



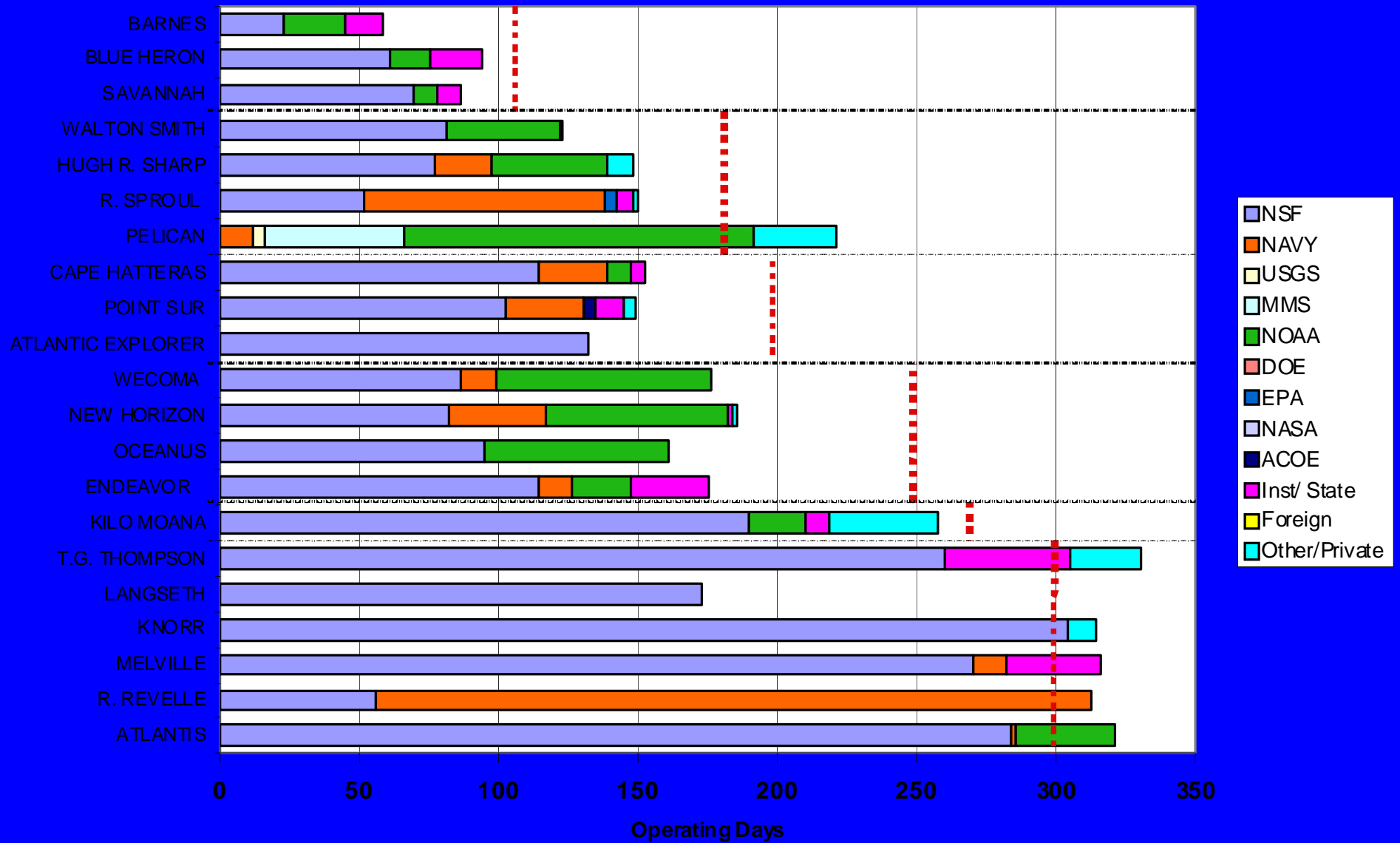
2010 UNOLS Fleet Operations



Where are the ships in 2010?



2010 Schedules



Melville



<i>Agency</i>	<i>Total</i>
INST	34
NAVY	12
NSF	270
Total	316

South Pacific
Nicaragua
Galapagos
Central Pacific
Off West Coast
Panama/Peru Basin
West of Chile

Research:

- Global Ocean Repeat Hydrography, Carbon, and Tracer Measurements
- Biological and Geological Processes and Patterns of the Chilean Margin
- Chilean Earthquake Rupture Survey
- Serpentinite, Extension and Regional Porosity Experiment across the Nicaraguan Trench
- Plume-Ridge Interaction in the Northern Galápagos: geochemistry, geophysical mapping, and gravity modeling
- Grazing and Iron Controls of Diatom Blooms
- Exploring the Santa Barbara Anoxic Basin:
 - Eastern Equatorial Pacific Ocean
- Center for Microbial Oceanography: Research and Education (C-MORE)

Melville



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INST	34
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Eastern Equatorial Pacific Ocean

Center for Microbial Oceanography: Research and Education (C-MORE)

Knorr



Research

Evaluate Atlantic Intermediate Circulation During the Past 25,000 Years

Reconstruction of a continuous, high-resolution record of late Quaternary paleohydrology and paleoclimate of the Amazon basin

Agulhas Current Time-series (ACT)

Amazon influence on the Atlantic

Radiocarbon ventilation ages and climate in the northern subtropical Atlantic

Understanding Exchanges through Davis and Fram Straits

Management and Logistics Operations for the U.S. GEOTRACES Zonal North Atlantic Survey Section

Agency	Total
INST	0
NSF	304
OTHER	10
Total	314

Amazon offshore

South Africa

Subtrop N.Atl

Thomas G. Thompson



Research

DIMES, Diapycnal and Isopycnal Mixing in the Southern Ocean

UW Oceanography Education

Response of the Ocean to the Montreal Protocol and Subsequent Amendments

BEST - examine impacts of sea-ice on the hydrographic structure and nutrients over the eastern Bering Sea shelf during summer

Enlighten'10 Regional Scale Nodes Detailed Site Characterization

Monitoring inflation at Axial Seamount

Function, activity, and adaptation of microbial communities in geochemically diverse subseafloor habitats

NEPTUNE Canada Installation and maintenance

Acoustic Instrumentation for Imaging and Quantifying Hydrothermal Flow in NEPTUNE Canada

<i>Agency</i>	<i>Total</i>
INST	45
NSF	260
OTHER	25
Total	330

Eastern Pacific

Antartic Pen.

