Agenda
North East Pacific OOI workshop – Cabled, Endurance, and Station Papa Arrays
University Place Hotel
310 SW Lincoln Street - Portland, OR
September 27-29, 2016

Pre-Workshop Activities for Participants:

1. Visit the main website for the OOI (oceanobservatories.org) and read about the Station Papa, Endurance, and Cabled Axial and Continental Margin Arrays to familiarize yourself with the deployment sites and available instrumentation; there is also a Knowledge Base http://oceanobservatories.org/knowledgebase/ (under construction) to assist in navigating the Data Portal and downloading/using data.

2. OOI Data Portal Registration – Required
   a. The Data Portal is located at ooinet.oceanobservatories.org (If the page does not load quickly, try clearing your browser cache).
   b. We have been working on some improvements and streamlining of the OOI User Interface. Changes have been made to the format and functionality of the initial landing page, platform information pages, plotting capabilities, and data catalog. If your previous user registration does not work on the updated site, please either re-register or use the CILogon interface.
   c. The data portal has CILogon functionality (the green button found under the Log In menu option), allowing you to use an academic or Google account to log in. If you are having issues with CILogon or don't have a valid identity provider, you may use the "register" menu option to set up a new OOI account.

3. Preload suggested software tools (NetCDF, Matlab etc.)
   a. The quick start guide found at http://oceanobservatories.org/thredds-quick-start/ contains a link to NASA's Panoply software (good for viewing NetCDF files) and example Matlab and Python scripts for viewing downloaded OOI data.
   b. NOTE: the specific server linked at that location was a temporary location for examples of pre-generated data; those datasets have not been updated since February 2016 and will eventually be removed and replaced by an ERDDAP server configured to deliver the most recent data.

4. Remember to bring a laptop preinstalled with one of the OOI-compatible browsers (Google Chrome, Safari, Mozilla Firefox, or Microsoft Edge)

5. Submit one slide of your research ideas and how you will use the observatories to <desilva@unols.org> by Tuesday, September 20th.

6. We will have a Twitter hashtag for questions etc. during the meeting #NorthEastPacOOI

7. As you explore the site, please note that there are a few known issues to be aware: http://oceanobservatories.org/2016/08/updated-ooi-user-interface-now-live-for-testing-feedback/. If you run into any additional data portal issues or have any questions about the OOI sites or instrumentation while you are preparing for the workshop, please send an email to help@oceanobservatories.org.

Workshop Goal/Objective
To enhance the access and success of ocean observatory systems in advancing our knowledge and understanding of marine systems
To identify new leadership and interest groups in the ocean observing research community

September, 26th - **Monday Evening**:
- 6:00 pm to 7:00 pm - Workshop Check-in (hotel lobby)
- Evening before workshop – informal gathering in Hotel

Day 1 – September 27th – Tuesday - Willamette Ballroom

Goal of Day One – Learn about the OOI assets in the NE Pacific, ideas from your colleagues, governance of OOI and proposal guidance, data access and realities of the cyber infrastructure system, and science questions by geographic region.

0830   **Workshop Check-in & Coffee**

0900   **Welcome and Introductions** – Doug Luther, U. Hawaii
- Workshop Conveners, Ocean Observing Science Committee (OOSC), OOI Science Oversight Committee (SOC), and the Workshop Steering Committee.
- Participant Introductions
- **Review of Goals of Meeting and Expected Outcomes** – Doug Luther

0930   **NSF and Consortium for Ocean Leadership – Program Information**
- Rick Murray (NSF OCE Division Head) – 10 minutes
- Lisa Clough (NSF – Head - Ocean Section)
  - Proposal Guidance and Policy
    - Governance of OOI
    - How to include OOI and other observational data in both proposals and publications
- Greg Ulses (Vice President and Director, Ocean Observing Programs at Consortium for Ocean Leadership)

