS.

I am very glad to be here and to work during two month and a half in a place so unique as MBARI.

Posted by [flopez](#) at Jun 14, 2012.

This week was mainly spent finishing a couple things from last month because we are going to have our big video lab meeting next Tuesday to discuss what new things I will do this summer. I worked on the data quality page of the Deep Sea Guide that I will be spending the first couple weeks finishing. This page is really only relevant to the video lab, so it won't be available externally. We discussed possibly making the Deep Sea Guide external this summer, which would be amazing! I had my final yesterday morning, which is why I'm late, sorry about that!

Posted by [ecurles](#) at Jun 15, 2012.

I want to apologize for being late with this post:

WOW! What an incredible week!

I am so excited to be participating in this internship with all of you, incredible people!

I still cannot believe that I am here at all!

My mentors in the Geology (Submarine Volcanism) lab are amazing! Dr. David Clague and his team: Jenny Paduan, Julie Martin, and Ryan Portner, have made me feel at-home in their labs, and have already showed and taught me so much! It is an honor to have such great mentors!

Dr. Clague had to leave town for a couple of days, but his team introduced me to the new seafloor data collected during the Western Flyers's recent expedition to the Gulf of California. The expedition involved a detailed sampling of the Alarcon Ridge and Seamount, as a new hydrothermal vent community was discovered there on this voyage!

Jenny and Julie gave me tutorials and introductions to the incredible seafloor map images of the Alarcon Ridge that they created GIS. Julie showed me how to grab images from the video footage from the ROV dives. Ryan showed me a few of the plunge cores taken of the seafloor sediment taken during the dives, and introduced to me to the descriptive process of the cores. He also showed me many of the rocks that were collected during the dives. Amazing!

This week consisted of seeing and doing things that were familiar, yet VERY different from my previous experiences!

I believe that my summer project will involve the utilization of the seafloor map images, photos, and rock samples to discern the two major types of basaltic flows of the Alarcon Ridge. I am so excited! We will narrow down the details of the project when I have a chance to meet with Dr. Clague again on Monday.

I want to take this moment to thank George and Linda for being such wonderful coordinators, and all MBARI personnel for such a warm welcome this week!

I look forward to seeing you all, on Monday morning!

-Patti

Posted by [pclark](#) at Jun 16, 2012.

Sorry for the late post:

Today I believe the method I will use for the remainder of the summer has finally been perfected. I am looking at corals in the Monterey Bay Canyon and on the Davidson Seamount: specifically primnoids, paragorgia, and isidids. I'm also looking at type of substrate the corals are adhered to and their size classes to help determine where are the areas of highest population density. After a slow start, I've learned how to use the VARS annotation and query systems and am now adding information and annotations that I will query later for physical data. It's super interesting being able to watch videos of the deep sea!

Thank you so much to Linda, George, Lonny, Nancy, all the interns, and all the MBARI staff for being amazingly supportive! I'm very excited about the rest of the summer.

Posted by [ebyer](#) at Jun 19, 2012.

15-July-2010

This page last changed on Jun 06, 2012 by [kgomes](#).

16-June-2011

This page last changed on Jun 06, 2012 by [kgomes](#).

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

17-June-2010

This page last changed on Jun 06, 2012 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 06, 2012 by [kgomes](#).

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01-July-2010

This page last changed on Jun 06, 2012 by [kgomes](#).

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19-July-2012

This page last changed on Jul 19, 2012 by [mage](#).

Comments

I just read the other Confluences from last week. Sorry for not getting to them earlier. Usually I read after posting, but as I was one of the earlier posts, I did not go back to check later. I will try to be better about it. Jason and Diane, you are welcome to stop by sometime if you want to see my plots.

Diane, I am interested in what you will be doing at CeNCOOS. Do tell me more!

At the end of last week, I met with my mentor to show him what I have done so far--mainly the analysis of the TS plots from the wave glider and the Fulmar CTD data. My next steps are to look at the effects of biological productivity versus gas exchange on CO₂ and O₂. I have made some plots of O₂ and sea pCO₂ versus salinity (the conservative tracer) with the z-variable as chlorophyll a or CO₂/O₂ flux. I have particularly interesting plot (CO₂ or O₂ versus salinity, the fluxes shown vertically as vectors) that shows that the waters are a strong CO₂ source to the atmosphere during upwelling events and a strong O₂ sink.

Last week, I attended another one of Steve Haddock's Python workshops. I'm really thankful that he takes time out of the week to provide us this valuable service. Although I may not have time to really learn Python this summer, it is good to be introduced to it.

This week I am working more with the Fulmar CTD data. I need to generate CTD profiles, then process the chlorophyll a data from bottle samples to compare with the fluorescence-derived chlorophyll a. Then hopefully by next week, I can get to comparing the Fulmar underway pCO₂ data with the wave glider pCO₂ data and also look at the pCO₂ time series from the M1. This May/June upwelling event had the highest pCO₂ seen thus far (1200 ppm).

One problem I had this week was generating the CTD profiles. It should be a simple enough task, but somehow there were no station labels in the data file I got. I had mistaken another field for the station label and generated a bunch of plots that were wrong. I spent a lot of time writing Matlab code to find all the unique lat/long, label them with a station ID, and then find how many repeated casts were done at each station. Then I wanted to plot the variables at each station for all the casts done at that station. Oh yea, and for upcast only. Some of the casts had both upcast/downcast, some only had one cast (not sure which direction). It was a challenge for me to sort through this mess. I didn't want to write sloppy code, but I ended up just doing what I knew would work. I ended up with a hideous code with too many for loops, but it got me what I wanted. Perhaps I need a lesson on Matlab style. Diane, if the references you are using are good, please direct me to them!

Anyway, I did enjoy the BBQ this week, and welcome back to Geraldine! I saw the Western Flyer return from my office.

Posted by [mfong](#) at Jul 18, 2012.

Going out on the Fulmar to grab more water samples was such a great experience. We even saw some humpback flukes and a Mola mola! Evelyn seems to have a good eye for spotting these kinds of things. I came back from the cruise, found that the fridge I was using had to be defrosted, and had to move all my samples into a fridge on the other side of the building on a different floor. I also spent the next morning mopping up water from the lab floor...oh well, these things happen...

As such, I have experienced some delays processing the water I've collected, but I'm hoping to freeze most/all of it today in preparation for later analysis. I am starting a sample log because with the number I am dealing with, I will probably forget details about the processing later...

Looking forward to outreach today.

Posted by [adjunaedi](#) at Jul 19, 2012.

I was handed my first defeat this week... and it came at the hands of ArcMap, which is a program I am very good at. Batch processing files through a model is easy when you only have one input; however when you have two inputs it's tricky. I spent a day spinning my wheels on this and then decided to just revert back to Matlab to run the process. If there is time toward the end of this internship I am going to

try and resolve this issue. I may be able to ask for help at the Monterey Region GIS User Group Meeting today, where I get to meet a well-known spatial ecologist and python programmer, Jason Roberts, from Duke University. He's designed the Marine Geospatial Ecology Tools that I became familiar with during my time in grad school. Some of those tools may be capable of assisting with my CeNCOOS project.

In spite of the defeat I managed to finish the HF radar dataset. Tomorrow I begin with COAMPS wind.

The BBQ was delicious and a ton of fun! Thanks to everyone for chipping in with all the work!

Posted by [jadelaaars](#) at Jul 19, 2012.

It's been a busy week, though I haven't spent too much time in lab. My mentors and I have started talking about how I should be wrapping up my project (eeeeeeek!), which I was a bit concerned about before the week began. We've come up with what seems like a doable plan, though, so I think everything should come together just fine. I have a few more lab experiments to run, but other than that I'll be shifting towards more data analysis and planning for my paper/presentation in the coming weeks.

I think the highlight of this week so far has been the Fulmar trip. It was awesome! Good weather + no seasickness + water sampling + gumby suits + many whales = successful day. Marguerite, our leader for the day, was really nice, energetic, and happy to answer all our questions. She was an MBARI intern in 2003, so it was interesting to hear how her career has evolved since then.

I also had a good time planning for (and eating at) the BBQ yesterday and I'm excited to do YWS volunteering just a little later today! Should be fun. Can't wait to hear all about the Flyer trip, Geraldine!

Posted by [agallagher](#) at Jul 19, 2012.

This week I was very busy making the BBQ budget work and I think it paid off - we did awesome! Everyone tells me they loved it and I've heard everyone is giving rave reviews. And with good reason - I couldn't believe how amazing it all tasted together! All the flavors meshed perfectly and the meat and veggies were perfectly done - hats off to George and Jason, our grillmasters! And thanks to everyone coming in in the morning to chop and prep everything.

Now it's back to programming but there's not too much to do until Brian gets back. I'm working on a page I was doing for the video lab before the focus shifted to pushing it external and adding in some stylistic code that can be used in the future when the nice formatting tools become available with CSS3.

I'm excited for Open House, the Aquarium tour, and our mentor BBQ - George always knows how to keep us busy in fun ways!

Posted by [ecurles](#) at Jul 19, 2012.

Hi everyone, I am back! I had one of the best weeks of my life. As you know it was my very first cruise and I pretty much didn't know what to expect. Everyone on board was just super nice with me, very adorable people!! The pilots are the best dudes ever! I received a Doc Ricketts T-shirt from one of the pilot himself!! They told me lots about MBARI, the boats, the ROVs and they even taught me how to play Call of Duty ?.