N/S Pacific

Bering Sea

Juan de Fuca

Line Islands

Juan de Fuca

Roger Revelle



Agency	Total
NAVY	256
NSF	56
Total	312

Research

FORMATION, REWORKING AND ACCUMULATION OF SEDIMENTARY DEPOSITS, WAIPAOA RIVER SHELF, NEW ZEALAND

Constraining mantle rheology, mantle flow, and crust/mantle coupling beneath New Zealand

How Is Rifting Exhuming the Youngest HP/UHP Rocks on Earth?

Dredging rocks from a large volcanic flow in the Bismarck Arc, Papua New Guinea

Process Study of Oceanic Responses to Typhoons

IWMSE PILOT Experiment, 2010

Philippine Sea Integrated Experiment

Generation and Evolution of Internal Waves in Luzon Strait

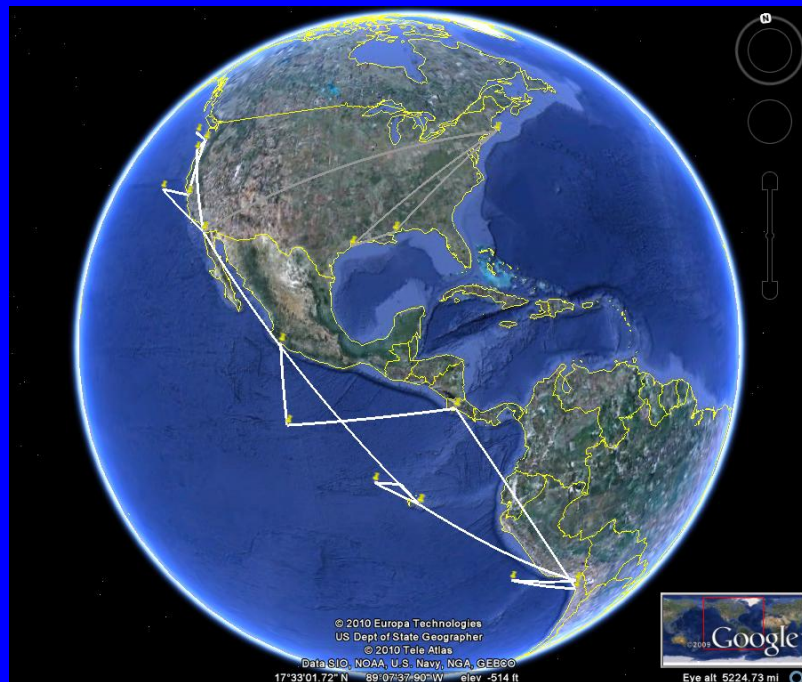
Air-Sea Interactions in Typhoon Conditions

Impact of Typhoons on the Western Pacific Ocean

Internal Waves in Straits Experiment

Acoustic Seaglider: Philippine Sea

Atlantis



Magma Movement along the EPR

Establishing a geodetic network at EPR Ridge 2000 ISS

Deep sea hydrothermal vent - after a recent eruption at EPR

Carbonate Ecosystems studies

Relationships between iron and microbial community - non-AV

Volcanic Eruptions on the Galapagos Spreading Center

Microbial Ecology: ODP Borehole Observatories

Probe deployments at the Endeavour ISS

Particle Transport and Carbon Export - Atlantic Margin

Seafloor Brine Seeps - Gulf of Mexico

Agency	Total
NAVY	1
NOAA	36
NSF	284
Total	321

Facilities
Supported:

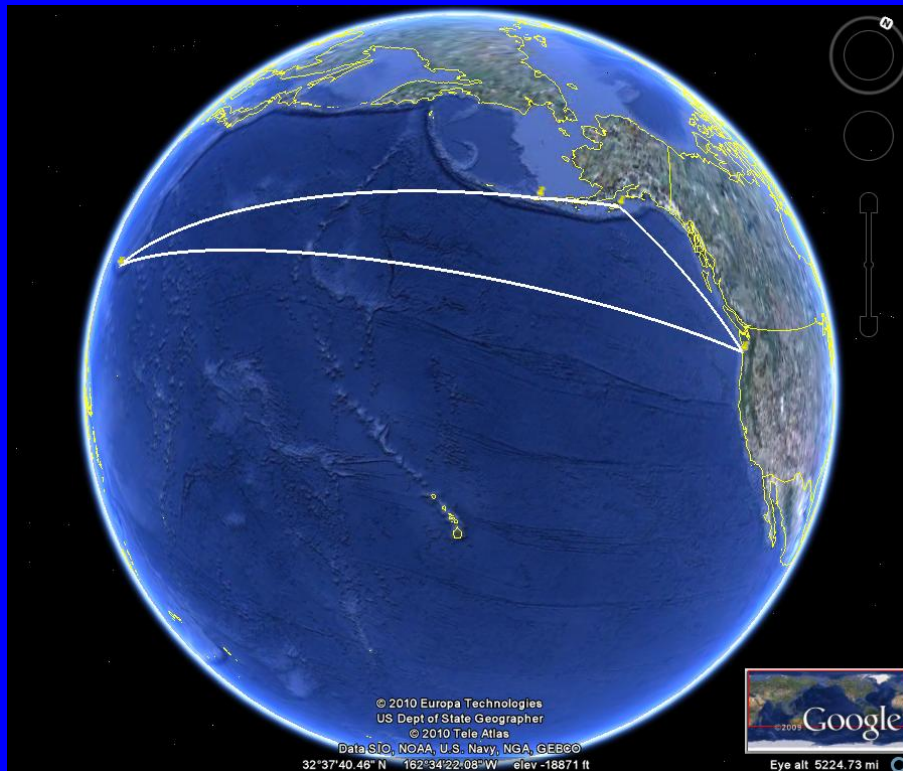
Jason

ABE/Sentry

Alvin

non-Submersible

Marcus Langseth



Research:

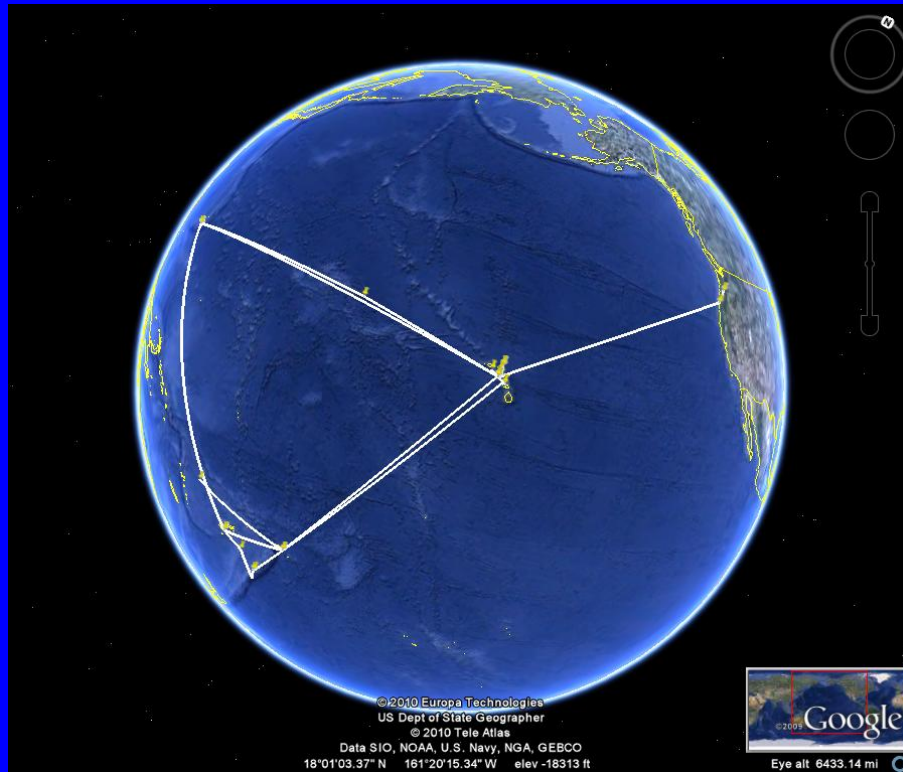
Mantle serpentinitization and water cycling through the Mariana trench and forearc

Geophysical Constraints on Mechanisms of Ocean Plateau Formation - Northwest Pacific

Megathrust seismic hazards by reflection mapping

173 Operating Days – all NSF

Kilo Moana



Agency	Total
NOAA	20
NSF	190
OTHER	39
STATE	8
Total	257

West Coast
Hawaii
Guam
Lau basin
ALOHA

Research

Strombolian volcanism, magma degassing, and hydrothermal discharge at an active submarine arc volcano

Assessment of T-wave Processes and Hydroacoustic Monitoring Capabilities in the Lau Basin

Center for Microbial Oceanography: Research and Education (C-MORE)

The Hawaii Ocean Time-series (HOT)

Oceanic diazotroph community structure and activities in a high carbon dioxide world

Seismicity and velocity structure of Lo`ihi submarine volcano

Depth Distribution of Anisotropic Fabric in the Oceanic Mantle

Crustal accretion and mantle processes along the subduction-influenced Eastern Lau Spreading Center

Wecoma



**NSF Science and Technology Center (STC)
for Coastal Margin Observations and
Prediction**

Endurance Array (OOI)

Using Dye to Study Lateral Mixing

**Reconfiguration of Webb-style gliders for
routine turbulence measurements**

**Ecosystems and Fisheries-Oceanography
Coordinated Investigations (Eco-FOCI)**

**Coastal Autonomous Profiling and Boundary
Layer System (CAPABLE)**

<i>Agency</i>	<i>Total</i>
NAVY	13
NOAA	77
NSF	86
OTHER	0
<i>Total</i>	<i>176</i>

Eq Pac
Oregon coast
East Bering Sea
WA margin
Puget Sound
Carcadia Margin

Endeavor



Agency	Total
NAVY	12
NOAA	21
NSF	114
STATE	28
Total	175

Offshore coseismic effects of the Port au Prince earthquake, Haiti

Rhode Island Endeavor Program

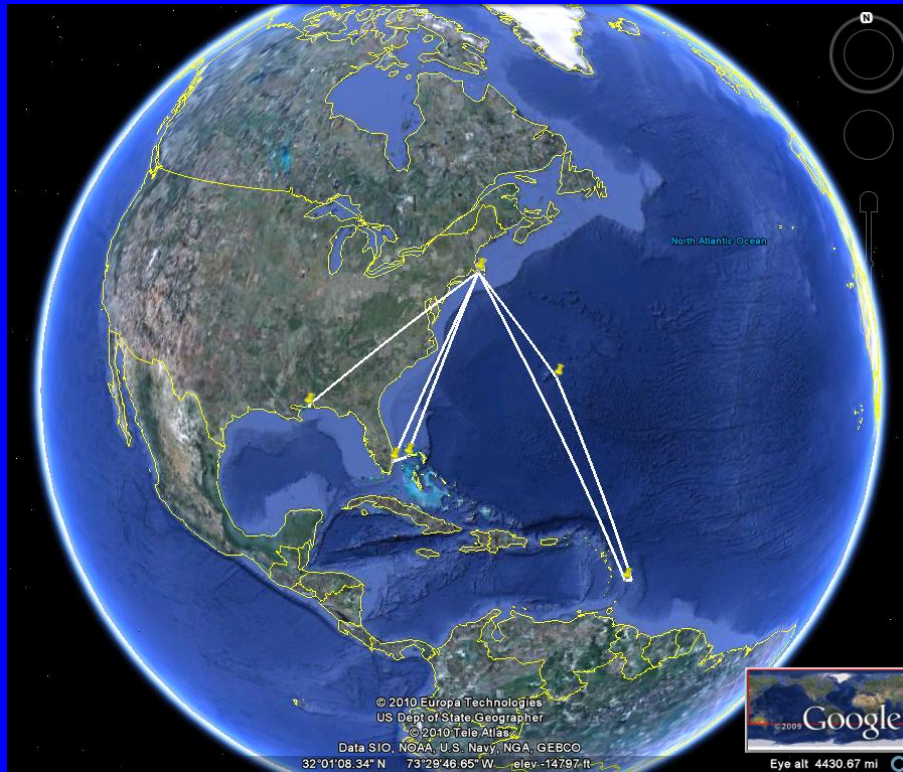
GOMTOX:Gulf of Maine - study of nearshore and offshore toxicity, vertical toxin flux, and bloom dynamics in a complex shelf sea