1000   **The OOI NE Pacific Arrays Session –** Doug Luther, U. Hawaii
Goal of Session – *Provide answers to questions: What is there? Why is it there and what it can measure? What can't it do? This is a very brief overview of assets. Informative posters will be used for focused conversation on systems during breaks.*
- Cabled Array (20 min) - Deb Kelley
- *1015 Break* **(15 min)**
- 1030 Coastal Endurance Array (20 min) - Jack Barth
- 1045 Global Station Papa Array (20 min) – Jack Barth

1115   **1-slide presentations** – From workshop participants who are already using OOI. One slide, one minute. [Facilitator - Annette DeSilva]

1200   **Lunch Break**

1300   **Data and the Cyberinfrastructure Session** – Mike Vardaro
Goal of Session – *Assure that participants understand the capabilities of the OOI CI system. How do I get to the data? Note – To make this session effective participants should have participated in the pre-meeting User Interface activities.*
- System Status and Availability
- Data Services: Levels of access and support depending on the type, volume, and user capability.
    o   Web based data portals (click and download)
    o   Web services (automated machine to machine scripts)
    o   Subscription services
    o   Data QA/QC Procedures

1330   **Hands-on Technical Session** – Mike Vardaro
Goal of session – *assure that all participants understand the optimum way to access OOI and other data.*

Participants will breakout into smaller groups to access and work with the Data. OOI Technical Support personnel will be on hand to assist.

1430   ***Break***

1445   **Breakout session by Geographic Region** – Introduction by Doug Luther
Goal of Session – *Gain insight into how ocean observing assets in a region can help you answer critical science questions*
Task for Session - List research topics/themes relevant to these regions that OOI and other observing assets can facilitate that you could not do before. What would you like to do in the future using OOI?

Regions:
- Axial and Ridges – Friedrich Knuth (Data Evaluator), Charles Garcia and Ben Larson
- Shelf to Slope Base – Michael Smith (Data Evaluator), Kim Bernard and Angelica White
- Open Ocean and Station Papa – Lori Garzia (Data Evaluator), Tetjana Ross, Jim Thomson

1545   **Report from Geographic Regions Breakout –** Session leaders

1600   **1-slide presentations** – from potential users. One slide, one minute. [Facilitator - Annette DeSilva]

1645   **A presentation by John Delaney, UW** - Introduction by Doug Luther.

1715   **Steering Committee** meet for adjustment of agenda as needed.

1730   **Reception and Working Dinner** - University Place Hotel.

Day 2 – September 28th, Wednesday - Willamette Ballroom

Goal of Day Two – Learn about the observing assets in the North Pacific, get up to speed on the user interface to OOI data, provide feedback to NSF on OOI, and discuss technical systems and critical science questions. Facilitate the formation of research topic interest groups.

0830   **Coffee**

0900   **Overview of today's agenda** – Doug Luther

0910   **Regional Ocean Observing Assets Session** – Doug Luther

Goal of this session – *Inform researchers about the full scope of NE Pacific Ocean observing assets available to answer science questions. Posters and other information on these assets will be available during the workshop for reference and focused discussions.*

- 0910: ONC - Richard Dewey - Ocean Networks Canada Associate Director, Science
- 0925: NOAA – Meghan Cronin, NOAA, Pacific Marine Environmental Laboratory
- 0940: NANOOS – Jan Newton, NANOOS Executive Director
- 0955: MARS – Craig Dawe, MBARI, MARS Manager
- 1010: Line P – Tetjana Ross, Institute of Ocean Sciences
- 1025: ALOHA – Bruce Howe, Research Professor, U. Hawaii

1040   *Break*

1100   **Hands-on Technical Session** – Mike Vardaro
Goal of session – *assure that all participants understand the optimum way to access OOI and other data.*

Participants will breakout into smaller groups to access and work with the Data. OOI Technical Support personnel will be on hand to assist.

