Ocean Observatories Initiative

The Ocean Observatories Initiative & Observing Science (Simulation) Experiment

Oscar Schofield Rutgers University

> Ocean Leadership October 2010



What is OOI?

THE VISION

To launch an era of scientific discovery across and within the ocean basins, utilizing widely accessible, scalable, interactive telepresence



NSF Ocean Observatories Initiative will sample extreme environments and episodic events for a sustained period of time



- Dangerous, Difficult, Human Impacts, Resources, and Hazards,
- OOI will transform interaction between humans and oceans









OOI will provide the infrastructure to study cold climates and undiscovered biota

www.nationalacademies.org/includes/seaman3.JPG



OOI will enable researchers to:

Interact remotely with observatory sensors and platforms





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OOI will enable researchers to:



Add or reconfigure sensors on the network with ease.





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OOI will enable researchers to:











OOI is already engaging the community during construction and enabling cool science

NOAA Integrated Ocean Observing System (IOOS)





The OOI Observing System Experiment (OSE) Nov 2 to Nov 13 2009

HF Radar	Satellites	SD Now- & Forecasts	Robots	Objective oceanog the desig support f and mob data from based ray offer thes assimilat Goal: To to guide coordina	e: To provie raphic test ned CI tec ield operat ile platform fixed plat dars, and s se data stre ive forecas use multi- glider depl te satellite	de a real bed in which hnologies wi tions of ships ns, aggregate forms, shore satellites and eams to data st models. model foreca loyment and observing.	n ill s s s s sts
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The OOI Observing System Experiment (OSE) Nov 2 to Nov 13 2009

Exciting the Next Generation: Data live to undergraduates and students helped deploy the tools









































The OOI Observing System Experiment (OSE) Nov 2 to Nov 13 2009

Technical Accomplishments A closed machine to machine adaptive sensor net spanning satellites to underwater robots

Observation network coupled to ensemble ocean model systems

Improved science and observatory decision making

Science Accomplishments

Special issue of Continental Shelf Research in which 4 publications utilize the OOI OSE data.

OOI OSE data central to two PhD theses (one biologist and one physicist)

OOI OSE data utilized in special issue of Marine technological Society special issue (Nov 2010) and highlighted in EOS (Sep 2010)



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