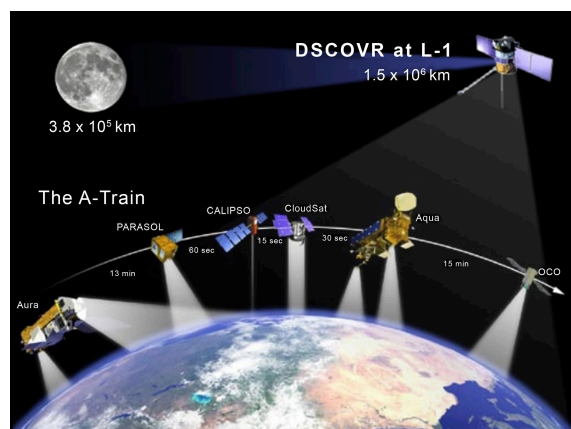
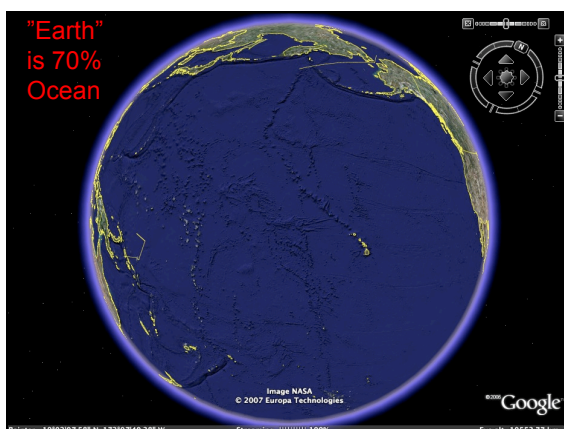
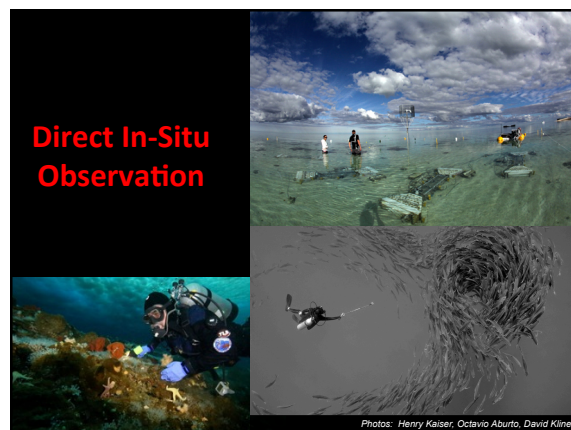
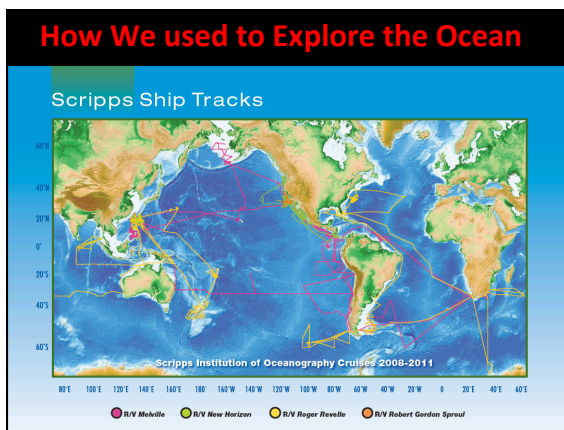
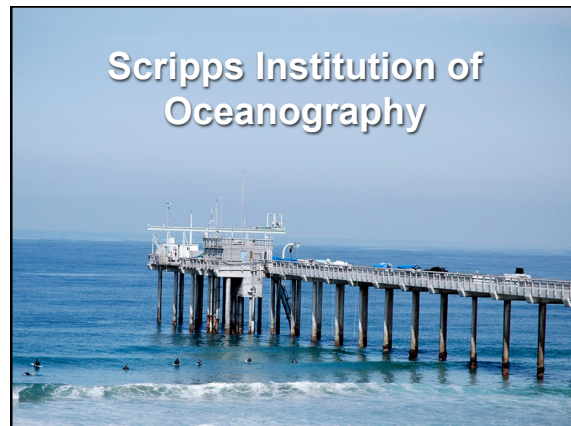