On a more professional side, the cruise was a midwater expedition and in a nutshell our main missions were:

- Hunting for deep-sea squids in general and vampire squid in particular. One of the aquarist from MBA was on board because the aquarium will open a cephalopod exhibit in 2014 and they would like to display some deep-sea species. So while we never saw a single Vampyroteuthis we did caught some Taonius, chirotheutis, Gonatus. They will stay at MBARI for now and hopefully survived... I will stay in touch with the aquarist to be updated about them. Hope they will be fine...
- We run 2 batches of Midwater Respirometre Sytem (MRS). So basically you have 8 chambers where you can measure gas concentration. You put a shrimp Sergestes similis in 6 of the 8 chambers (the 2 other are controls) and you hang the whole MRS on a mooring at about 200 meters depth for 24 hours and then the ROV comes back and picks up the MRS and analyzed the respirometry data. So you get some in situ data about respiration instead of running the experiment in the lab.
- Hunting for amphipods, sinkers and other species that scientistS will bring back in the lab for different kinds of experiments.

If you want to know what we did on a daily basis, just follow the link: <http://www.mbari.org/expeditions/Midwater2012/index.htm>

I was in charge of writing the logs and that was the best way for me to get to understand what they were doing, why, the timing of the day and everything! I really enjoy taking care of this part of the expedition. I also learnt how to annotate during the dive, which is very interesting, best way to remember species name!

Today I have so much to catch up with, it is scary and my main task seems to try to keep my brain awake and fight my dock rock. But this hard day is totally worth it!! I am sooo thankful for this amazing experience!!

Posted by [gfauville](#) at Jul 19, 2012.

This week has been a kind of test for me to see how much I can handle with this project. I came to the realization on Tuesday that, with the tasks that I took on, I wouldn't be done with this experiment before the internship ended. So, we have officially dropped nanomia processing and identification from the project and am now doing only holothurian and plankton identification. Phew!

So with that change in the project, I will be ready for my actual experiment by tomorrow and will probably be starting it then, depending upon my testers. Brandon and Jason are going to be participating in it and we're looking to see if John Ryan (who the LISST-HOLO images of the plankton belong to) would be willing to participate or someone in his lab because we need at least 3 experimenters to get a rounded data outcome.

Thank you to all of you that volunteered too! We're trying to use people that have had some kind of experience in identification to get a novice perspective so please don't be offended that I didn't choose

you 😊

So now I'm on track and ready to go and not feeling a huge amount of stress either. I've started writing my final paper (or at least thinking about it....) and my presentation (at least the outline....) so things are going well.

The BBQ yesterday was great. Good job Erica for pulling it all together at the end! And thank you George and Jason for your awesome grilling skills! Yummy 😊

I'm really excited and looking forward to the Open House this weekend. It's going to be so much fun!

Can't wait 😊

(p.s.: stinks that we only have 2 more confluences scheduled.... 😞)

Posted by [speterson](#) at Jul 19, 2012.

First off: what a great BBQ. Hats off to Erica for taking the reins on this operation and to Jason for being an awesome Grill Master.

As for work, I've made a lot of progress this week. All the SolidWorks Simulations have been completed, and I now know the optimal plate thickness and material, while still being as light as possible. I spent this morning getting quotes from different metal vendors, and will place an order today or tomorrow. I never would have guessed that metal plate would be so expensive... Once I have received the materials, I will be ready to assemble and test the new submerged plate, and be able to calculate its new drag coefficient. On the side, I did some work on the high load power converters, which also failed last deployment.

Can't wait for the Open House this weekend. I'm brining my family and girlfriend. Should be fun!

Posted by [pcorrbarberis](#) at Jul 19, 2012.

First of all, thanks Audrey for the compliment on my observational skills. The Fulmar cruise on Tuesday was really amazing. Great weather, no sea-sickness, tons of whales, dolphins, clusters of jellies, and some mola mola. Everyone on the boat was really nice and very interesting.

On Wednesday, the intern BBQ was a huge success. Thanks to Erica for organizing it so well!

Thursday I volunteered for Young Women in Science which is an educational outreach program run by the Monterey Bay Aquarium. I got to hang out with some awesome girls, monitor sand crabs, and boogie

board on a beautiful beach. It was great to see that a lot of the girls were really excited about being there. One told me "I LOOOVE THIS! THE OCEAN IS AWESOME!"

Project wise, its crunch time. Next week is (sadly) my last week, so I'm trying to wrap things up and start on my presentation which will be next Thursday at 9am. The time has really flown by! I'm looking forward to the open house tomorrow.

Posted by [ebyer](#) at Jul 20, 2012.

Seems like I'm not the only one who didn't update yesterday... phew!

Anyways, this hasn't been the best week to make tons of progress, since I was sick on Monday, and much of my time on Tuesday and Wednesday was occupied with preparing for the BBQ... which was fantastic, btw. Kudos to Erica for a great job spearheading the effort! I only wish I had made more rice so that there would be leftovers...

I have managed to make some decent progress this week, however. Since making the digital I/O expander chips functional last Friday, I've been busy writing various functions/routines to service them. I created a new source file entitled "expander.c", which handles all operations to the expanders. I wrote functions for initialization, device reset, clearing the GPIO registers, simple reads, simple writes, setting individual bits high or low without changing the other bits, and an initialization routine which sets the I/Os to their default state (high or low) at the beginning of the program. This is the "fun stuff" involved in embedded programming, when you can focus on developing the overall structure of the software instead of spending hours just trying to make the damn device work.

I've also begun coding for the next set of devices on the board that I want to program: the digital potentiometers. They are important to the board's operation, because their settings affect when the circuitry triggers certain conditions (over current, over voltage, under voltage) on the scientific instruments. So far, I've written a simple function that resets them. Next, I am going to focus on making simple writes (again, via the SPI bus) to set the potentiometer to it's desired settings. Overall, good stuff.



Posted by [jperotti](#) at Jul 20, 2012.

Now, I have lesser time to stay at MBARI than the time I spent here. Feel like I should speed up my work progress!!! But, things don't always go my way. I've trained my prediction model using EOFs generated from a historic HF Radar data. Then, from the model I generated predicted sea surface currents. Everything looked good by then. To verify the outputs of the model, I simulated some drifters and virtual moorings, but the errors seem too big (we have some error metrics for the simulations). I haven't figured out what went wrong. My guess is either 1) the data over the training period are bad, or 2) I made some mistakes in the code. Or, it is also a possibility that this result I have might be the best I can get from my data. Ugh... I'm stuck now. 🤔 I'll try to figure this out, and hopefully it won't take long.

By the way, Happy 25th Anniversary, MBARI!

Posted by [dchang](#) at Jul 20, 2012.

The BBQ was awesome and I enjoyed it a lot, preparing all the things for it and eating all the very good meal. This week has been special, cause tomorrow my family comes, and I have been preparing the house, getting the car, buying groceries... the sad part is that I will not be here for the Open House, but sure that I will enjoyed a lot the pictures and the stories that you explain me on Monday.

At the beginning of the week my project wasn't working good, cause I have to do some changes in the STOQS code and it's quite difficult for someone new on python. But on Wednesday I figured out the way to do it and now all it's ok. The next week my mentor come back to MBARI and I am really excited to show him my progress. Yesterday I sent to a national congress in Spain the work that I am doing here, it's a small congress but I hope that they accepted the abstract. Thanks to Anna for the english correction.

I am really jealous of the people who has gone to the sea, they have a nice weather and watch a lot of

animals, and I only watched waves, waves and waves... 😊

Enjoy a lot tomorrow on the Open House.

Posted by [flopez](#) at Jul 20, 2012.

Yikes, busy week! First I want to echo the previous statements, going to sea was a lot of fun, and the BBQ was really tasty, good job team!

Unfortunately the automation for my CFD studies didn't go as smoothly as I hoped. Setting up the design study always takes longer than expected. I was able to get through a couple simulations of a preliminary blended body and finished up the CAD work on another wing morph design for the tandem profile. Unfortunately the CFD program crashed near the end of the simulation I ran over night so still no results on the tandem wing design. I presented what I've worked on so far at Santa Clara with Bill Kirkwood to Dr. Kitts lab group. They all seemed pretty interested which made that fun.

See you all tomorrow at the open house!

Posted by [jtucker](#) at Jul 20, 2012.

Hi! Sorry for the late post! I must be the last one...

Can you even believe this is Week 6 of our Confluence entries?

Time is flying by at an ever-increasing rate!

Yikes!

...and what a week it was:

I was sad not to go out on the Fulmar, but my back has been so whacked, that I think it was a wise decision.

Maybe there'll be another chance? There is always hope!

I am so glad that you all had such a great cruise! Mola mola, too! Wow!!!

Welcome back, Geraldine! I read your Confluence entry, so I can say that the trip sounded really wonderful! Yay! I will have to go to the blog for more, and then perhaps, meet up with you soon!

Thanks to incredible team work and Erica's leadership, the Intern BBQ on Wednesday was a fantastic success!

The food was so amazing. Congratulations, everyone!

Wednesday was topped off with a great lecture given by Dr. Mary Silver. I adore her! She is such an inspiration, as are those of you who participated in the YWS program, to those younger women that you met.