The Black Carbon Cycle: Budget and Fluxes of Black Carbon in South Atlantic Sediments

Acoustic Resonance Classification of Swimbladder-bearing Fish at Multiple Scales

Interannual cyst distribution in the Gulf of Maine

Oceanus



<i>Agency</i>	<i>Total</i>
NOAA	66
NSF	95
<i>Total</i>	<i>161</i>

Western Boundary Time Series

GOMTOX: Study of nearshore and offshore toxicity, vertical toxin flux, and bloom dynamics in a complex shelf sea

Dispersal and life history dynamics of benthic foraminifera

Deep-ocean Assessment and Reporting of Tsunamis Service of North Atlantic

Mercury Biogeochemistry on the Continental Shelf and Slope

Nitrogen fixation, nutrient supply, and biological production in the Gulf of Mexico

Nitrogen fixation in the western North Atlantic

New Horizon



Agency	Total
INST	4
NAVY	35
NOAA	65
NSF	82
OTHER	1
Total	187

CalCOFI Survey

Ocean Surface Sources of Correlated Noise

A Pacific OBSIP Facility

A submerged upper-ocean multi timeseries profiler

Hypoxia and the ecology, behavior and physiology of jumbo squid, *Dosidicus gigas*
Dynamic Camouflage in Benthic and Pelagic Cephalopods

Zooplankton at the Base of the Particle Maximum

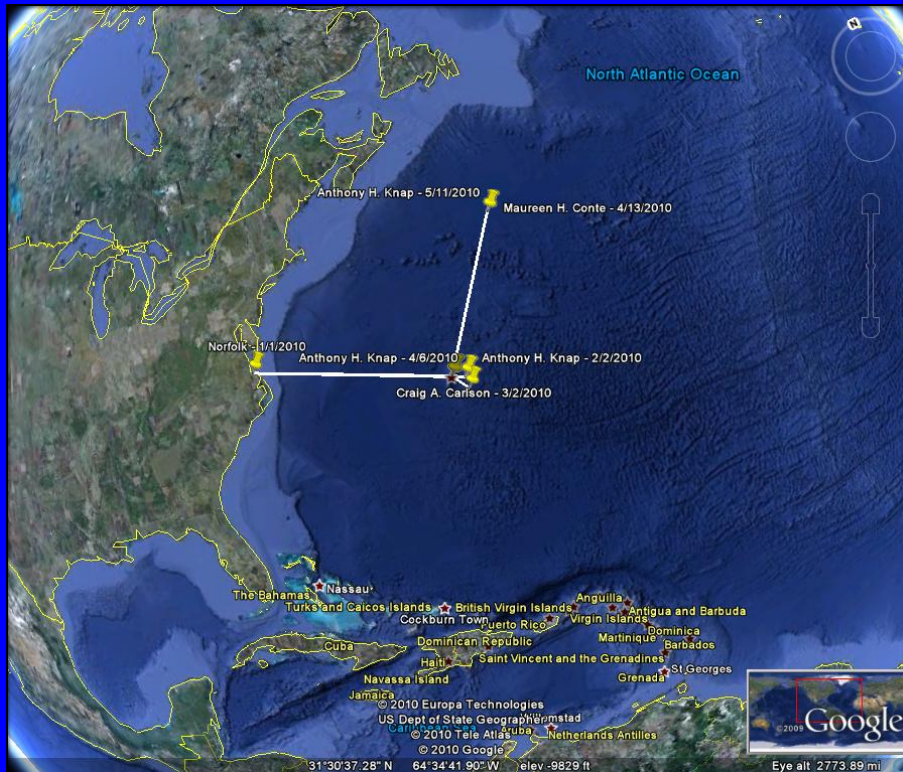
LTER: Nonlinear Transitions in the California Current Coastal Pelagic Ecosystem

Southern California Regional Coastal Ocean Observing System

Egg Production in *Calanus pacificus* in Response to Oceanic Fronts

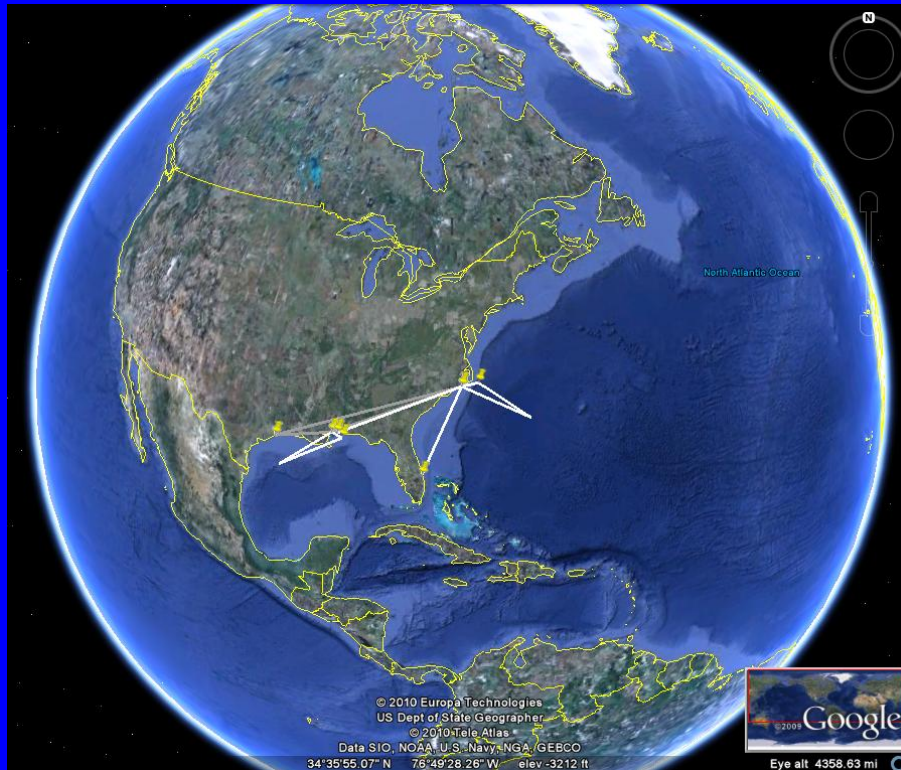
Advanced Technology for In-situ Acoustic Sensing of Zooplankton