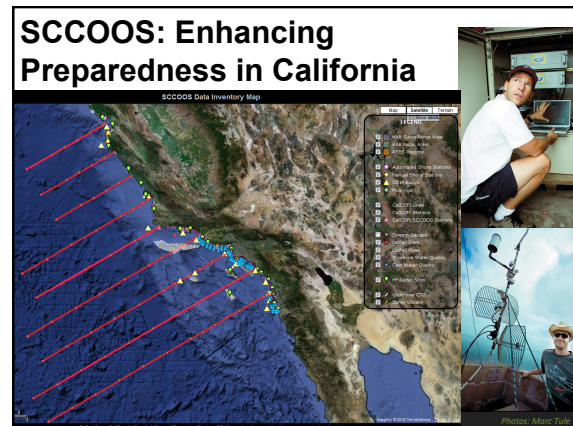
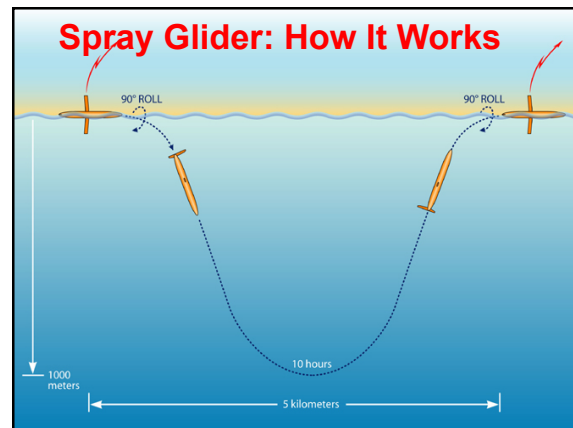
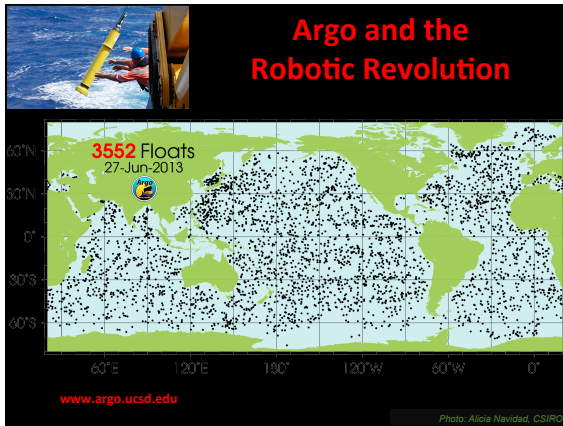