I'm happy to say that my project was finally gaining some momentum last week, although I have not worked on it at all this week, with all of the Open House and BBQ preparations. I look forward to the project work next week, but need to figure out a time budget. I need to split blocks of time between the microscope and computer. Eventually I need to use ArcMap to illustrate the boundaries of a set of distinctive lava flows in the Gulf of California that were sampled on the 2012 cruise. I am starting to become nervous about running out of time!

We need to be creating a PowerPoint in the first week of August or so, right?

George and Linda: Are we going to have an Intern meeting that focuses on the presentation?

It is fine, if we don't...I am just curious!

So, Evelyn, you are to give her presentation next Thursday, and must leave in the days afterward?

I am so sad to see you go!

You rock!

I look forward to the Open House tomorrow!

The geology group is short-handed, so I will be in their tent all day. Drop by, if you have time!

Have fun, everybody!

It will be so great!!!

-Patti

Posted by [pclark](#) at Jul 20, 2012.

Do I really get to Confluence last this week? Such a privilege!

My week has been not as productive as I would have liked for my project. I did have some really great intern experiences, helping with sampling and deployments on the Fulmar, trying on an immersion suit

for the first time, and mentoring girls in sand crab monitoring and boogie boarding. I thought Mary Silver's talk on Wednesday was really cool too. The topics she covered are exactly why I think studying HABs is cool, because of the human and environmental health implications. I enjoyed hearing the historical perspective she added, and hearing about her experiences in Zanzibar.

In terms of my project, I put together a blog post for the MBARI and MLML student blog, and put some work into the background and outline of my paper. I have spent the times I've been in this week working with different LISST data sets on Jim's scripts, and I had a couple productive meetings with Jim in the latter half of this week. He has some big project ideas to refocus my project to include LISST-HOLO image data, wherein I would make a time series of data about species (most likely class, possibly genus) abundances and distributions and compare that to the LISST-100X data from the Dorado mission(s). It sounds like a really neat and ambitious idea, and I am looking forward to meeting with Sam's mentor Danelle on Monday or Tuesday to get a feel for how practical it would be to do.

Open House today!!

Posted by [dwyse](#) at Jul 21, 2012.

21-July-2011

This page last changed on Jun 06, 2012 by [kgomes](#).

21-June-2012

This page last changed on Jun 21, 2012 by [dwyse](#).

How was your week?

Comments

This week has mostly been learning to use various methods for data visualization. I learned how to use Ocean Data View, a free program, for constructing contour maps of the wave glider data (sea pCO₂, pH, O₂, temp, salinity). The program is really useful for making all sorts of oceanographic plots and has a lot of good data sorting functions as well. However, I don't think the program is very well documented, and I spent many hours clicking various things before getting what I wanted. Besides that, I have also been playing a lot with MATLAB this week and making various plots. Next week, I will be working a bit in the lab helping with the development of a dual pH and dissolved inorganic carbon analyzer.

Posted by [mfong](#) at Jun 21, 2012.

In the past few days, I've started setting up, calibrating, and running the laser Raman spectrometer by myself, which is great! I've taken data and have used the analysis program that goes with the laser to interpret the spectra I've gotten, so I feel like I'm making some good progress. I also have a better idea of the overall goal of my project (both from reading background papers and talking with the people in my group) which makes the work much more interesting!

The data I'm collecting right now are on the dissolution of CO₂ in seawater - I'm determining what the detection limits are for the laser (what concentrations of CO₂ it can measure) and, depending on what I find, we'll decide whether or not to go forward with plans for a new instrument that will make these measurements for pore water in the deep ocean. From there, I'll be doing some experiments to compare our laser Raman in the lab and the laser used on cruises when taking data directly in the ocean to see how well they match up with each other. I still don't understand all the steps I'll be taking to process the results, but I'm sure that will come in time... things are coming into better focus every day.

With all the intern activities and general MBARI activities, it seems like there will always plenty to do around here! And plenty to eat! Sidenote: I really enjoyed the speaker and all his photos yesterday, I'm sure most of you did too...

Posted by [agallagher](#) at Jun 21, 2012.

Successful week!! My first week of MATLAB has been fruitful. I've been in the process of downloading quarterly satellite observations from the CoastWatch website one at a time. I created a 'for' loop to download a whole year with one run of the script and it worked the first time! Victory! Yesterday, I hit it a major project milestone by successfully exporting a GeoTiff from MATLAB and having it work in ArcGIS. I thought it was going to take me another few days to figure that out! Victory! MATLAB is clicking. Now I'm creating scripts to convert hundreds of MATLAB images into GeoTiff format. I'm making progress.

Posted by [jadelaars](#) at Jun 21, 2012.

This week I have continued familiarizing myself with the existing hardware on the SWFOCE's electronics chassis. For the first time, I powered up the CPU and environmental boards, and attempted to communicate with them serially using my PC. This presented a number of problems to be solved. The CPU board wasn't communicating serially, and the environmental board did not appear to be getting power. It turned out that the power supply board on the chassis had not had a known circuitry error repaired yet. I swapped that board with one that had been repaired and verified to be working properly. This fixed the power issue (it turned out that the CPU board wasn't receiving all of it's needed power either). However, the CPU board still wasn't communicating serially. It was discovered in the schematic for the board that the serial lines needed to be jumpered together. This was done because of my mentor, Chad, who often makes the mistake of swapping the Tx and Rx lines with each other (haha!). The installation of jumper allows him to correct that mistake if it is made. After properly jumpering the Tx and Rx lines, the board was finally able to communicate and display output on the HyperTerminal window. Next, I played around with some of the user commands that the previous intern had programmed in to the CPU board. I made sure that the CPU board was able to detect the type and slot number of any of the daughter boards plugged into the backplane. I added a few printf statements so that it would read

out when detected (previous code only printed if the slot was open). Next, I began the daunting task of starting coding for the load switcher. This is what I am still working on today. So far, I have mapped the digital I/Os – a good place to start. 😊

ETA: Also, a few neat things happened this week unrelated to my project directly. We had a chance to fly the ROV around in the test tank, which was a ton of fun. Easy to do when looking from above, but a lot harder when using just the monitors! Also, we witnessed the christening of the Rachel Carson, which is MBARI's newest research vessel. Afterwards, we joined the rest of MBARI staff at the reception for the board of directors, which had great food, great beer, and great company. I also attended my first MBARI barbecue... absolutely delicious! 😊

Posted by [jperotti](#) at Jun 21, 2012.

This week has gone by just as fast as week one, but I still have Friday! My work on the PowerBuoy project continues to revolve around preparation for deployment next Tuesday. Mostly I have been mounting necessary equipment (resistor housing and an antenna) and removing old equipment (extra batteries). Of course on Tuesday I spent the whole day following the Board of Directors around and learning about the Gulf of California expedition and all the other projects going on at MBARI. And of course I got to see the christening of the Rachel Carson. On Wednesday I took a trip with Francois to the storage facility in Castroville to retrieve some "pop-up buoys," which may serve very well in the steel plate recovery system I have been assigned to create. I will begin working with them to understand how they work, or if they even work at all. As I understand it, they have been in storage for something like 14 years...

Highlights of the week: The Joe Allen seminar, which was absolutely amazing and inspiring and just awesome. And flying the miniROV, which was a real treat.

Posted by [pcorbarberis](#) at Jun 21, 2012.

This week has been extremely productive in developing my project! I've established most of the guidelines of the experiment process, as well as identifying and then changing (for the better) the organisms that I'm going to be using for observation. I've planned out to use (1) moving ROV videos of Holothurians, (2) stationary video of Nanomias, and (3) STIL-HOLO images of phytoplankton as my three mediums and subjects for comparison of accuracy, strength, weaknesses and many other variables in human and computer capabilities to identify organisms. I've also been looking up a lot of background on the species for later use and a general idea of aspects that may effect identification. This is a whole new way of looking at things for me since I usually don't look at the programming aspect. I'm really enjoying being exposed to this new way of thinking because, in the long run, it's really going to help me understand what I need and what can be done if I ever do research that involves this kind of thing. Tuesday was especially exciting with all the seminars and meeting members of the Board. I really enjoyed all of the talks that I sat in on and learned a good amount. Also prompted me to talk to a few people like Charlie Paul and Steve Haddock. Broadening my horizons at MBARI! And tomorrow I get to go out on the Zephyr... which should definitely be interesting. Going to have to take a few of those motion sickness pills...

Next week - Intern Cookie Break Competition..... Who's going to win? We'll just have to wait and see 😊

Posted by [speterson](#) at Jun 21, 2012.

This week I have made progress by becoming more familiar with the AUV datasets available to me, and by better defining the objectives of my project. I spent a lot of time last week learning about the various AUVs' histories, mechanical engineering, instrument features, and operation. I have been working with both Dr Bellingham and Thomas on using the existing scripts to present and visualize the data from Dorado. I will look forward to working with some of the LRAUV data as well. I am hoping to work more with the Dorado data, as that vehicle collects more biological data than the LRAUVs (Daphne and Tethys), because it includes bioluminescence and has gulpers that collect water for laboratory analysis. An advantage of LRAUV data in studying phytoplankton bloom dynamics is the battery life is much longer, so the LRAUVs can be sent back and forth across a front, and continue to collect oceanographic and nutrient data for almost a month (~26 days). I spent this spring collecting water samples for stable isotope analysis of the particulate organic matter from the MLML seawater intake and from a day cruise aboard

the R/V Point Sur. I think that project and my background in biology are drawing me towards favoring Dorado data for my project and potential thesis research, though I have not explored the potential for using the gulper water samples to run isotopic analyses. I think that combining isotopic analysis with oceanographic and meteorological data is a fascinating way to study bloom dynamics, but it is also very tedious and laboratory intensive. It seems it will be more reasonable and enjoyable to focus on assessing the relationship between variables such as optical backscatter, fluorescence, bioluminescence, etc. in order to determine what combination of variables is associated with blooms of certain phytoplankton species. I have also talked with Dr Bellingham about potentially working with Microsoft Research for my thesis research, and I am looking forward to exploring that idea in greater depth.

