

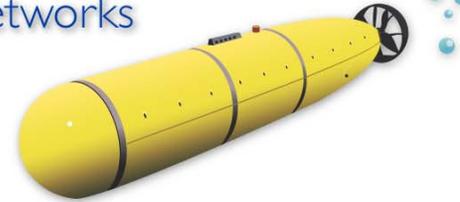


OCEAN OBSERVATORIES INITIATIVE

Understanding a changing water planet:

Building the new automated ocean sensor networks

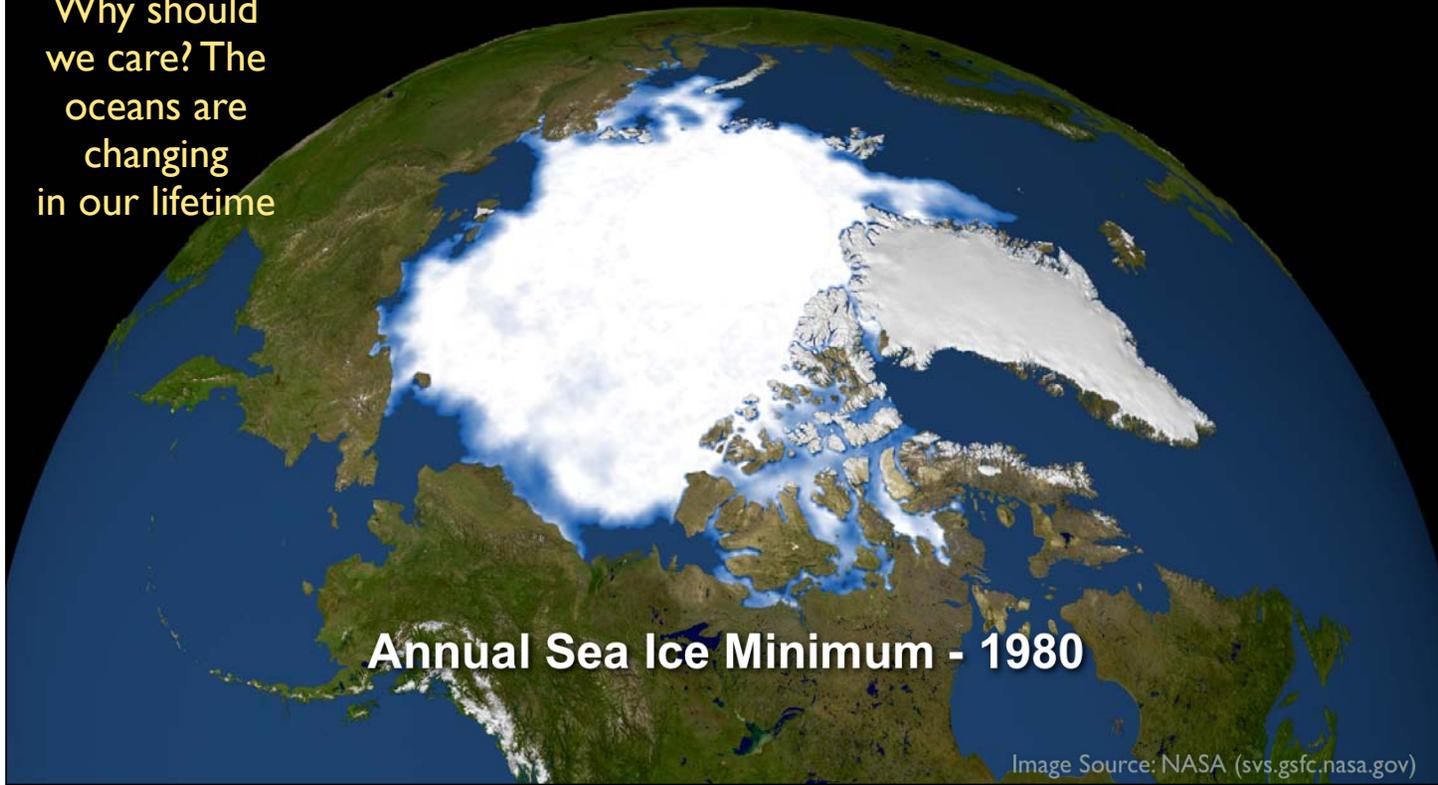
Oscar Schofield
Rutgers University's Coastal Ocean Observation Lab
(RU COOL) <http://rucool.marine.rutgers.edu>