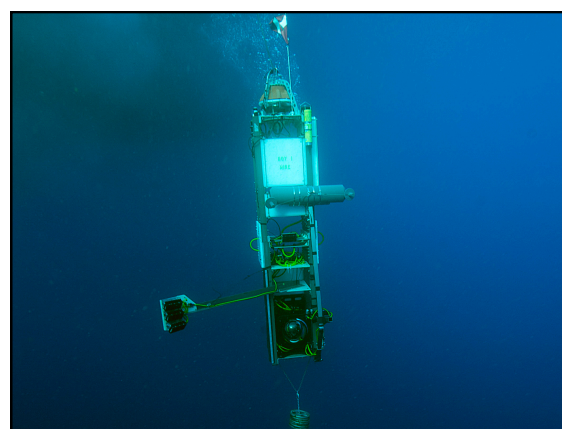
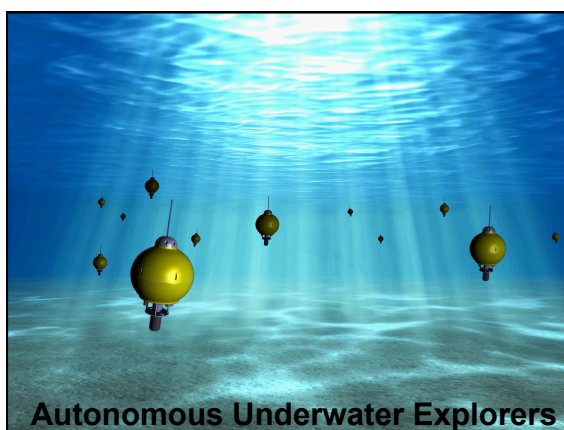
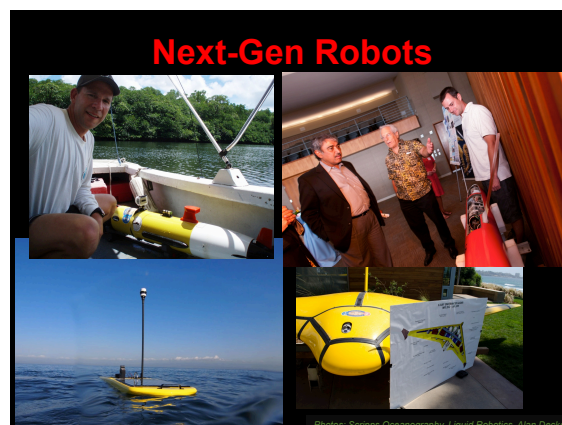
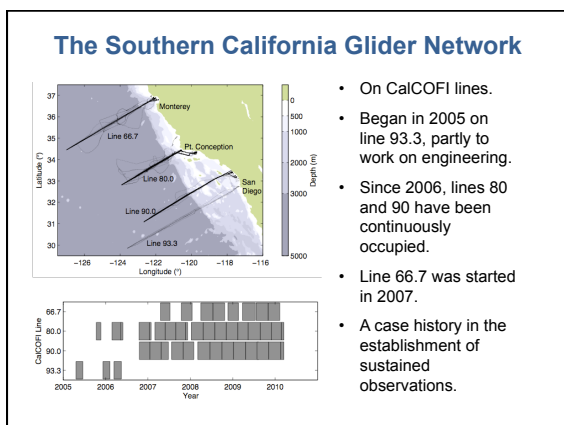
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UC San Diego

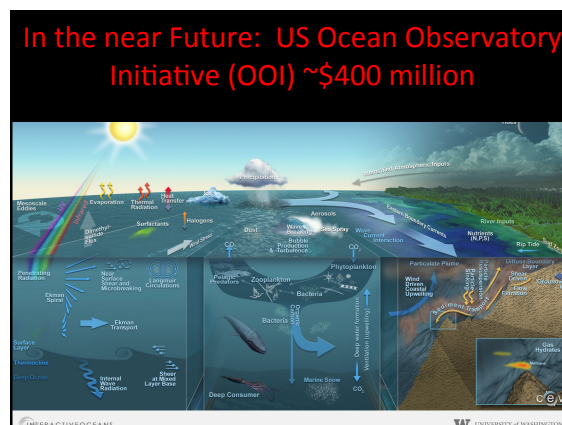
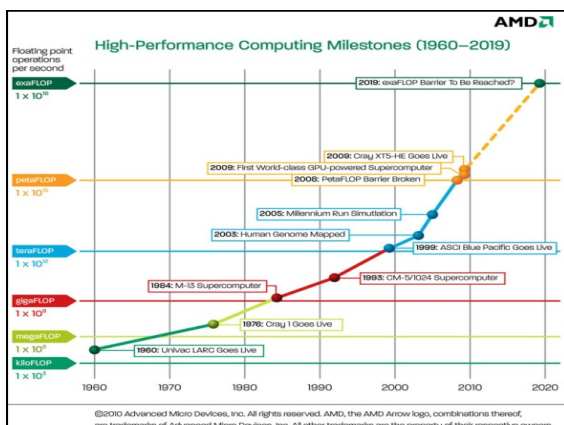
**"Behind every Cloud":
Massive data use in the Earth Sciences**