Other cool things I did this week:

Monday: Drove the flyer ROV (which I am calling "Simba" until it is otherwise named) in the Test Tank. That was most excellent, many thanks to Dale and George for giving us that opportunity.

Tuesday: Learned a great deal about research in the different lab groups at MBARI, and got a good feel for what a long expedition aboard the Flyer involves. I was impressed by how all the presentations were well put together and communicated, especially since a lot of the data is still being processed. I enjoyed the R/V Rachel Carson christening and the fancy reception afterwards. I think one of my favorite things about talking with board members is developing a broader understanding of the history of MBARI, and seeing how highly everyone regards David Packard.

Wednesday: Deployed Daphne with Thomas and Dongsik, and after work went sailing in Monterey. Their yacht club is pretty cool, and a bit bigger and fancier than the Elkhorn Slough Yacht Club here in Moss Landing. Dr Joseph Allen's talk on Wednesday afternoon was really great, I especially enjoyed how he communicated the experience of becoming a satellite of Earth (the trip there and back, and both riding in Columbia and operating an astronaut's jet pack). So unbelievably cool. I sure miss watching launches and feeling the shuttle return. I appreciate how much he supports and recognizes the need for BOTH manned space travel and studying marine science. Both of those fields of exploration are near and dear to my heart, and I find it annoying when people insist upon putting those at odds (mostly related to arguing which is more deserving of funding). Dismounting from soapbox...

I'm looking forward to going out on the Zephyr tomorrow! Hopefully it will be operational again soon.

Posted by [dwysie](#) at Jun 21, 2012.

This week has flown by! A successful amount of work has been done, and the previous days have also been very fun. We've been able to tour the Moss Landing Marine Labs library and drive an ROV in the test tank. Also, on Tuesday I attended a couple presentations for the board of directors about the current projects at MBARI which was very interesting. Later there was a reception with amazing food and really interesting people! On Wednesday, I saw former astronaut Joe Allen give a very inspirational talk about his adventures into space (which is almost as awesome as the deep sea). Also, a group of high school students came in for a tour and some of the interns shared their science experiences to inspire them and give advice.

Work-wise, I've gone through a good number of hours of video and have just started looking at my first dive from the Davidson Seamount, so I expect to see some really interesting organisms. I'm hoping to use my annotations in kml form and create a visual representation of the dives on Google Earth soon.

As a side note, I'm hoping to get scuba certified during my summer here, so I can continue to explore the ocean!

Posted by [ebyer](#) at Jun 21, 2012.

Cannot believe it is already the end of the second week. I will not report on the wonderful side activities that we have done this week, just want to say that it was all fun and super interesting. About my project, this week on Wednesday we had our first big meeting with all the persons involved in social media. I presented the document I have been working on since I arrived. So we discuss what metrics we might want to follow in order to have an idea of the health of our social media presence. Then we discussed the goals for each outlet and finally I presented all the strategies that I would like to try. At the end of the meeting my to do list was very long and I am working on it now.

All for this week!

Posted by [gfauville](#) at Jun 21, 2012.

I've spent much of this week familiarizing myself with the facilities and my project. I ran into a couple of kinks getting my terminal setup and appropriate software installed (I think that is mostly resolved now). My project has been firmed up with my advisor into doing a brief Tradespace study on the proposed Shearwater UAV/AUV project. From there the plan is then to design, fabricate and test a component of critical interest. This will likely be something to do with the water to air and air to water transitions. Over the past week I have created a skeleton of the Tradespace study I need to complete. I've started filling in information on wing design and propulsion systems. Currently I'm trying to get approximate lift drag characteristics from blended body craft without running a simulation. I'm also working on finding efficiency conversions for air propulsion systems (specifically propeller profiles) in water and vice versa. I'm fairly certain previous tests have been done on this so for the mean time I've got more reading to do.

Posted by [jtucker](#) at Jun 21, 2012.

Again in confluency, and another week has pass. I have the STOQS database installed in my computer and working, and now I have started to upload AUV data collected during the experiment AUV2011 done in Spain the past year. In this experiment participated Mike McCann and now I am trying to recover all the data, process it and upload to the database.

On Wednesday I went to the sea with Tim Pennington and during half of the travel I had sea sickness and I did a feeding show to the pacific's fish as in the Aquarium. But finally it was a great experience and I could help to Tim and Margarite with the job aboard. But..... I lost the BBQ & Joe Allen seminar, there are too many things to do in MBARI.

Posted by [flopez](#) at Jun 21, 2012.

Continuing from the last week, I've been working on data visualization to see if the HF radar data I have can be used to apply Sergey's surface currents prediction algorithm. In his algorithm, we train the prediction model with the historic data, and this data quality analysis step is very important because we do not want to use bad quality data to train the model, which will result in bad predictions. Sometimes we have bad HF radar returns due to bad weather conditions, etc., which causes missing data, and in order to fill in this missing data, interpolation is often used. I have both the original data with gaps, or missing data, and the interpolated data. Sergey and I looked into the plots and movies of both original and interpolated data, and came up with an idea of what portion of the data we are going to use to train the model. Beside the data quality analysis, I started trying to get myself familiarized with Sergey's MATLAB code he used before. Also, he visited MBARI yesterday and gave me an instruction on what in his code needs to be changed for my data. I'll be running into a lot of problems and code errors while working on the code, but I am hoping that I can get something done with his code by next week.

Other than my project, I've experienced fabulous things I didn't expect: playing with the flyer ROV, christening of the R/V Rachel Carson, deployment of Tethys - a LRAUV, and boat sailing. Now, I can't imagine what would happen next week and can't wait! Below is a picture of me (taken by Diane Wyse,

thanks! 😊) trying to catch Tethys, hoping it comes back into my arms...



Posted by [dchang](#) at Jun 21, 2012.

I went out on the Zephyr this morning, but we hit a fishing rope and it got tangled in the propellers, so we had to limp home. I was back by 9am, so I didn't get to sleep on the boat to make up for getting up early like I wanted to. I got a few pictures anyway, which I'll probably put up on the blog (you should all be making posts too! 😊).

This week has been more on the Quality Control stuff but Brian and I had a discussion (just now, actually!) about re-focusing to tidying up the web side of things so it can be pretty enough to make external soon! Then there will be all the testing of the page once it goes external (errors...errors

everywhere I bet...). The web design side of things is more my strength than the database side anyway, so I will get more done if that's my focus and won't have to rely on Brian so much. I'm excited to finally be able to show my friends and family the DSG!

Posted by [ecurles](#) at Jun 21, 2012.

This week seems to have been a timed puzzle of getting lab work done and participating in the intern/MBARI activities! I am working more on my own now in the lab on the time-intensive part of individually picking out, filtering, taking pictures of, and freezing copepods for later analysis. I enjoyed the seminars I was able to attend between running back to finish experiments in the lab. The Paul Allen talk was a definite highlight, as well as driving the ROV...and I think by now, most of the interns have decided not to bring lunches when the board is in town! I'm looking forward to a full day of lab work on Friday. Hopefully, I'll be able to finish preparing copepods from culture 1 so I can start on a newer batch of copepods as a comparison. Side note: the lights in the lab apparently turn off automatically, at least after 6pm or so! Not so good for transferring tiny critters on filters...

Posted by [adjunaedi](#) at Jun 21, 2012.

I'm sorry for the late post!

Week 2 of the internship was amazing!

The week has been a flurry of activity, and I must confess that my project is barely launched! I did finally have an opportunity to sit down and talk about my project goals and parameters this week, and that is a good thing.

The multitude of awesome non-project activities included, but were not limited to, the following:

- Monday we had our tour of the library at Moss Landing Marine Labs. Another beautiful marine facility! Afterward, we had the incredible opportunity to drive the MiniROV! I was super-paranoid about crashing it into the walls or floor of the tank, so I was timid with my movements! This was a really awesome, unexpected treat, for sure! Thanks Dale!
- Tuesday was a huge highlight of the week: the Day of Engineering, Science, and Technology. It was an incredible seminar that summarized much of MBARI's recent project work. The presentations and synopses were outstanding and inspiring! The day was complete when we were able to watch Julie Packard christen of the R/V Rachel Carson, and then feast wildly with all-MBARI in the atrium!
- On Wednesday, we were treated to a seminar by board member, Dr. Joe Allen, who gave an incredible presentation of his experiences in space! He was a funny, engaging speaker, and gave an inspiring talk! All of this...after the fantastic BBQ put on by the LRAUV team and the Czars! Yum! No shortage of great food opportunities here at MBARI! Thanks so much!
- On Thursday, while many of the interns were involved with CSUMB, I was in a Submarine Volcanism Lab meeting with Dr. Clague's crew, and visiting professors and graduate students from UCSC and the University of New Mexico. I was a, "fly-on-the-wall", for the meeting, but they gave me a full set of maps and spreadsheets so that I could follow along. I took notes, etc., while they discussed their major collaborative publication of data for the Endeavor Ridge study. The meeting lasted all day, and I learned a lot!
- Today, I learned how to process the plunge cores of sediment, and look for Foraminifera that may be sent to a lab for C-14 analysis. This information will help Dr. Clague's team determine the ages of the various volcanic flows of a given ridge system. The cores we processed today are from the Alarcon Ridge in the Gulf of California. These are the cores they collected only ~6 weeks ago via Western Flyer and ROV!