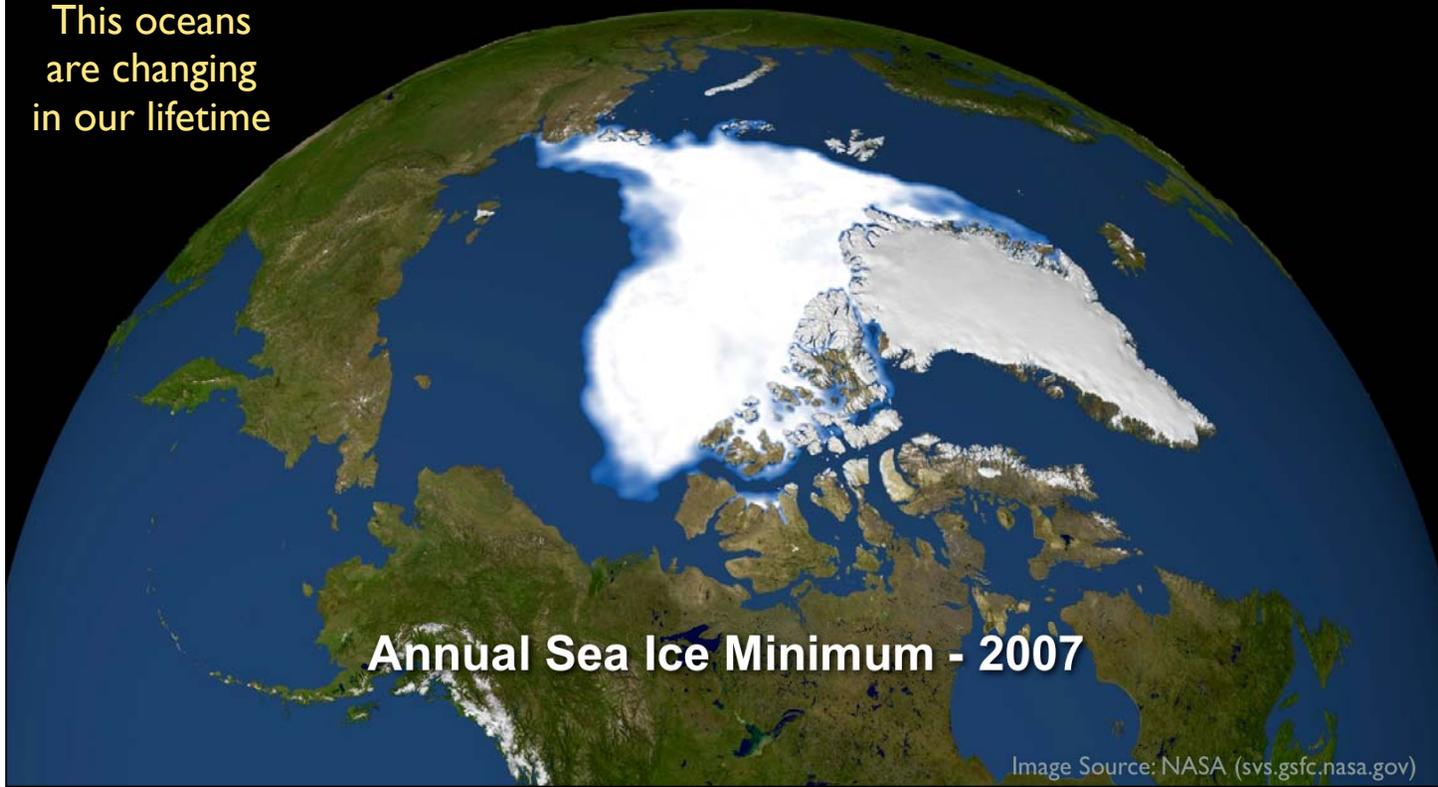
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Why should
we care? The
oceans are
changing
in our lifetime