1200   *Lunch*

1300   **OOI Feedback Session** –OOI experts (Deb Kelley and Jack Barth) will lead discussion.
Goal of Session – *Provide community feedback to NSF on the following questions:*
- Are the facilities meeting the science plan (revisit 2007 plan)
- Overview by region/system:
  - What exists, what's working, what isn't, what will be maintained, what will not.
  - What (if anything) is planned/funded for next year(s) for installation
  - What are the gaps/is needed (by site/across sites)
  - Which sensors should be changed (reliability, is the data useful, etc.)
- What is essential for all/most science or special studies (must have)
- What is desirable for all/most or special studies (to be proposed)

1415 **Breakout session by Technical Systems** – Doug Luther

Goal of Session – *Focus on the technical assets and how they will help you answer critical questions.*

Task for Session - List research topics/themes relevant to these technical systems that OOI and other observing assets can facilitate that you could not do before. What technologies are needed for the future?

- Seafloor – Friedrich Knuth (Data Evaluator), Deb Kelley (Cabled Array), William Wilcock and Julie Huber
- Water column & Gliders – Mike Smith (Data Evaluator), Jonathan Fram & Jack Barth (Endurance Array), Orest Kawka (Cabled Array), Kipp Shearman and Ricardo Letelier
- Surface measurements – Lori Garzio (Data Evaluator), Meghan Cronin (NOAA), Craig McNeil, and Richard Dewey

1515 **Break**

1530 **Breakout session by Major Science Questions**
Goal of Session – *Facilitate creation of research topic interest groups and other activities to help researchers form research teams.*

Question for session – How is research on this topic greatly facilitated by OOI and other ocean observing assets? Example – Cross shelf/slope fluxes can now be measured using the mooring/glider combination systems.

- Seafloor/Geophysics – Group Leaders: Bill Chadwick and Guangyu Xu
- Biogeochemical fluxes (ocean acidification, nutrient cycling) - Group Leaders: Jan Newton and Clare Reimers
- Physical-biological interactions (turbulence, cross-shelf exchanges, populations) - Group Leaders: Kim Bernard and James O'Donnell
- Climate scale - Group Leaders: Craig McNeil & Steve Mihaly

1645 **Hands-on Technical Session** – Mike Vardaro
Goal of session – *assure that all participants understand the optimum way to access OOI and other data.*

Participants will breakout into smaller groups to access and work with the Data. OOI Technical Support personnel will be on hand to assist.

1715 **Steering Committee (and entrained new leadership)** meet for adjustment of agenda, discussion.

Evening - Informal networking opportunity

Day 3 – September 29th – Thursday - Willamette Ballroom

Goal of Day Three – Summarize critical science questions that are consistent with the NE Pacific Ocean Observing Assets. Agree on specific actions to assure scientific and technical user groups can become viable. Leave with everyone seeing a path forward to use the long-term sustained NE Pacific Ocean Observing Assets to answer critical new science questions.

0830   **Coffee/Refreshments**

0900   **Overview of today's agenda** – Doug Luther

0905   **Critical Science Questions Session** – representatives of the technical and science question *ad hoc* groups. –Doug Luther

Goal of Session – *List the critical science questions that can uniquely be answered by the long-term sustained ocean observing assets in the NE Pacific.*

Reports from Break-out Sessions
- Technical Systems – group leaders
- Critical Science Questions – group leaders
- Note – this information will be adjusted based on feedback and presented by representatives of the ad hoc groups in final form for discussion on Day Three.

The outcome will be the final question list.

1000   **Break**

1030   **The Way Forward Session** – Doug Luther will facilitate a discussion on the way forward for OOI researchers, science and technologies.

Goal of Session - Identify the technologies and strategies for that will optimize the research enabled by OOI in the future.
- Identify actions to assure that scientific and technical user groups can be viable. The ad hoc groups formed on Day Two will formulate a list of actions and present it.
- Identify new sensors and technologies for the future.
- Review the workshop suggestions received in the suggestion box and from Twitter

The session outcome will be list of specific actions and recommendations.

1130   **Concluding Comments** – Doug Luther, Participants, steering committee and others.

1200   **Adjourn**