Tony Haymet and Steve Diggs
2013 July 4
Thanks to Matt Shen and Andrew Barna (SIO)







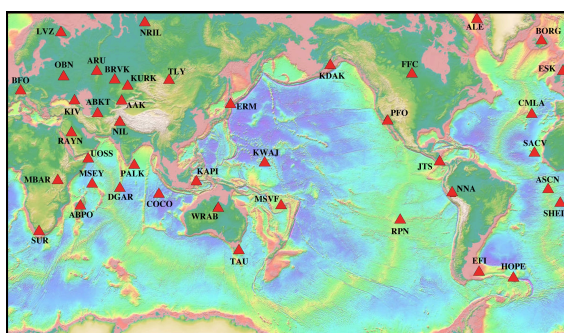


Australia's IMOS: What Is It?

- The Integrated Marine Observing System (IMOS) is a
 - National
 - Collaborative
 - Research Infrastructure program
- It brings together the Australian Universities and Publicly-Funded Research Agencies working in marine and climate science
- It funds them to deploy ocean observing equipment
- And (most importantly) it makes all of the data freely available to the whole community
 - The data streams are the 'research infrastructure' we are creating and developing

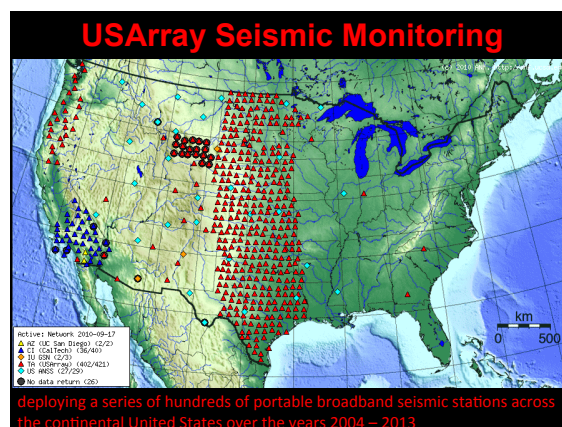
From Tim Moltman

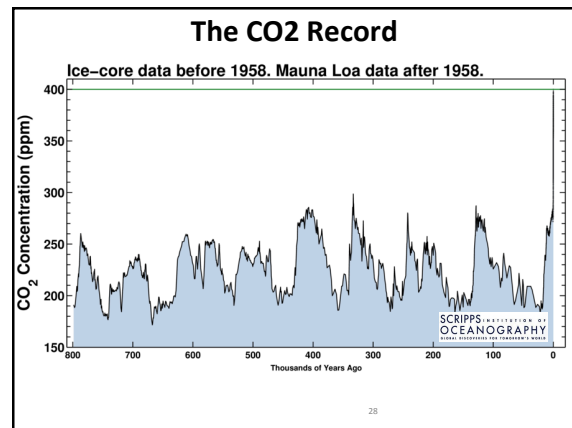
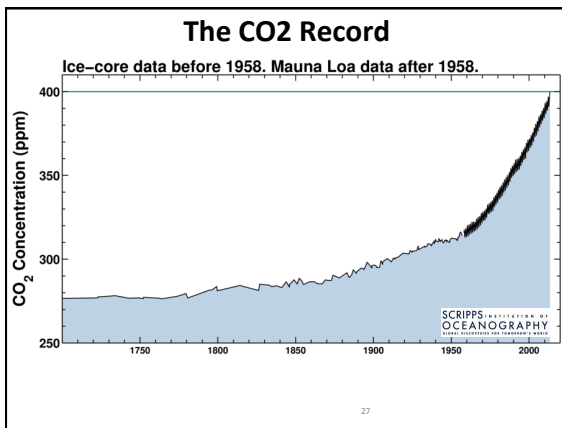
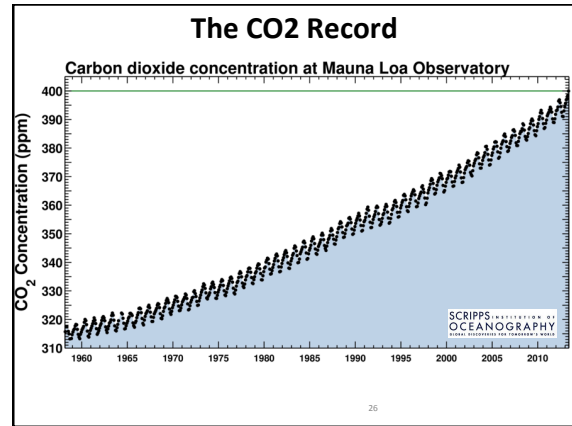
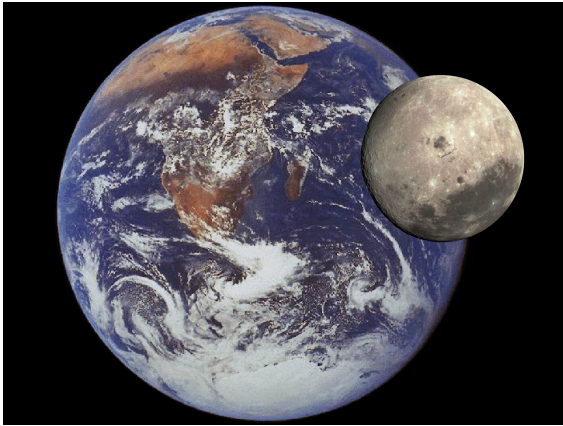
Observation Networks for the solid Earth and the Atmosphere