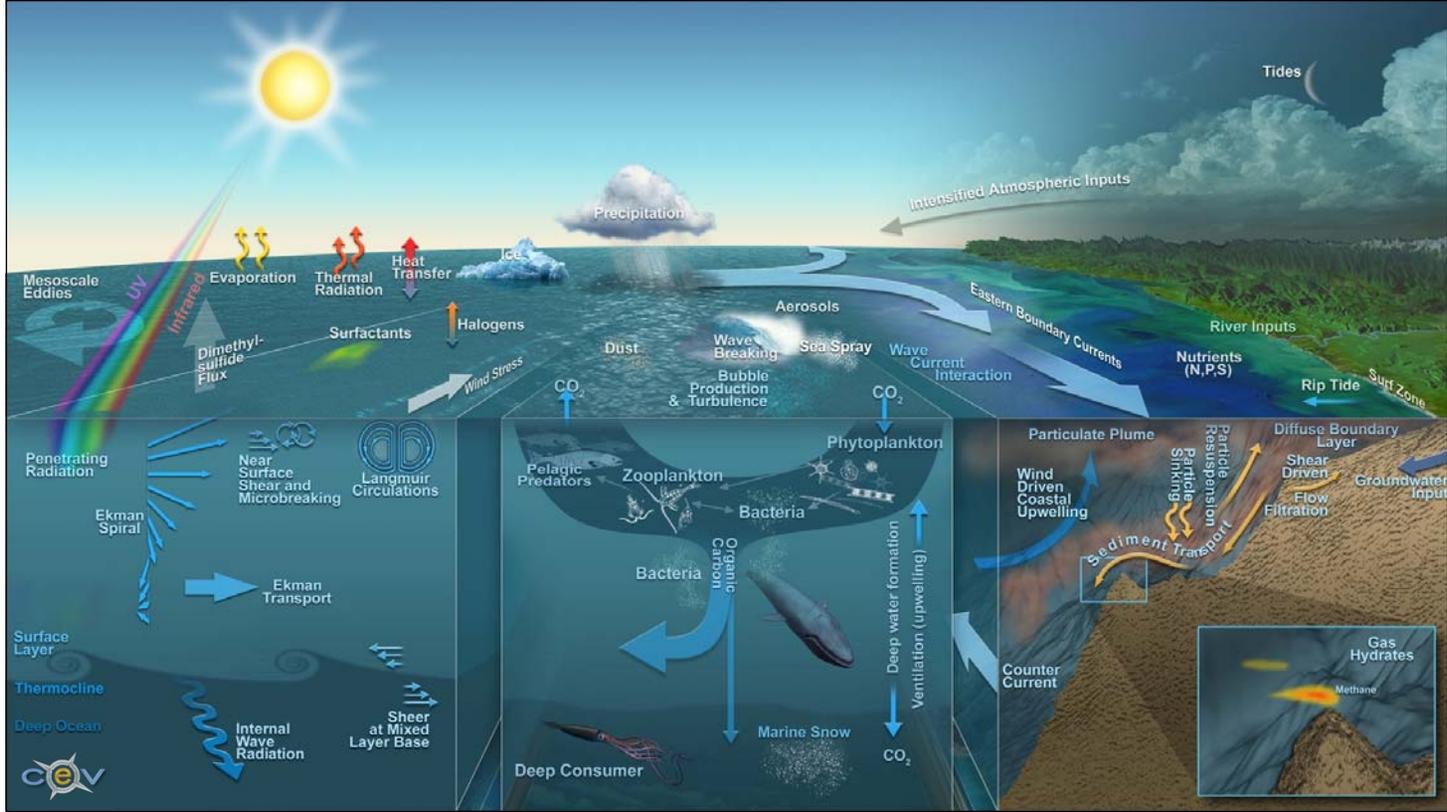


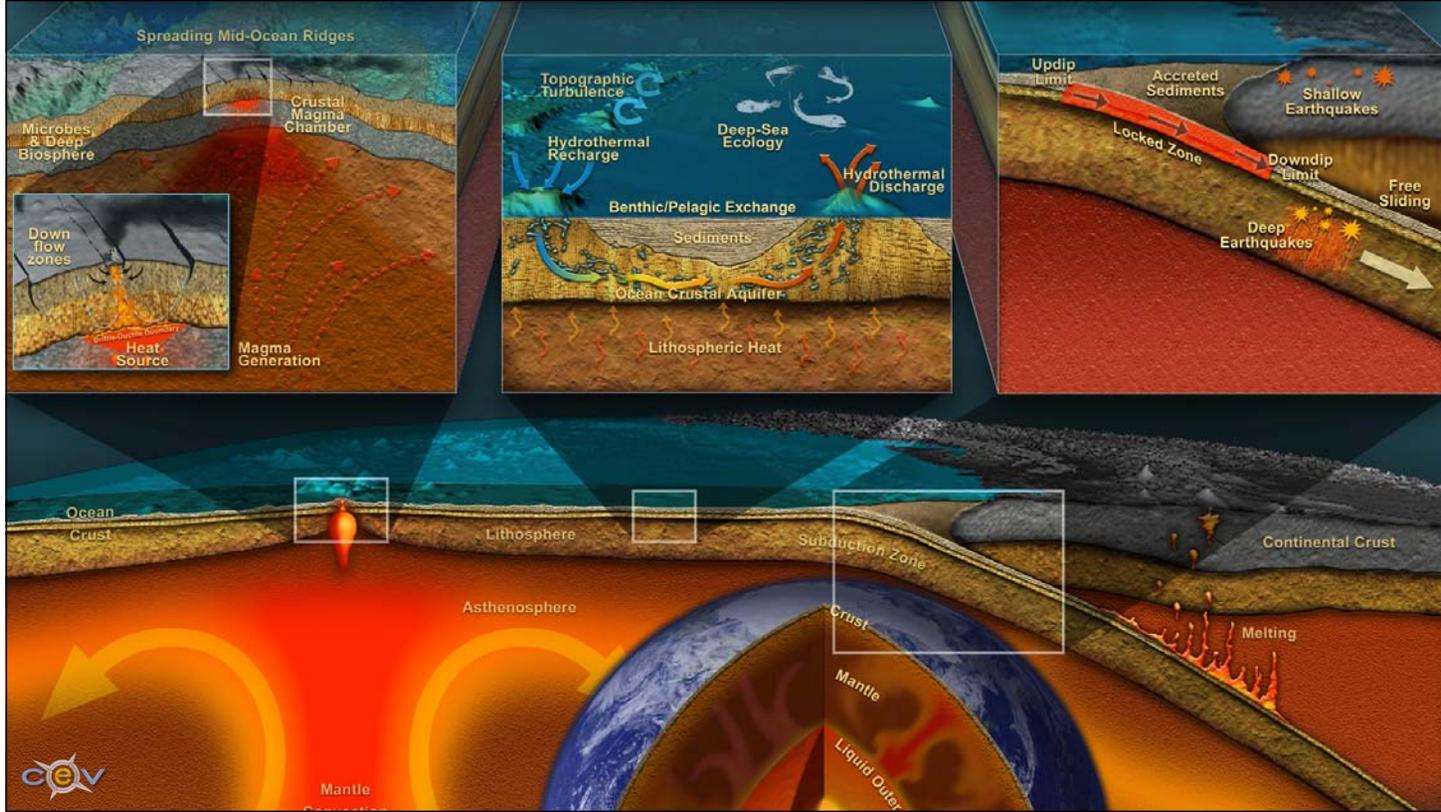
This oceans
are changing
in our lifetime



Annual Sea Ice Minimum - 2007

Image Source: NASA (svs.gsfc.nasa.gov)





Ocean is a harsh
place to work

Challenging to observe
or conduct experiments.