Atlantic Explorer



- The Bermuda Atlantic Time-series Study (BATS): Years 21-25
- The Panulirus Hydrographic Stations: Year 54-59
- Transitions in the surface layer and the role of vertically stratified microbial community structure in the carbon cycle- an oceanic microbial observatory

132 Operating Days – all NSF



Cape Hatteras

purpose

Winter fish tagging

Satellite Assessment of CO2 Distribution

Survey and coring in the northern Gulf of Mexico slope.

Top-Down Regulation of Picophytoplankton in the Sargasso Sea: Trace Metal Sampling

Chemical ecology of sponges - Caribbean Reefs

LIDAR Studies of Small Scale Lateral Dispersion in the Ocean

N2-Fixation in GoMex

<i>Agency</i>	<i>Total</i>
NAVY	25
NOAA	8
NSF	114
STATE	5
Total	152

Point Sur



ONYX - San Clemete Island

Point Sur Ridge mooring recovery

RAPVLA Acoustic Modem Test

Mechanisms controlling the production and fate of DOM during diatom blooms

The California Current transition zone off northern and central California

Stratification on the Bering Shelf

Kelp forest interaction webs in the Aleutian archipelago

Agency	Total
ACOE	5
INST	10
NAVY	28
NSF	102
OTHER	4
Total	149

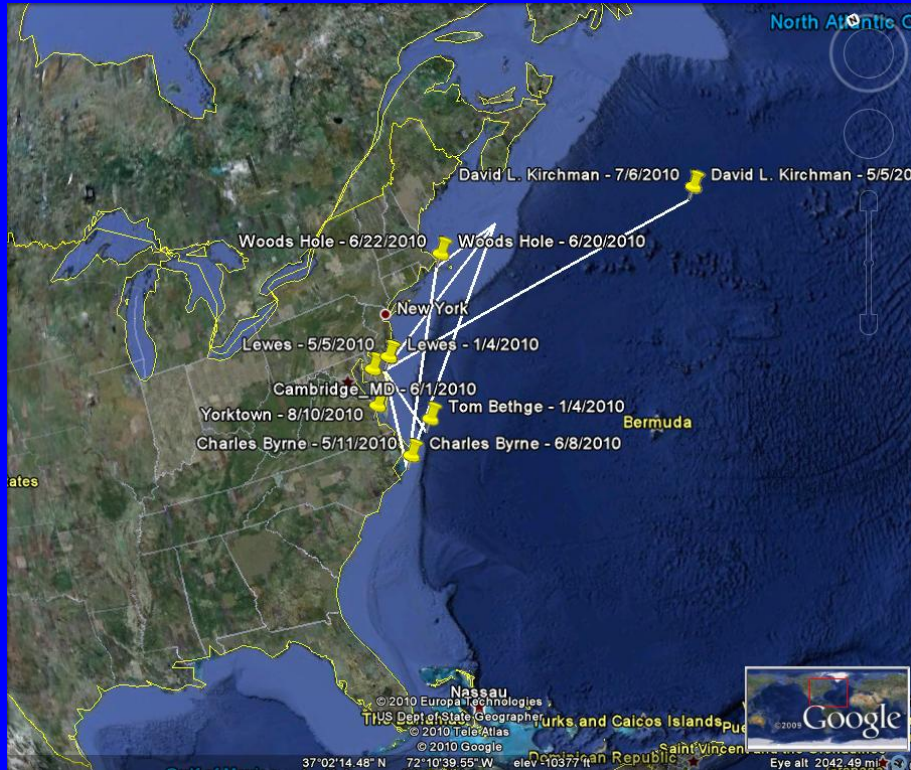
Monterey Bay

SB Basin

Aleutians

Bering Sea

Hugh R. Sharp



Sediment Sources, Transport Mechanisms, and Fluxes in a Coastal Plain Estuary

MO: Photoheterotrophic Microbes of the Mid-Atlantic Bight

Sea Scallop Survey - Vessel Calibration

Hypoxia in Marine Ecosystems: Implications for Neritic Copepods

Sediment Sources, Transport Mechanisms, and Fluxes in a Coastal Plain Estuary

Sea Scallop Survey - Vessel Calibration

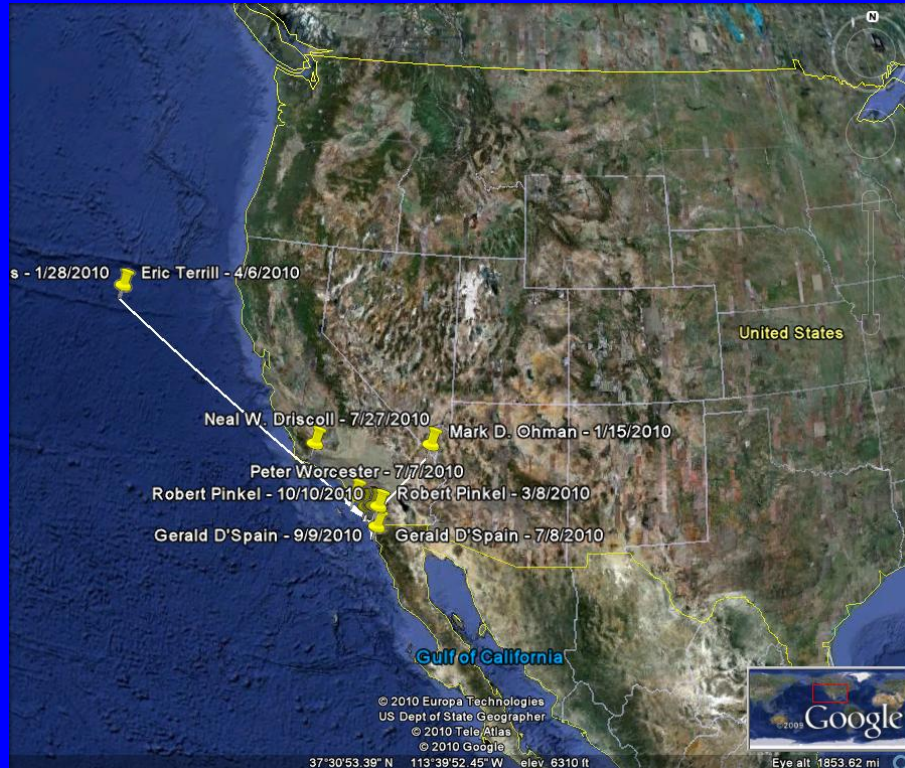
MO: Photoheterotrophic Microbes of the Mid-Atlantic Bight

Life in the Dead Zone: Microbial respiration, production, diversity and gene seasonally anoxic estuarine waters

Agency	Total
NAVY	20
NOAA	42
NSF	77
OTHER	9
Total	148

East Coast
Chesapeake Bay
Delaware Bay
Hudson R-Canyon

Robert Gordon Sproul



Agency	Total
EPA	4
INST	6
NAVY	86
NSF	49
OTHER	2
Total	147

A Pacific OBSIP Facility

Blue Whale Behavioral Response Study & Field Testing of the New Bioacoustic Probe

Surface waves, internal waves, and the stability of the Diurnal Surface Layer

Liberdade Flying Wing Underwater Glider Program

A Bottom-Moored Acoustic Seafloor Strain Sensor

Glider-based Detection and Classification of Marine Mammals in the SOCAL Region

Marine Mammal Monitoring (SOCAL)

Construction and Deployment of a Seafloor Drift-Corrected Pressure Gauge for Deformation Observation at Axial Volcano

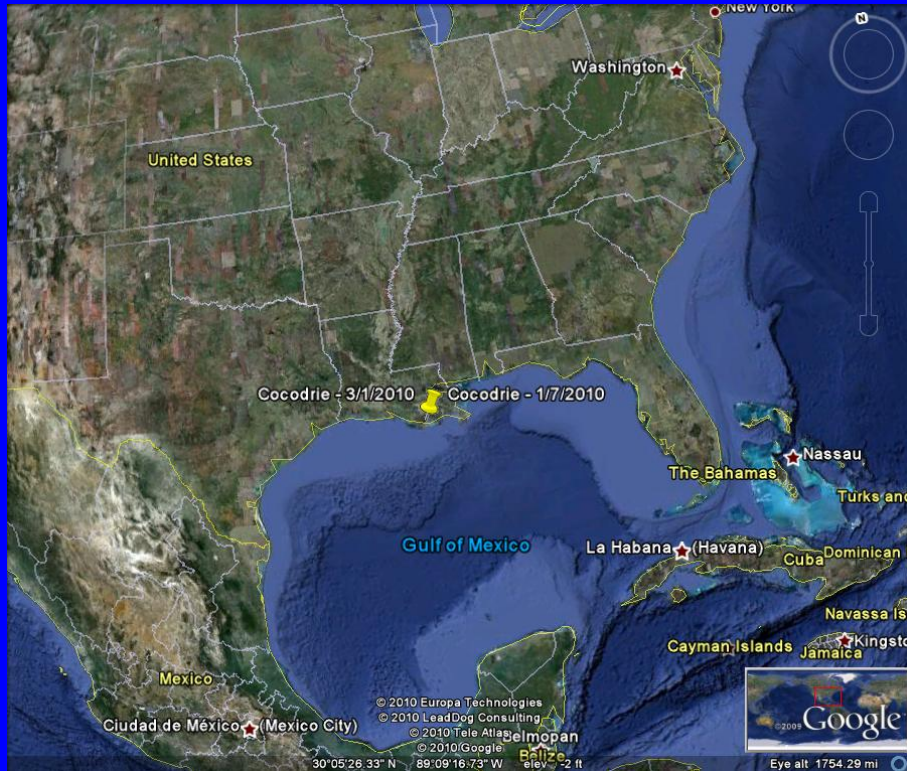
Advanced Technology for In-situ Acoustic Sensing of Zooplankton

Development of a Next Generation Subseabed Pore Pressure Instrument for Marine Hydrogeology: The PUPPI-II

