

Report to the Unidata Policy Committee

May 12, 2008
Clifford Jacobs
National Science Foundation

NATIONAL
SCIENCE
FOUNDATION

F I S C A L
Y E A R
2009

B U D G E T
R E Q U E S T

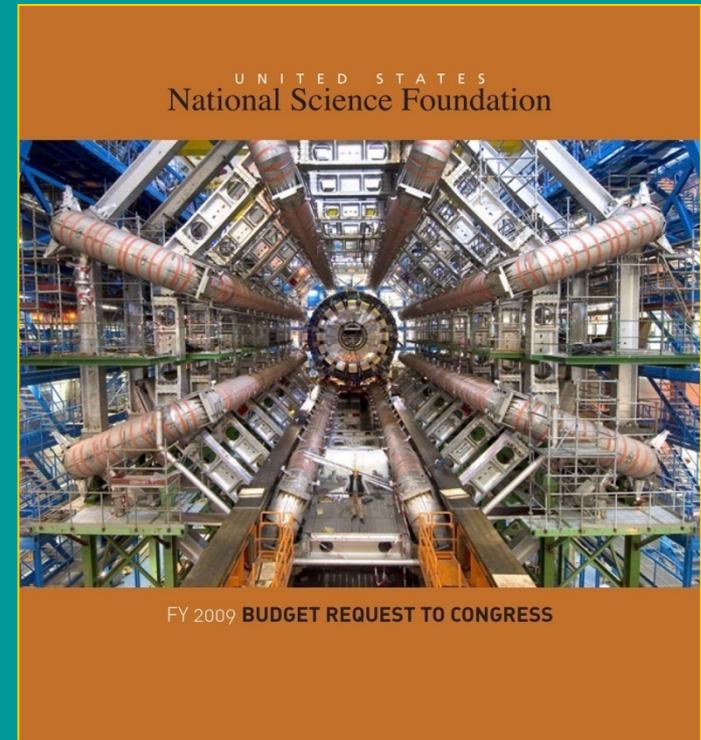


The Big Picture

NSF FY 2009 Budget

TOTAL: \$6.85 billion

Increase: 13%

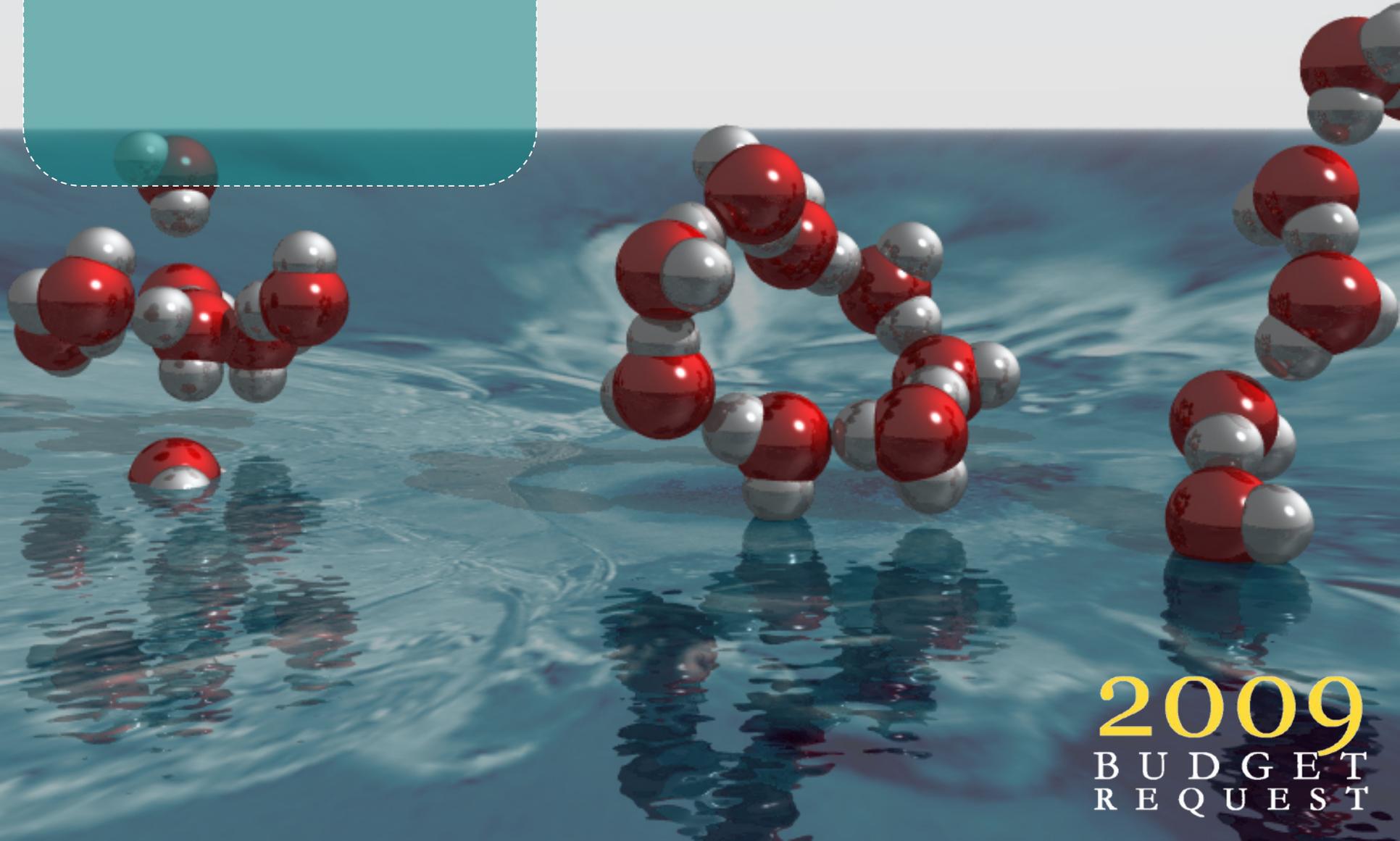


FY 2009 Budget Request by Appropriations Account (millions)

Appropriations Account	FY 2009 Request	Change from FY 2008	
Research & Related Activities	\$5,593.99	\$772.52	(16.0%)
Education & Human Resources	\$790.41	\$64.81	(8.9%)