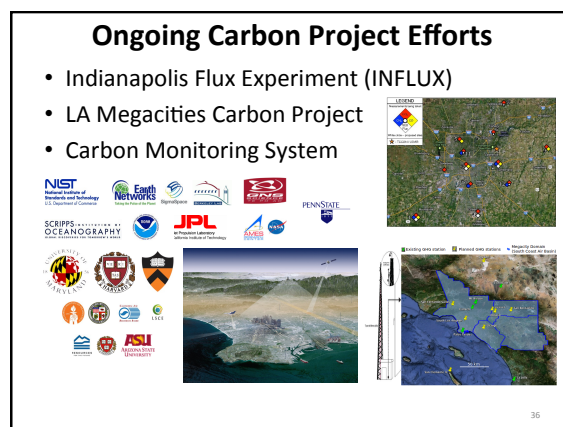
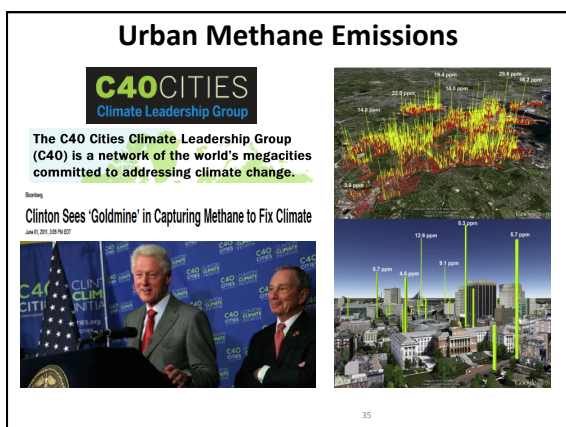
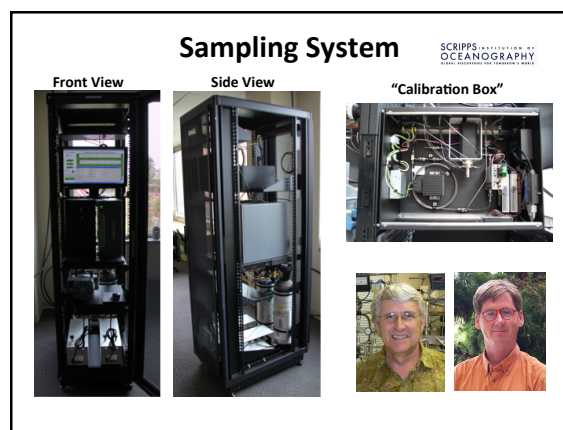
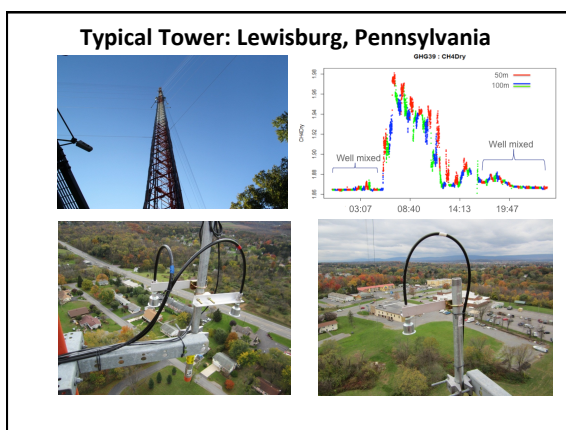
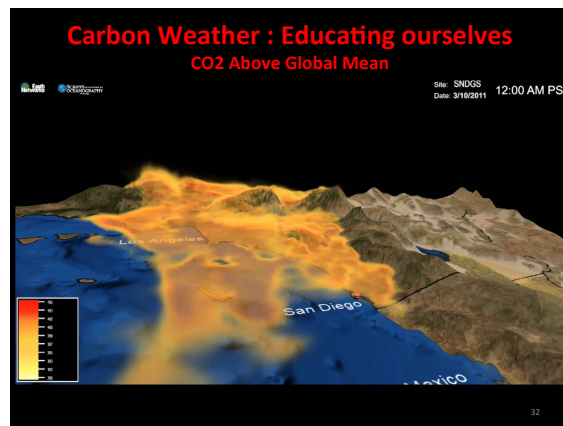
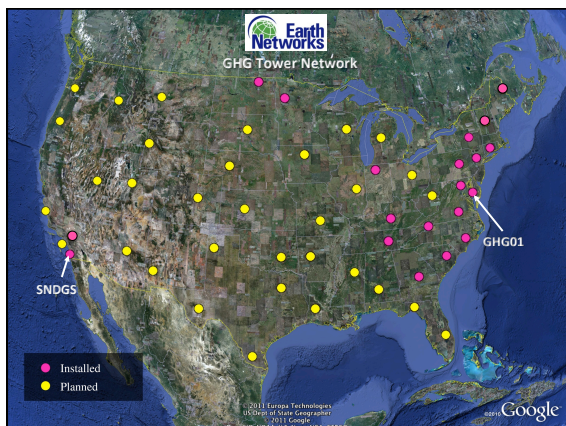


The IRIS/IDA Global Seismographic Network

41 stations of the IRIS/IDA Global Seismographic Network operated by UCSD. 26 countries. Data to research scientists USGS (for earthquakes), NOAA (for tsunamis), and the United Nations (for nuclear testing).









EarthRisk Technologies

New generation Weather & Climate company (for profit). One product TempRisk predicts heat waves & cold snaps

- **EXAMPLE: Midwest East US Region** Extreme heat event of summer 2012
- Prolonged heat occurred during late June and early July 2012

EarthRisk's business model

- TempRisk is the first commercial application with a Comprehensive Empirical Forecast Model used to analyze risks for extreme cold and heat events up to 40 days before they occur.
- TempRisk users make better weather-influenced trades with greater risk visibility – both when high impact weather is more likely and less likely than today's standard models

“Driving better demand based trades with visibility of the risk distribution”