NSW Coastal Observing Development and Support

North Pacific Acoustic Laboratory

Pelican



SEAMAP

Seafloor Observatory

Sediment Trap

Mooring rotation

NGOMEX09: Integrated Ecosystem

Eco-Arch research

Loop Current Study

Hypoxia processes

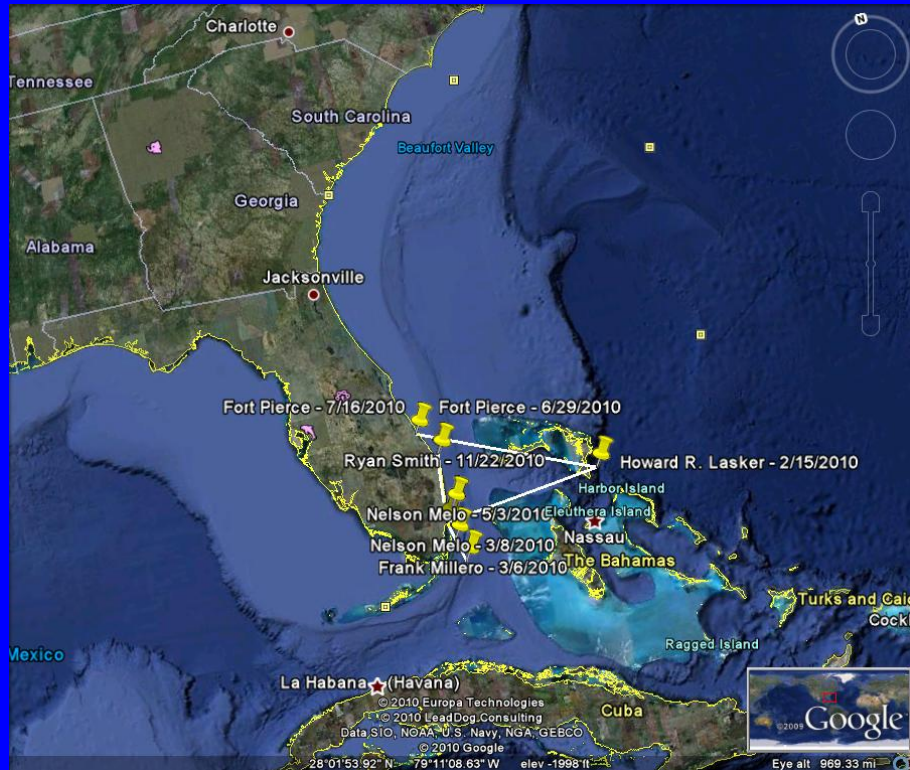
NGOMEX: Reproductive

ECOHAB: Karenia Nutr

Mooring rotation

<i>Agency</i>	<i>Total</i>
MMS	50
NAVY	12
NOAA	125
OTHER	30
USGS	4
<i>Total</i>	<i>221</i>