Unfortunately this is how we have studied the oceans for centuries

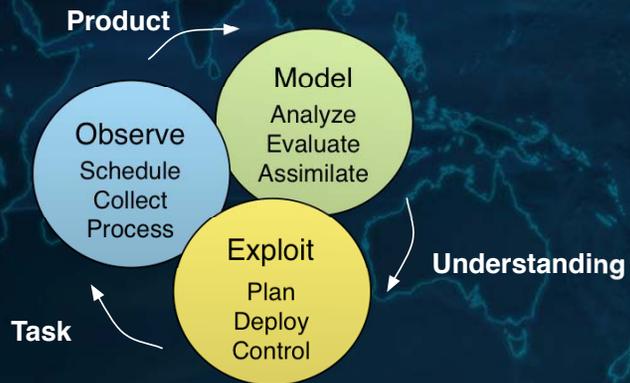


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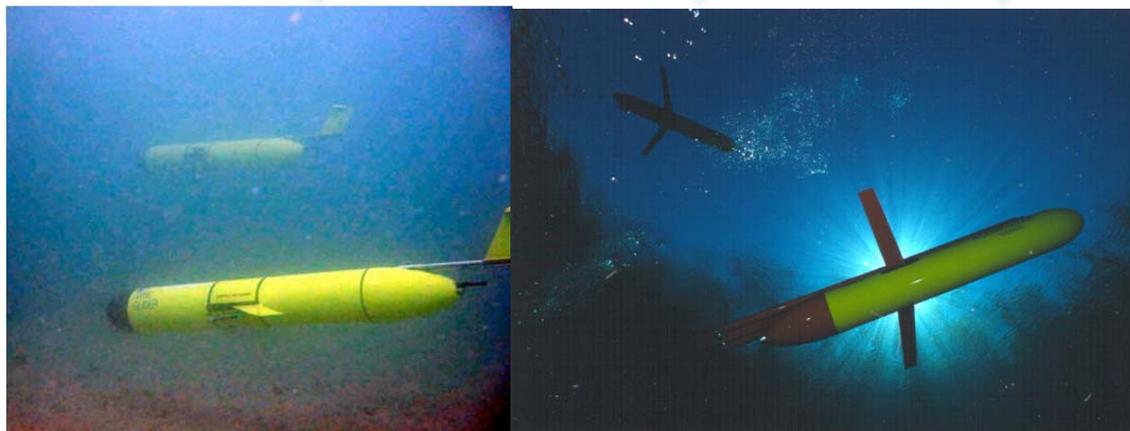
Ocean Observatories Initiative:

An interactive ocean laboratory integrated by a leading-edge, multi-scalar cyberinfrastructure.



OOI will enable researchers to:

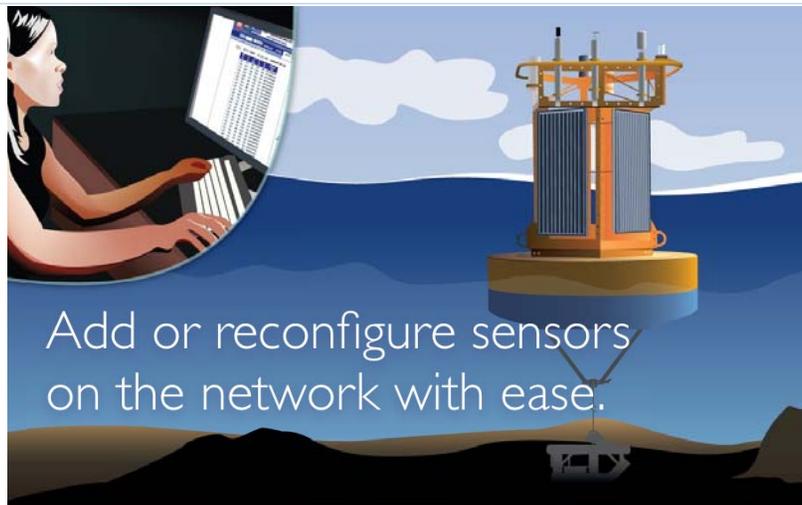
Interact remotely with observatory sensors and platforms