Everyone was so right about the time going by fast this summer! It certainly is! We must make the most of it!

We miss you George! We hope that you had a great vacation!

-Patricia Lieberg Clark

Posted by [pclark](#) at Jun 22, 2012.

22-July-2010

This page last changed on Jun 06, 2012 by [kgomes](#).

23-June-2011

This page last changed on Jun 06, 2012 by [kgomes](#).

26-July-2012

This page last changed on Jul 26, 2012 by [pcorbarberis](#).

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.

Comments

Congratulations to Evelyn for finishing the internship and giving the wonderful presentation! Hope everything goes well in Costa Rica!

Peter, maybe give us a heads up when you will be testing the plate! Perhaps I'll stop by to look and take some pictures.

It is the end of week 7, and it does feel like things are starting to wrap up. I met up with my mentors Francisco and Gernot this week to look over the work I've done so far and discuss what directions I might take my project. I have worked with a lot of different types of data so far and need to narrow the focus and pick a few things for the presentation.

Just to resummmary my project, I have been analyzing wave glider data (as well as other data) from the May-June CANON experiment during which the Monterey Bay was surveyed with various autonomous platforms. Our group's wave glider instrument package is a novel platform equipped with CO₂ gas analyzers (for measuring pCO₂), a weather station (for measuring instantaneous wind speeds), pH electrodes, and also the typical CTD and oxygen sensors. The sensors on the wave glider are the same as in MBARI's Ocean Acidification (OA) moorings, and they were integrated into the wave glider platform by last year's intern.

The observations by the wave glider during the CANON experiment are interesting, because the highest sea pCO₂ values ever observed in the region were found (>1000 ppm) during a strong spring upwelling event. Coupled with the strong winds during the upwelling, there were also correspondingly large CO₂ fluxes out of the ocean. However, the high sea pCO₂ and large fluxes were short lived (days). The advantage of using the wave glider is the high temporal and spatial resolution that is needed to capture these fast processes. With instantaneous data on CO₂ and wind conditions, I can model how fast sea pCO₂ levels are drawn down back to equilibrium just by gas exchange alone, getting an idea of whether biology or chemistry/physics is more important in regulating the sea pCO₂. (I will be working on this model soon.)

The other part of my project is the validation of the wave glider data. Are the data from the wave glider reliable and comparable to other established forms of measurements? So far, I have also looked at CTD casts from the Fulmar cruise, pCO₂ measurements from the Fulmar underway system, chlorophyll data from bottle samples, and Dorado AUV data. In my remaining weeks, I will need to figure out the best comparisons to make a convincing case that the wave glider can give trustable results.

Posted by [mfong](#) at Jul 26, 2012.

I can't believe how fast time is flying - another week is over! Brian will be back next week, so hopefully we can get back to work on making the DSG external! I've had a bit of inspiration, so I've started working on an external version of the DSG "Annotations" page. Some of the pages in the internal DSG will have to be left off/changed for the external DSG because they focus on quality control of the data in VARS and no one in the public cares about that! Not sure how that will work code-wise, but somehow some pages will be excluded from the external version. So I'm changing the goal of the page for the external version to be kind of a cool interactive embedded Google Maps map of the annotations. So that'll be my job next week, making that work! That and starting the powerpoint/paper (agh how is it that time already?!). Reading the API and the explanation pages of how to make the maps using Javascript makes me love

Google even more - it's so well-organized and easy to understand! I love it. Makes my job much much easier.

Posted by [ecurles](#) at Jul 26, 2012.

3 weeks remain and I'm starting to feel the pressure. Converting the COAMPS wind data is every bit as difficult as expected. I've managed to write the binary files into arrays and now im creating a couple of functions to rotate the grid and data to true lat/lon orientation. From there i still have to average the data into 3-day composites (accounting for missing data) and then write the observations into geotiff and then ARC GRID files. If i dont have all of that finished by mid next week, i may be forced to abandon the

COAMPS 🙄 and move on with analysis of what I have.

I met with my mentor and we discussed analyzing the data to measure along-shore and cross-shore water movement, using marine geospatial ecology tools to find temperature fronts, and using zonal statistics to measure mean SST and chlorophyll within MPAs. Or at least figure out *how* to do all that and provide brief examples.

This internship is going to be over before we know it and I'm not ready for it to end!

Posted by [jadelaars](#) at Jul 26, 2012.

Look at you Peter, first to post this week!

This week has been pretty good for my project, but I am feeling the stress of the amount of time we have left. The big news story for my project is that late last week, Jim had an idea to use data from the sensor Sam is working with to complement and essentially ground truth the data from the LISST-100X sensor data I am analyzing. We have had several meetings to discuss this and my original project. I anticipate receiving an Excel file from Danelle and/or Sam with timestamp information for the orders and genera that they have identified from the LISST-HOLO sensor this summer. The idea is to see if there is enough data to make an effective timeseries and match it to the existing continuously collected data from the LISST-100X, to see if we can make any correlation between various combinations of the 100X channels and LISST-HOLO images, in an effort to better understand sensing capabilities of the 100X. It would be fantastic to be able to ID a genus or even species of phyto or zooplankton bloom using LISST-100X data. As of right now, I am continuing to look at the spatial and temporal variability of the size distributions for data from three different Dorado missions.

Posted by [dwyse](#) at Jul 26, 2012.

I spent most of the week creating and polishing my presentation. Monday, we had a behind-the-scenes tour of the aquarium. It was really great to be there when no people were around. The giant octopus was my favorite part. I gave my presentation this morning. Besides the computer freezing, I'm very pleased with how it went. I've had the most awesome summer working here! I'm very sad to say goodbye. But good luck everyone on the rest of your projects and presentations, I know they'll be great and I wish I was here to see them! I'll miss you all!

-Evelyn

Posted by [ebyer](#) at Jul 26, 2012.

Is it seriously Thursday already? Gosh....

Ok, so this week has been very productive. After the amazing tour behind the scenes of the Aquarium I got to work making sure I had EVERY single file needed to start the experiments with Diane, Jason, and Brandon. Made their resources perfect and all of that jazz so everything was ready on Wednesday for them to come in and get started. As of right now, I'm more than 1/2 way done gathering data from them which is amazing. So this weekend I will be processing the plankton results and seeing if everyone was consistent in their identification.

I've also started on my paper and presentation so that I can actually enjoy the trip to sea with Steve

Haddock (yea, I'm officially going 😊)

I'm sad to see Evelyn go but hopefully we actually go to San Francisco so I can get a little more time with her 😊

This coming week I'm going to be feverishly working on analyzing and organizing everything. As well as getting things basically finished for the last week. It's exciting but sad that it's so close... Oh! I'm also going to packing all of my stuff to move... not cool.

So basically, as of right now, I do not have any kinks which is good and makes my life so much easier... We'll see what next week brings.

Posted by [speterson](#) at Jul 26, 2012.

Oops, completely forgot about Confluence (as usual). STHe open house was amazing, I loved feeling part of MBARI!! People congratulated us all the time for the nice work done here and for the fantastic open house. The social media booth went very well, took pictures of happy people was fun and it definitely helped to recruit new followers on Facebook. This was a very short week! On monday I spent my time processing the photos to post on Facebook. I started to think about my report, the structure etc because my mentor will be soon on holidays. On Wednesday, I went to the aquarium to meet their social media guru and it was a very nice meeting and I realized that (at a different scales) he is struggling the same way we are. I was really glad my mentor set up this meeting. I love the way she is always trying to offer me new opportunities!! On Thursday I was working at Hopkins with my regular co-workers. Friday is off and this is my last weekend with me family, I am driving them back to SF on Monday. Glad to know I will be at the housing with you to fill in the gap. I am also working on my talk for tuesday.

Evelyn, we will definitely miss you!! Was a blast to have you around! Sam, I am so jealous, would kill (well not really) to go back on board the WF! Enjoy every second!

Posted by [gfauville](#) at Jul 28, 2012.

Hi !!!

This thursday has been crazy, a lot of meeting, seminar,.. and I forgot about confluence. But now, here I am. This week has been very important to me, for several reason. The main one is that my family is in here, and now I am living together. Sam, Geraldine, Anna and Evelyn, thanks to be so good roommate, I enjoyed a lot the time there. My project is working nice, this week I had a couple of meeting with my mentor and we had have important improvement in the model/stoqs tool. Now the tool exists and is working and it is really awesome how it compare the model data with in-situ measurement in a so easy way. The next week I will like to show the tool to some people, Monique, John Ryan, to get some feedback from them. The presentation that I sent to the Physical Oceanographic Spanish Congress about my work in MBARI has been accepted, its a very small congres but its important to me. Evelyn good luck in Costa Rica, I am sure that you will enjoyed it a lot !!! Sam, I am jealous, lucky woman !!!!!