F.G. Walton Smith



Bahamian octocorals

**Recruitment dynamics and
population connectivity in**

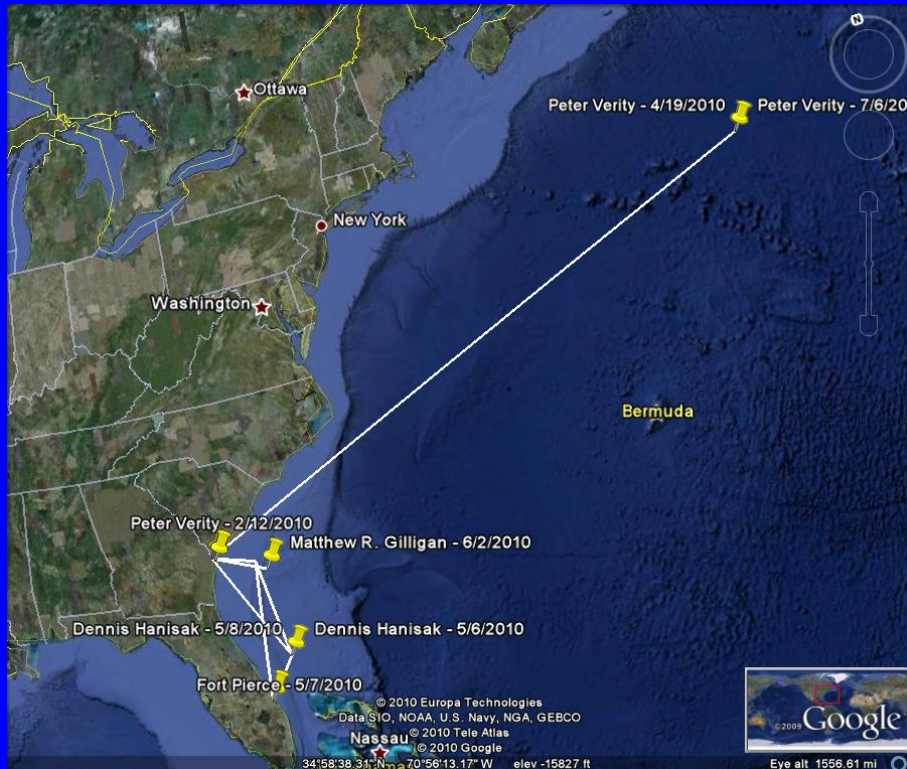
Bahamian octocorals

**Chemical ecology of sponges on
Caribbean coral reefs**

**Center for Subtropical and Tropical
Oceans and Human Health Research
in the Marine Sciences**

<i>Agency</i>	<i>Total</i>
INST	1
NOAA	41
NSF	81
<i>Total</i>	<i>123</i>

Savannah



<i>Agency</i>	<i>Total</i>
NOAA	9
NSF	69
STATE	8
<i>Total</i>	<i>86</i>

Doliolid Blooms

Savannah State University

Coastal Geoscience and Engineering

**Student education and training
(State-funded)**

**Building Ocean Literacy in a Coastal
Community through Science
Education and Estuarine Monitoring**

**New At-Sea Opportunities for the
Next Generation of Scientists**

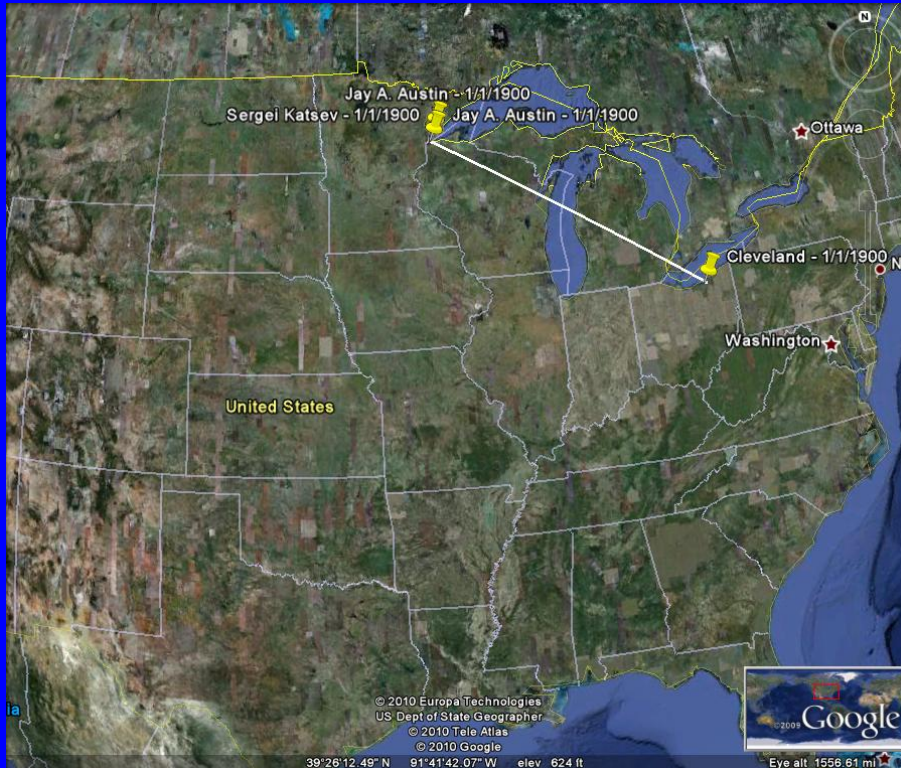
**PROCESSES CONTROLLING THE
RELEASE OF IRON FROM
CONTINENTAL MARGIN SEDIMENTS**

**Bridge to Research in Marine
Sciences**

Investigations of Trophic Interactions

ETBC: Reactions at the Edge

Blue Heron



purpose

The role of Ice in the response of Large Lakes to a Changing Climate

HOW IMPORTANT IS “OLD” CARBON IN LAKE SUPERIOR? A RADIOCARBON INVESTIGATION

MG&G Marine Seismic-Reflection

Water and sediment sampling

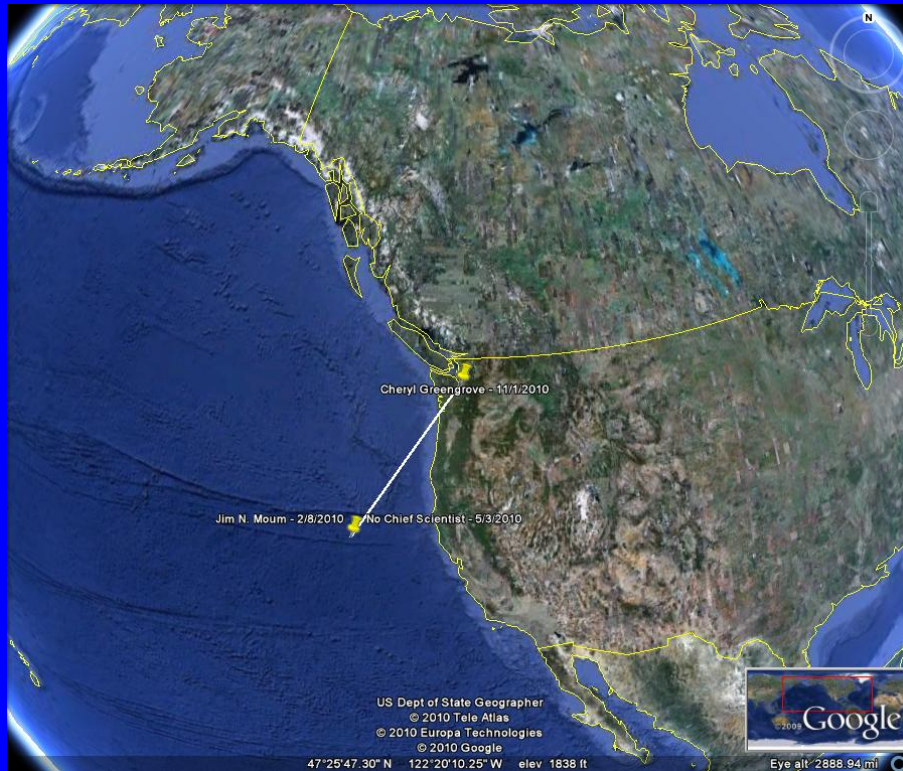
<i>Agency</i>	<i>Total</i>
INST	19
NOAA	14
NSF	61
<i>Total</i>	<i>94</i>

Operational Areas

Lake Superior

Lake Erie

Clifford A. Barnes



purpose

UW Academic - Student cruises

