

Ocean Gazing: Episode 22
Community organizing, ocean style
OOI Community Workshop: Baltimore

<begin intro music>

Ari: This is Ocean Gazing, the podcast where we dive into the sea and then peer all around us. I'm Ari Daniel Shapiro. We've talked with a good number of scientists on Ocean Gazing about their shared dream of piping data from the ocean onto the web and into the palm of your hand in real time, 24 hours a day. Well, that dream has a name: the Ocean Observatories Initiative.

Kelley: I mean, one of the drivers for this whole project was to put infrastructure in the water that will really change forever how we view the planet and interact with it.

Ari: That's Deb Kelley from the University of Washington or UW <pronounced 'Dub'>, and this vision of hers and others is closer to reality than ever before. Stay tuned.

<fade up music and sustain until the end; then fade up airplane noise>

Ari: A couple weeks ago, I took a short trip from Boston...

JetBlue: Appreciate you remaining seated till that seatbelt sign comes off. Thanks once again for choosing us, and welcome to Baltimore.

Ari: ...to Baltimore. That's where the Ocean Observatories Initiative, or OOI, was holding a community workshop. <fade up lobby sounds> I arrived at the hotel where the 2-day meeting was being held, and caught up with Julie Morris from the National Science Foundation in the lobby. She explained what OOI is.

Morris: A linked network of sensors in the ocean reporting back through telemetry 24 hours a day, 7 days a week using chemical, biological, biochemical and physical sensors from the air-sea interface all the way through the water column to the seafloor reporting back on the health of the oceans. We put science in the hands of anyone, anywhere with a computer who wants to use it.

Ari: Morris told me that the OOI has gotten a large chunk of funding from the federal stimulus package. And with that money, OOI has become a concrete reality. The plan is to build several linked pieces of the observatory over the next 5 years. These platforms for interdisciplinary science will reside in the waters off Washington and Oregon states, off the mid-Atlantic coast, in the Gulf of Alaska, near Greenland, off Argentina, and off Chile. Some of the science will connect with understanding the climate. And some will be related to rare events in the ocean, like an underwater

volcanic eruption. You can't really plan to be there to study it with a ship when it explodes. But observatories monitor the ocean all day everyday. So all you gotta do is put an observatory near a volcano and you're already rolling when the thing explodes, or when an extreme storm or harmful algal bloom happens. <cross-fade lobby and workshop discussion>

I left the lobby and walked into the large room where the workshop was being held, and honestly, it felt like a who's who of Ocean Gazing. John Delaney from episode 1. Heidi Sosik from episode 2. John Orcutt, episode 5. All those guests of Ocean Gazing, plus a lot of other scientists and educators, all gathered together for one reason. It was a chance for those who'd been designing and planning the OOI to tell other scientists about it. To get their suggestions on how to make these observatories even better. To figure out how to maximize the science possibilities.

As I listened to the presentations, discussions, and the Q and A, something became clear to me. That this Ocean Observatories Initiative is a very different way of doing science. First of all, it's unbelievably collaborative. Here's Jack Barth from Oregon State University.

Barth: Now we have an observatory that's gonna pull our 2000 people together to talk to each other. So I've heard the term collaboratory: it's a place where you can collaborate, and it's this observatory. We're just seeing the start of the interaction. It's just gonna explode with ideas. There will always be a place for individual research. But to really study the Earth's system, which the ocean is a big part of, it really requires these bigger teams.

Ari: OOI is also making oceanography way more democratic. Al Plueddemann is with the Woods Hole Oceanographic Institution, or WHOI for short.

Plueddemann: There will be a lower threshold of access for the individual that is not at an institution that has access to a ship, say, or does not have hundreds of thousands or millions of dollars of project money, can actually get access to ocean data in real time. That's going to allow, we hope, a broader community of users. For example, graduate students, young scientists who would not otherwise have the ability to get their instrumentation into the ocean on their own.

Ari: I mean, is this essentially helping people share?

Plueddemann: <laughs> In the scientific community, I think we generally do share so that concept is not new. What this is going to do is allow sharing to be faster and broader in its distribution.

Ari: Faster because the data are gonna be streaming real time and broader because it's gonna be distributed over the Internet so anyone can have access to it?

Plueddemann: That's exactly right, yes.

Kelley: It's absolutely a new model.

Ari: Deb Kelley from UW agrees.

Kelley: This way, this new way of doing science, none of the data will be really protected. It's open for the entire world to use, and I think that will be a challenge, but it's also a gigantic opportunity. And I think that's gonna be one of the best parts of the program.

Ari: The other thing I realized about this meeting is that it was arranged just like a community organizing event. Lemme explain. <fade up Sosik talking at meeting> At some point on the first day of the meeting, Heidi Sosik from WHOI raised her hand. She said she was concerned that more people hadn't been involved with discussing what types of sensors should go on the observatories. A lotta people came up to Sosik afterwards and told her they were glad she said something. The next day we were shown who would be heading up various discussion groups after the workshop finished up. And there was Heidi Sosik's name. She's in charge of the sensor development and integration discussion group.

It's pretty smart, and it's the whole point of this workshop and a bunch more that are planned in the near future. To get scientists involved and invested in these observatories. <cross-fade from workshop background to Pisces background noise>

There was a reception on the first night of the workshop. All-you-could-eat hors d'oeuvres and a cash bar. It was held on the top floor of the hotel, in the lounge called, appropriately enough, Pisces. <pause> This was our last sonic stumper: the sounds of people milling about and socializing at Pisces. After helping myself to a good deal of the hors d'oeuvres, I went looking for some feedback on the workshop. Nancy Penrose works with the OOI observatory off Washington state called the Regional Scale Nodes.

Penrose: Because I'm so focused on the Regional Scale Nodes, it's been really nice to be in this setting where people are thinking about all components of the program. It's a refresher to some extent.

Ari: I also spoke with Xiaotong Peng from Tongji University.

Peng: I think it's a good opportunity for me to attend this meeting.

Ari: And so when you go back to China, what are you going to do when you're there based on this meeting?

Peng: I want to use the knowledge from this meeting to design the China observatory. <fade out Pisces ambi>

Ari: This is exactly in line with the long-term vision of the Ocean Observatories Initiative. Here's Deb Kelley again.

Kelley: We as a world, a global world, not an individual nation, have to start looking at the planet in very, very new ways. Not as tribal countries anymore, but as a global community. And so what we're seeing is a migration of other countries wanting to install these observatories also. So you can imagine, say, 10, 20 years from now, not only is there one ocean observatory for the US, but there's moorings and cabled observatories throughout the entire ocean and they're all connected to the Internet.

Ari: It's such a vast...I mean, it's a vision as big as the Earth itself.

Kelley: It is a brand new vision. When you look at it that way and think of the importance it has for society, for education, all aspects of who we are, then it's worth it. And I think, I hope the vision comes true. <laughs>

<fade up transition music>

Ari: Onto our next sonic stumper.

<fade up sonic stumper; cross-fade to outro music under next graf>

Ari: Care to make a guess? Or have a question or comment about the Ocean Observatories Initiative? Just visit our website: oceangazing.org. You'll also find a map showing where the observatories are, and another audio clip from both Julie Morris and Jack Barth.

Ocean Gazing is a product of the Centers for Ocean Sciences Education Excellence, and it's funded by the National Science Foundation.

Thanks to Cheryl Peach, Laura Cravens, Julie Farver, Oscar Schofield, Janice McDonnell, Jim Yoder, Sage Lichtenwalner and Ghinwa Choueiter. Our intro music is by Evan Sanders.

Happy Thanksgiving.

<fade up stumper and sustain until the end>