Posted by [flopez](#) at Jul 28, 2012.

WHOOOPS! Totally forgot about Confluence, this week has been so busy! Don't worry, it doesn't mean that I don't still want to update you all on my project. But my first piece of news is that I survived moving apartments I'm sitting in my new place in San Francisco! And we have internet already even though it hasn't been installed yet! Mystery, but wonderful 😊

Anyway, on to science. I wrapped up the last of my major experiments on the laser this week, which were all for the purpose of estimating the CO₂ detection limit (lowest concentration that we can measure) for the seagoing Raman system. The past setups I had used were all at higher pressures of CO₂ and once I calculated what CO₂ concentrations those pressures corresponded to, we realized that we were not going to get an accurate enough estimation of the system's capabilities with just those data. So, these experiments were done at low pressures with mixed CO₂/N₂ gas (which has a separate equation for calculating concentration in seawater than pure CO₂), which allowed us to add a lower amount of CO₂ overall. I had been a bit worried that I wasn't going to get the data we needed, but I think, apart from a few possible repeat experiments, that there should be enough to yield meaningful results. Wahoo! I have a few more analysis issues to sort out, but hoping that all will be well.

Evelyn, miss you already! Have a safe trip back to LA and then to Costa Rica!

Posted by [agallagher](#) at Jul 28, 2012.

Ohh, Anna, I get the Ramen reference now..teehee. Sorry, everyone, for the informal (2AM) confluence post.

Interestingly enough, the most work I got done this (last week now, I guess) week was on the off Friday, when I biked to work and back (turning into a popsicle on the way home since it was windy, foggy, and I ran out of energy halfway home since it was too close to dinner time!). Thursday was spent being frustrated about the direction my project was going (I had problems with expiring lab materials/fat, lazy copepods=possibly less RNA?? messing up results). Luckily, my mentor and I got together with Roman and talked a few things out. I have more work to do now, but my purpose for my project is now more clear, I think. I also got to watch a couple practice talks for the larval conference that some of my lab's members are going to. Oh, and dinner with the Aquarium's interns was GREAT. I think this should happen again in the following years since, after all, MBA and MBARI are sister institutions.

On Wednesday I had a great conversation with Patti and Jeff Drazen, who I had communicated with before over email in the past about an undergraduate project, so I was excited to finally meet him in person. He showed us some nice video from a baited camera (thresher shark and another type, plus a grouper and sculpin that were interested in eating the camera's plumb weight!

On Tuesday, Sam, Diane, and I talked to Marc Miller in the morning, thanks to George's awesome ability to put together meetings with professors that just happen to be in town.

Monday was amazing since we started our day with a wonderful breakfast AND an Aquarium visit...what more can I say...

Speaking of great internships, I watched a motorcycle race today thanks to tickets donated by Bill Kirkwood.

Oh, and I'm also sad that Evelyn just left today, and that I only got to practice my violin with her once!

Again, sorry for the super chatty confluence post.

Posted by [adjunaedi](#) at Jul 29, 2012.

Sorry for the late post.

Last week, I got outputs from our sea surface currents prediction model based on the GA coast HF radar data, but the predictions didn't quite agree with the observed HF radar data. Basically, we trained the prediction model with the data over the period between 2006 and 2010, generated predictions for 2011, and compared the predictions with the observed HF Radar data over 2011. However, the predictions were not very good. Especially, the model didn't work well on the shelf, where tidal current is a dominant factor of water flow. Since tides are periodic, we think the model should work better on the shelf, but it's opposite; the model works better in the Gulf Stream region. But, this also sort of make sense because Gulf Stream always flows northeastwards, and has not much variation. Anyhow, this week, I spent most of the time analyzing the outputs from our model to see why it doesn't give us good predictions on the shelf by checking residuals of EOF coefficients between observation data and predicted data as well as by checking whether other forcings like winds had an influence on the observed data (our predictions were generated without wind forcing). After the analysis, we (mostly my mentor) concluded that the prediction errors are not caused by wind forcing. So the next thing we will try would be to split the data into two: one inside the shelf, and the other outside the shelf, and to check if EOFs couldn't catch the energy of the dynamics from the data because there are mainly two big different motions: one is based on periodic sinusodes, and the other one is quasi-static (since Gulf Stream flows mostly northeastwards). Tomorrow, one of my advisors who is a physical oceanographer is coming to MBARI, so hopefully we discuss this issue with her and come up with a nice idea to move along.

Posted by [dchang](#) at Jul 29, 2012.

Hello,

Sorry for the late post! Am I last?

Once again, I cannot believe how quickly time is passing! I am almost in sort of a panic mode over my project, as the deadline for a portion of my work has moved up. I found out that Clague's group needs a certain portion of the work to be completed so they can run an extra calculation for a conference abstract that is due on the 8th. Yikes! I need to turn things up a huge notch!

What an incredible week it was! So many wonderful things happened, but I will note just a few highlights semi-briefly:

Saturday:

Open House was a completely amazing experience! I was in the geology tent with MBARI's two geology groups. As I may have mentioned before, the groups were a little bit short-handed, so I was asked to stay there for the whole event. What a crazy, wonderful whirlwind, it was! I was in the tent with anywhere from 1-3 other geology people for the entire 5 hours, with 15-25 visitors in the tent at any one time. Everyone was so nice, and so interested in what MBARI was doing! How incredibly cool! A couple of times I mentally stepped back to take a breath, and looked around the tent at the scene before me. It was almost surreal!

Monday:

George, thank you for taking us to such a great breakfast spot, and following this up with very cool behind-the-scenes tour of the Aquarium! So fun! I had not been to the MBA in while, so I was very happy to be there with all of you guys!

Tuesday:

This was the day of our Jaine and George Birthday Celebrations, with delicious cakes made by Justin, Anna, and others...Yum! The COSMOS outreach program took place in the afternoon. I always find it frightening to talk in front of groups for any reason, so this was really good practice. The students were really great. It would have been nice to have spent more time with them.

Wednesday:

In the morning, Audrey and I had a great chat with the day's seminar speaker, Dr. Jeffrey Drazen. He is involved with so many cool projects, and talked with us about things he was working on that had little to do with the seminar talk. Very interesting!

After lunch, my mentor and employer from Cabrillo College visited me at the Clague lab. He is one of the three people who wrote nice letters on my behalf, so I thought that he'd enjoy an afternoon meeting some of the people involved with my internship. He seriously enjoyed visiting with Dave Clague, Jenny Paduan, Ryan Portner, Charlie Paull, and hearing about all of the projects these teams have been conducting. He was actually pretty blown away! I didn't have a chance to show him exactly what I have been doing in the Clague lab, as we attended the seminar, and ran out of time. Perhaps he can visit again...

Thursday:

Evelyn gave us an awesome talk! I was really inspired by her presentation, and the way she carried herself, and delivered it. She definitely set the bar for the rest of us! I enjoyed meeting, Evelyn, and am sad to see her go. I wish her all the best with her adventures in Costa Rica!

Thursday was also the day of the Mentor/Intern BBQ at Connor's. Wow, what an incredible feast! You guys are all such great chefs! It looked like there was a great turn out of mentors, too! Great work!

Have a great week, everyone!

Good luck on your projects!

-Patti

Posted by [pclark](#) at Jul 30, 2012.

Never fear Patti, I have you beat...

I've been continuing with the fluid analysis for various configurations. Its taking much longer than it should since both computers I've been using max out their CPU and crash when I queue up multiple simulations (bug in the software that I can't find a patch for...) I'm part way through an optimal tandem wing spacing study to determine minimum drag for in water use. Last week I was also able to finish another blended body design and run a course simulation on flow characteristics. I'm currently working on another model that optimizes for water impact. By the end of this week I plan to have selected one of the designs for more detailed analysis and prototyping. Today I'm heading over to NPS with my mentor to look at their testing equipment and figure out a scale for the prototype. I'm also in the process of determining the maximum expected G force for the water impact study so I can order the appropriate accelerometer. Further plans for this week include doing confluence on Thursday...

Also awesome BBQ!

Posted by [jtucker](#) at Jul 30, 2012.

28-July-2011

This page last changed on Jun 06, 2012 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 28, 2012 by [jadelaars](#).

test

Comments

This week I sent a survey to our FB fans to see what they like about our page, what they would like to see more etc. The result of this survey will help use guide future social media strategies. Interestingly, we all thought posting a link to the survey on our timeline wouldn't work and we decided to send individual private message to each fan. I spent hours copying and pasting this message and Facebook was suspecting me to be a spammer... Unfortunately no one replied to the survey so we decided to try to put it on our timeline and BAM in less than a day, 20 replies! So next week I will start looking at the answers (exciting). We also started to try to engage more people by (among other things) inviting people to ask their question related to our post. We tested it yesterday with the deployment of the power buoy and we have comments and questions!

I also work on a special event concerning the Open house but I don't say anything here... wait 10.00 o'clock and check our facebook page... 😊

I am also looking at ways to be more visible on Twitter... and I spend some time replying to all the comments we have on our Youtube channel.

So of course it is difficult to see if our efforts are paying now, we need to wait longer and then take a close look at our metrics.