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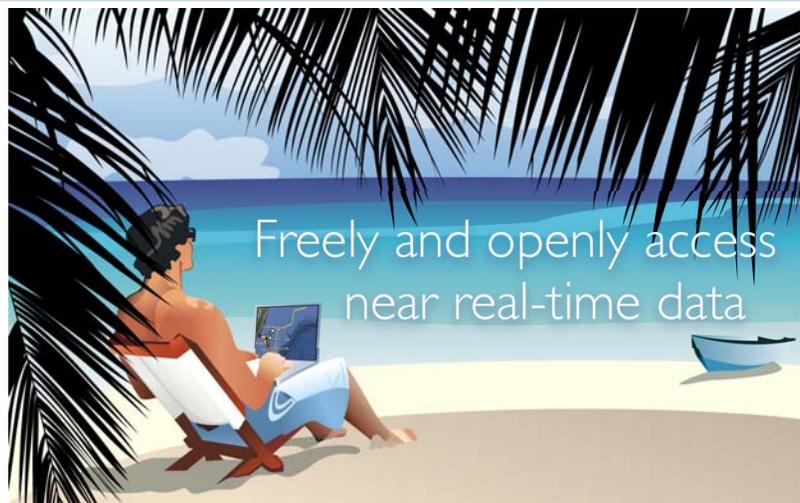
OOI will enable researchers to:



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OOI will enable researchers to:



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OOI will enable researchers to:



Collaborate with others in virtual labs to analyze and model data, test ideas and modify the observatory



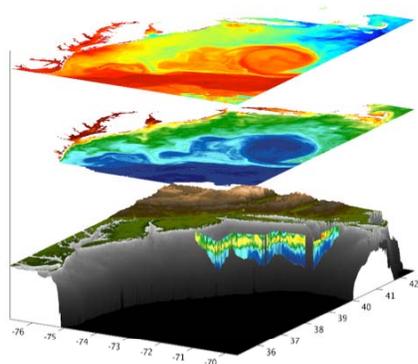
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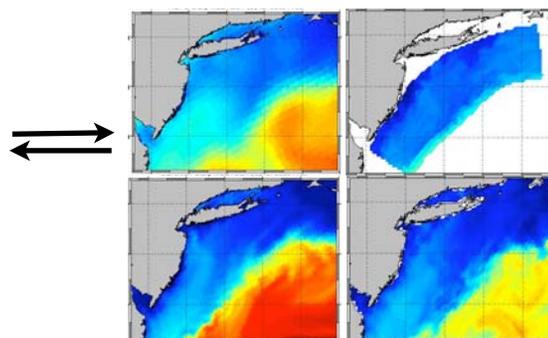
OOI will enable researchers to:

Run models within the integrated observatory network

Data



Ensembles of Numerical Models



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OOI will enable researchers to:

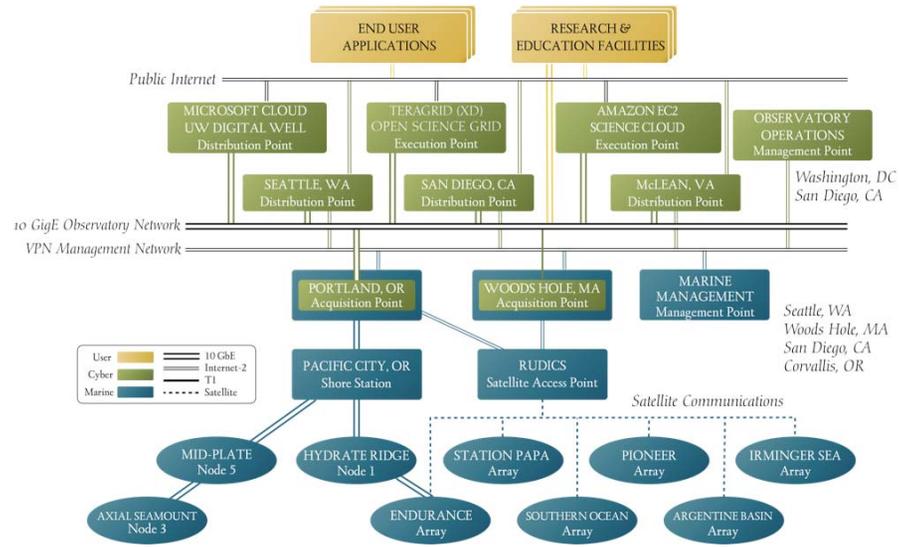
Easily subscribe to data from the observatory



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CI Network Deployment

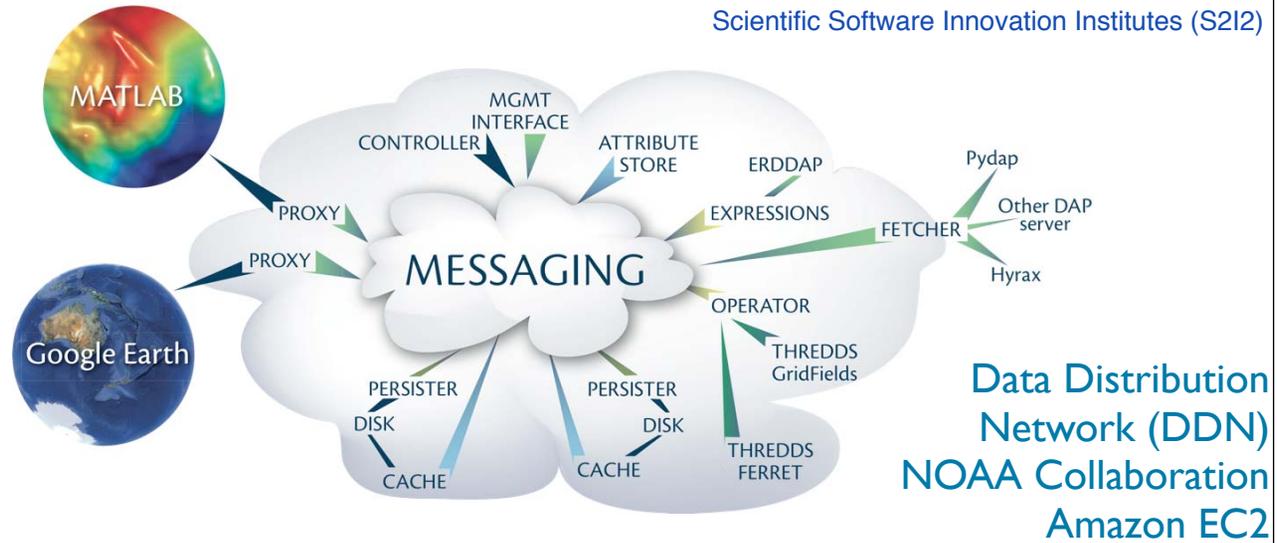


NSF OCEAN OBSERVATORIES INITIATIVE



OOI CI & NOAA Data Distribution Network

Scientific Software Innovation Institutes (S2I2)



NSF OCEAN OBSERVATORIES INITIATIVE





A Networked Ocean World with International Research & Academic Partners



NSF OCEAN OBSERVATORIES INITIATIVE



Ocean Observatories Initiative (OOI) will

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

It will allow anyone to be an oceanographer

The cloud provides the distributed capacity to allow the dream to become reality

Illustrative Implementation of OOI National Backbone