Evolution and diversity of biochemical pathways: core sampling

Sampling in Puget Sound and the Strait of Juan de Fuca for toxic viruses

Linking Protein Degradation to Peptide in Sinking Particles and Marine Sediments

seafloor pressure measurement

Microbiological and Nutrients Depth Profiling

Climate Change study - Collecting surface sediment samples using a Craib corer

Operating Areas

Pacific NW

Puget Sound

Vancv Isl BC

<i>Agency</i>	<i>Total</i>
INST	13
NOAA	22
NSF	29
<i>Total</i>	64

OOI Estimated Ship Days * (inclusive of DAS, transit, mob/demob) - January 2010 Update

					Days by year				
Infrastructure	Vessel Class	2010	2011	2012	2013	2014	2015	2016	2017
		Construction					Operations		
<i>Atlantic</i>									
Pioneer Array	Global				24	24	24	24	24
Pioneer Array	Intermediate		14						
Pioneer Array	< 80 ft.			4	12	12	12	12	12
Irminger Sea	Global				33	33	33	33	33
Argentine Basin	Global			24	24	24	24	24	24
<i>Pacific</i>									
Regional Scale Nodes	Global+ROV	29			64	59	40	40	40
Station Papa	Global			0	22	22	22	22	22
Southern Ocean	Global					24	24	24	24
Endurance Array	Global+ROV		0	0	5	5	5	5	5
Endurance Array	Global				8	8	8	8	8
Endurance Array	Intermediate	12	12	15	8	16	20	20	20
Endurance Array	< 80 ft.				54	54	54	54	54
Global testing	Intermediate	5							
	Global	5							
Total by vessel class									
UNOLS	Global	5	0	24	111	135	135	135	135
	Global+ROV	29	0	0	69	64	45	45	45
	Intermediate	17	26	15	8	16	20	20	20
	< 80 ft.	0	0	4	66	66	66	66	66

OOI Ship needs