Anyway, it is exciting! I am having a blast (or hella fun) 😄

Posted by [gfauville](#) at Jun 28, 2012.

End of week three! Time sure flies when you're having fun!

Work-wise I had another productive week. It started off with another victory over MATLAB... I had spent half of thursday and half of friday banging my head against the keyboard over what I thought was a projection issue when I was converting ASCII files to ARC GRID files. Monday I went back to the asciwrite MATLAB code and broke it down to find the problem. The script was rounding my latitudes to 3 decimal places, which was too coarse for my 0.0125 degree grid. So MATLAB was compressing my outputs by half a degree latitudinally, which offset my GRID alignment with the CA coast by 30km. Since that problem has been fixed I've converted 1100 (and counting) daily sea surface temperature observations into a functional GRID format in ArcMap! I love having computers do all the work for me!

This has given me time to consider project goals moving forward. Using statistics in ArcMap, I can derive a method for longterm monitoring of seasonal oceanographic conditions within California's MPA network. I am also beginning to compile information to create a portal for seafloor multibeam bathymetry on CeNCOOS.

Outside of work, this week at MBARI has been kind of low-key. Our cookie break was a great success! Michael's meticulous chocolate chip cookies earned us a tie for second (which we achieved only by the very last vote!). I rode my bike with Justin, Brandon, and Diane to/from work a couple times this week. And I'm thinking about trying yoga for the first time ever today at lunch.

However, this whole week I have been in anticipation of moving my wife up to Marina from Southern California! This weekend will end almost 2 years of living separately and I couldn't be happier!

Posted by [jadelaars](#) at Jun 28, 2012.

It's fun that we can all see the work Geraldine is doing as she goes along! I even liked the MBARI facebook page... Big step.

In terms of my own work, I've learned/re-learned quite a bit about the principles behind the laser I'm using. My mentor found me a book that's a good refresher on the topic and I've also been working with Peter Walz to figure out an issue we've been having with the signal changing, which has involved taking apart the instrument to clean it. A little frustrating not knowing what the problem is (we still haven't quite solved it), but really cool to see how everything works and do some more hands-on stuff.

Despite the issues with the laser, I have still managed to get good, usable data on CO2 dissolution in seawater... once I've finished processing it, we'll have a better idea of the sensitivity of the laser and how to move forward with plans for future experiments on cruises.

I've been considering setting up an Endnote file with all the references to papers I've read, just to keep track of them. Has anyone else done this?

Posted by [agallagher](#) at Jun 28, 2012.

Anna, I use Mendeley to store all my papers, you can create folders and it is super easy afterward to write your bibliography (which is always a pain!!). Mendeley provides a desktop application that quickly became essential for me!

Posted by [gfauville](#) at Jun 28, 2012.

Yes, with MyEndNote Web at least I go to "Format" "Bibliography". You can also create separate folders for your references and then select that folder to create your list using the format bibliography option.

Posted by [adjunaedi](#) at Jun 28, 2012.

I've been using Mendeley for the last year and its great for organizing and querying my references. Having the ability to access my references through the cloud is really helpful too. However, the create bibliography function is VERY clunky. I still just create my own citations and bibliography. It may be a bit time consuming, but if you want it done right you gotta do it yourself. Is EndNote free?

Posted by [jadelaars](#) at Jun 28, 2012.

This week has been good for my project productivity. I have enjoyed the multitude of scheduled intern opportunities we have been offered, but I have had much more time this week to work with my mentor and engage my project more fully. That being said, I am not exactly where I want to be with it, but my mentor and I are on the same page with where things are. One of my favorite distractions this week has been stopping to talk to whoever is throwing a piece of equipment into the Test Tank. I have also enjoyed reading about all the different kinds of optical sensors for phyto and zooplankton detection, particularly in the Jaffe lab at Scripps. I'd like to think it's important to know about the functions and features of what exists, as part of my project is to assess what combination of channels on the LISST sensor on our AUVs can detect what kinds of plankton are in a bloom or patch.

In other news this week, I updated my intern page and read some of the others, it's cool to learn about everyone's background. I also want to write a post for our intern blog, and would like to encourage everyone to post something about their work/life as an intern at MBARI. I am familiar with the MLML student blog, and as I understand it the MBARI intern blog works much the same way. Still, see Erica for more information.

Que mas...I biked to work for the first time, and got a climbing gym membership. Maybe I can strike a balance between my daily cookie obsession and maintaining a reasonable level of physical activity. Maybe.

Posted by [dwyse](#) at Jun 28, 2012.

This week revolved around our deployment of the PowerBuoy. Monday was spent bringing the whole system out on the dock and getting it in the water and on the boat. That proved to be quite the mission, since it is so heavy and in 3 pieces. With careful crane work everything went according to plan. Unfortunately I missed out on the cookie break because we worked right through it. Tuesday we went out to sea for deployment. We left at 6 AM, before the winds picked up. Because the weather was so nice, everything went flawlessly. The Powerbuoy is now 5 miles out in the ocean, generating electricity and collecting data. What is new in the deployment this time is the batteries which collect the power being generated. Before electricity was just generated for proof of concept and then dissipated into heat. Storing the electricity in batteries proves difficult because of the range of voltages produced corresponds to the size and power of the waves, which is continually changing, whereas the voltage potential of the batteries is constant. Also the Buoy has an anchor now, which is new too. Yesterday and today I'm working on the pop-up buoys retrieved last week. Each one has been tested and is functioning (video on facebook, thanks Dongsik); however alteration will have to be made to allow for stronger, thicker rope to be used. That should keep me busy.

Posted by [pcorrbaberis](#) at Jun 28, 2012.

This week I took a little detour from my main project of mapping the CO2 data from the wave glider. I have been working with Jules Friederich in our lab to start the development of a dual pH and DIC analyzer. This involves integrating a separate pH system to the existing DIC analyzer in our lab. Although I know nothing about engineering, Jules was very helpful in explaining what was going on and showing me how things were done. I was very fascinated by how he knew exactly how to wire together circuit boards and fit together parts to make a working device. We haven't integrated a pH electrode to the system yet, but we have now connected together an 8-sample selection valve, a diaphragm pump, and a thermistor. The coolest part was getting to learn and play around with Agilent VEE (similar to LabView), a program used for programming instruments. Knowing a bit of Matlab helped me to understand how programming works in general, and by the end of yesterday, I was able to write a primitive program for a sampling routine--turning the selection valve to each of the eight samples, turning on the pump to draw sample, recording temperature while sample is being drawn, and then turning off the pump and temperature logging during the transition to the next sample. I was very excited when my program actually made the device move. Having no prior engineering experience, the fact that my computer code actually produced an effect on physical reality was amazing to me.

I'm not sure if this side project will be integrated into my main project and my results to be presented, but I definitely want to do more instrument programming in VEE.

Posted by [mfong](#) at Jun 28, 2012.

I've made some decent advancements this week. I finished re-mapping the digital I/Os in the load switcher's code, which was an important first step. I also looked at the initialization routines for the microcontroller's other peripherals, such as the SPI (Serial Peripheral Interface) and UART (Universal Asynchronous Receiver/Transmitter). I remapped the re-programmable pins associated with those modules, so that they would be functional again. I was able to verify the functionality of the UART by successfully communicating with the board using my PC's RS-232 connection and HyperTerminal.

Verifying the functionality of the SPI has been a bit more challenging. First of all, I should mention that there are two different SPI modules being used on this system. SPI1 is being used by the LV board (slave) to communicate to the CPU board (master). SPI2 is being used to communicate with the board's various peripherals (I/O expander, digital pots, ADCs). First, I wanted to take a look at the SPI1 module, since I would like to use the CPU board as a debugger of sorts for the LV board. This is where problems arose.

As was tested earlier, the CPU board is perfectly able to scan the slots and recognize the environmental board when it is plugged in to the backplane. However, when I have the LV board plugged in, the CPU doesn't recognize it. The logical explanation would be that there is a code issue on the LV board (although I did my best to change the code to accommodate different pinouts etc.). The weird thing, though, is that when both the LV board and environmental board are plugged in, the CPU recognizes NEITHER of them. It just reads all of the slots as empty.

I want to plug in a second functioning board to see if I can narrow down the problem to either being Roland's CPU code, or my LV board code (Roland is the name of the programmer who worked on this project before me). I also would like my mentor to take a look at the hardware, since that is his specialty. If the issue is code, then I may need to call on a more experienced embedded programmer to help me figure out what's wrong. Perhaps I can contact Roland directly to help me resolve the problem. For now, I'm pretty much just staring at it blankly, hoping for some kind of revelation. You know, the usual when it comes to programming. 😞

Other than that, the week has been pretty decent. Cookie break was a ton of fun. I also had a blast with Erica up in Santa Cruz last weekend. I look forward to planning the intern BBQ and exchanging recipes.



Posted by [jperotti](#) at Jun 28, 2012.

This week has been mostly reading up on various topics related to WIG aircraft. The focus has been on airfoil and propulsion systems. I've assembled a crude mass budget to begin an initial iteration for required power and lift. I've also been able to find several scaling charts that suggest a reasonable required power plant for the craft in takeoff (max power stage for WIG craft). I also began preliminary

calculations on a compressed air buoyancy system for the water to air transition. I'm still working on determining the optimal thrust mechanism (likely a ducted fan or exposed propeller). For wing design I'm still trying to find some data for blended body craft in the ground effect, especially with regards to pitch stability.

Anna,

I've used endnote before and it's one of the best bibliography programs I've used that interfaces directly with MS Word. I think the new version even lets you annotate the referenced pdfs directly in the program. That said Word gets pretty screwy with references and cross-references... I would highly recommend learning latex if you are creating a long document! There are a bunch of bibliography management programs available that generate the required bibtex format to interface with latex. There is a bit of a learning curve but definitely worth learning.

Posted by [jtucker](#) at Jun 28, 2012.

Alright, so this week has been intense for me and my project. After much deliberation and processing of videos/images with Danelle, I FINALLY got some data that I can analyze and prepare for the actual experiment. I must say, there are a lot of steps in the development of my project. So the data that I got to look at this week was of the Nanomia stationary recordings, very easy to identify those things so those were cake. The challenging part came with the LISST-HOLO images of plankton. Those things are hard to identify, and that's been exactly what I've been doing the last 3 days. But in doing so, I've found kinks that could come with the actual experiment, which is better to know now than later. Definitely killed my eyes on Tuesday though... Don't know how the people in the video lab do this day in and day out. Guess you just get used to it.

Today we actually added another feature to the overall experiment. First, we were only going to test the differences between human and machine identification but, with the slow identification of the LISST-HOLO images, we've added a self consistency test. We're going to take the LISST-HOLO images and run self consistency tests on all those participating in the experiment. Figured: If it's hard for a human to even get it right in the first place, how are we going to teach a computer program to do it correctly or even better?

So that's where I am now, trying to figure out exactly how we're going to do that. Should be interesting!

Other than THAT! I've just gotta say: Cookie Break? AWESOME! It was so much fun and I'm so glad that everyone at MBARI that came really enjoyed everything!

Also, finally saw Brave.... super cute. And it definitely made me cry.

Can't wait for the WATCH event this afternoon!

And this weekend is going to be a blast in LA! Road trip with Erica 😊 And visit with one of my sorority sisters 😊

And it sounds like everyone's getting into the thick of their projects! Yay! I wish everyone good luck!

Posted by [speterson](#) at Jun 28, 2012.

Third week already! As time I share with my intern friends accumulates, this internship is getting more fun. To relieve my anxiety about my (slow?) work progress due to having too much fun (I remember someone said there is not such thing as too much fun? :-p), I often have to remind myself of what George said about this internship, "This internship is not all about work." Speaking of which, I worked on my mentor's MATLAB codes this week, and it looks like I could manage to modify it and have it run with my data. I still need to verify the output of the codes and run more tests to check, but I think I can slowly move onto the next step or theoretical part of our project. My mentor Sergey developed a ocean currents prediction algorithm based on a historic HF radar data, and his algorithm and the background knowledge/theory are what I have been focusing on so far. He also has an idea of a compact ocean model for AUVs that can be run in the on-board system of them (I don't know much about this yet), and the final goal of my project would be to implement the ocean currents prediction algorithm in AUVs using the compact ocean model. I am not sure if I have a clear idea of this. I should talk to my mentor again. Early next year, I am having a field experiment in Long Bay using Slocum gliders. Unlike AUVs here at MBARI we don't have access to the onboard system of the gliders, so my personal final goal would be to figure out how to implement this whole idea of the ocean currents prediction and compact ocean model for the gliders. It is important to enjoy all the fun happening around here, but I also try not to forget about this.



Posted by [dchang](#) at Jun 28, 2012.

Having trouble with my (live) critters. Will post later..

Posted by [adjunaedi](#) at Jun 28, 2012.

This week I worked on sprucing up some of the pages so they look beautiful externally. Brian showed me today how to do performance tests, so I will be doing that next week to figure out why the DSG is causing the server to hang when Brian tests it. Next week I will also be doing housekeeping - commenting, deleting code we're not using, and generating documentation. Hopefully we can figure out what's hanging the server so we can make it external soon! Brian's gone next week, so there's a lot of self-learning I'm going to have to do to figure out these tests.

Posted by [ecurles](#) at Jun 28, 2012.

I've finished filtering copepods from the second culture and hope to finish analysis on this batch next week. Tomorrow, we're going out to collect and filter sea water, which will be exciting because so far, I have been using copepods from a lab culture.

Otherwise, I'm hoping to participate in outreach activities more - today's lab work was all very time-sensitive, so it was non-stop work!

-Audrey

Posted by [adjunaedi](#) at Jun 28, 2012.

The weeks are starting to fly by faster and faster!

This week was a very productive one, and I've been able to go through a good amount of dives both in the canyon and on the seamount. I've also been able to cover dives with high populations of both Primnoids and Isidids which is awesome. Another interesting thing I've seen is a Japanese coke bottle down at 1500 m. I've also seen some great lava formations such as deflated pillow lava (which looks like a squeezed tube of toothpaste) on the Davidson Seamount. Have a great weekend!

Posted by [ebyer](#) at Jun 28, 2012.

Hi

Finally my project is well defined. I am going to develop a tool in Matlab to connect to a Opendap server, the one use to serve models output and automatically Matlab will download all the in situ data available in the STOQS database (AUV,Glider, ROV,..) for the area, date and depth of the model output. It's really useful for the people used to work with model, as I do.

Although I am learning Python and I will move to it, I am going to develop my project in Matlab cause most of the researcher work on Matlab, and I will like to develop a tool useful.

The cookie break was great, fun preparing the cookie and all the people very happy with it.

So very glad of the week ,and trying to talk with all the intern about his/her project, cause most of them are very close to my project, although perhaps they didn't know it. But I will like to talk with them and show the powerful of the databases

Posted by [flopez](#) at Jun 28, 2012.

Hello Everyone!

Another incredible week at MBARI!

It flew by, just like the first two!

There were fewer, "Special Events" this week, so I hunkered down with work in the Submarine Volcanism Lab. I learned how the Clague lab processes their seafloor sediment cores in preparation to send off samples to an outside lab. The goal of the treatment is to isolate the Foraminifera for age-dating analysis. Each core is carefully sliced into 2-cm. sections. Each vertical section is treated with an antiflocculant, then filtered through a stack of four sieves of prescribed mesh sizes. After sieving, the remaining sediment (and Forams) are collected in a dish, then placed in a drying oven overnight. The next day, the sediment is carefully poured into a vial for out-sourced carbon-14 dating. The cores we worked with this week were collected by the ROV Doc Ricketts in the Gulf of California about seven weeks ago.

I also started looking at the lab's samples of volcanic glass collected from the Gulf of California. My task is to view the samples with a compound microscope, and determine the rough percentage of crystal content in the glass. This glass is so gorgeous! I have seen a lot of geological materials under dissecting scopes before, but I've never seen anything quite like this glass, and it has a story to tell!

Some of the Special Events that did occur include the following:

Monday: The Intern Cooke Break was a great success! I want to congratulate Sam, Geraldine, and all of the winners of the cookie contest! Heck, everyone was a winner, right? Perhaps the biggest winners were all of the MBARIans who were able to partake in the tasting phase of the contest! Thanks for setting this up Sam et al.!

Tuesday: I played softball in a competitive setting for the first time since the Mesozoic. Yes, it was opening night for MBARI's Surfing Squirrels, and we won 18-2! They are really good! I am not, but I had fun!

I still need to arrange a fun, casual pick-up game for us (the interns)...If you guys are still interested in having this arranged, please let me know through the e-mail system.

Wednesday: We gathered at noon to talk about the Intern BBQ plans. It will be quite an event!

Thursday: I participated in a Land Use Panel with Jason, Sam, and Peter. The event was part of a Monterey Bay Aquarium program called, WATCH (Watsonville Area Teens Conserving Habitats). We gathered in the Pacific Forum where the student represented groups of various stakeholders that were either for or against a new development in the Watsonville region. Each group of "stakeholders" gave a Powerpoint (or Prezi) presentation (that they had 2 hours to prepare as a group), designed to sway the panel to their way of thinking about the project. We interns acted as the science panel that was scrutinizing the arguments. It was a very cool experience! At the end of the session, Connor asked each of the interns to go on stage and introduce ourselves to the high school students, and give them a little bit of insight as to how and why we are at MBARI. I could not believe how petrified I was! I was sooo nervous! Terrified! I am glad that Connor had us do this. I obviously need to practice public speaking, AND need to get ready to be presenting on this particular stage! August 15th is coming!

Oh, and by-the-way, I recently downloaded Mendeley's bibliographic software, and love it, so far!

Good luck with your projects, everyone!

-Patti

Posted by [pclark](#) at Jul 01, 2012.

29-July-2010

This page last changed on Jun 06, 2012 by [kgomes](#).

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05-August-2010

This page last changed on Jun 06, 2012 by [kgomes](#).

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12-August-2010

This page last changed on Jun 06, 2012 by [kgomes](#).

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30-June-2011

This page last changed on Jun 06, 2012 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!

Activities

This page last changed on Jun 06, 2012 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 06, 2012 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

News

This page last changed on Jun 06, 2012 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.**

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Opportunities to Go to Sea

This page last changed on Jun 06, 2012 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)

Schedule

This page last changed on Jun 06, 2012 by [kgomes](#).

- 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

This page last changed on Jun 06, 2012 by [kgomes](#).

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

This page last changed on Jun 06, 2012 by [kgomes](#).

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)

4th August 2011

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