Major Research Equipment & Facilities Construction	\$147.51	\$-73.23	(-33.2%)
Agency Operations & Award Management	\$305.06	\$23.27	(8.3%)
National Science Board	\$4.03	\$0.06	(1.5%)
Inspector General	\$13.10	\$1.67	(14.6%)
TOTAL, NSF	\$6,854.10	\$789.10	(13%)



Water



2009
BUDGET
REQUEST

Dynamics of Water Processes in the Environment

FY 2009 Investment: \$10 million





CDI

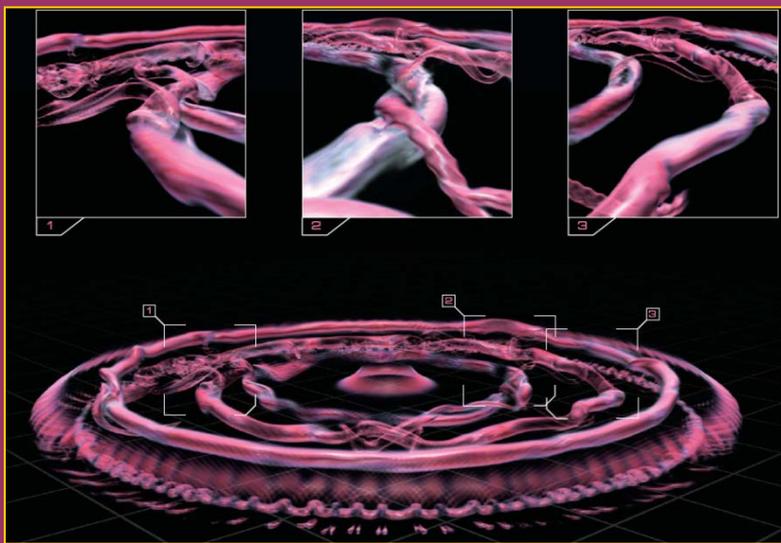
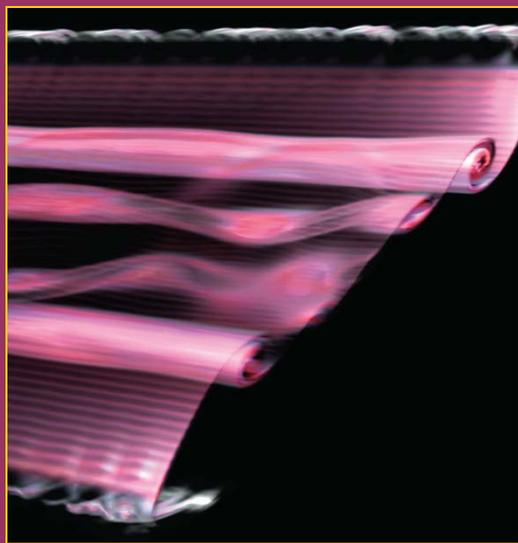


Cyber-enabled Discovery and Innovation

2009
BUDGET
REQUEST

FY 2009 Investment: \$100 million

From Data to Knowledge



Cyber-enabled Discovery and Innovation

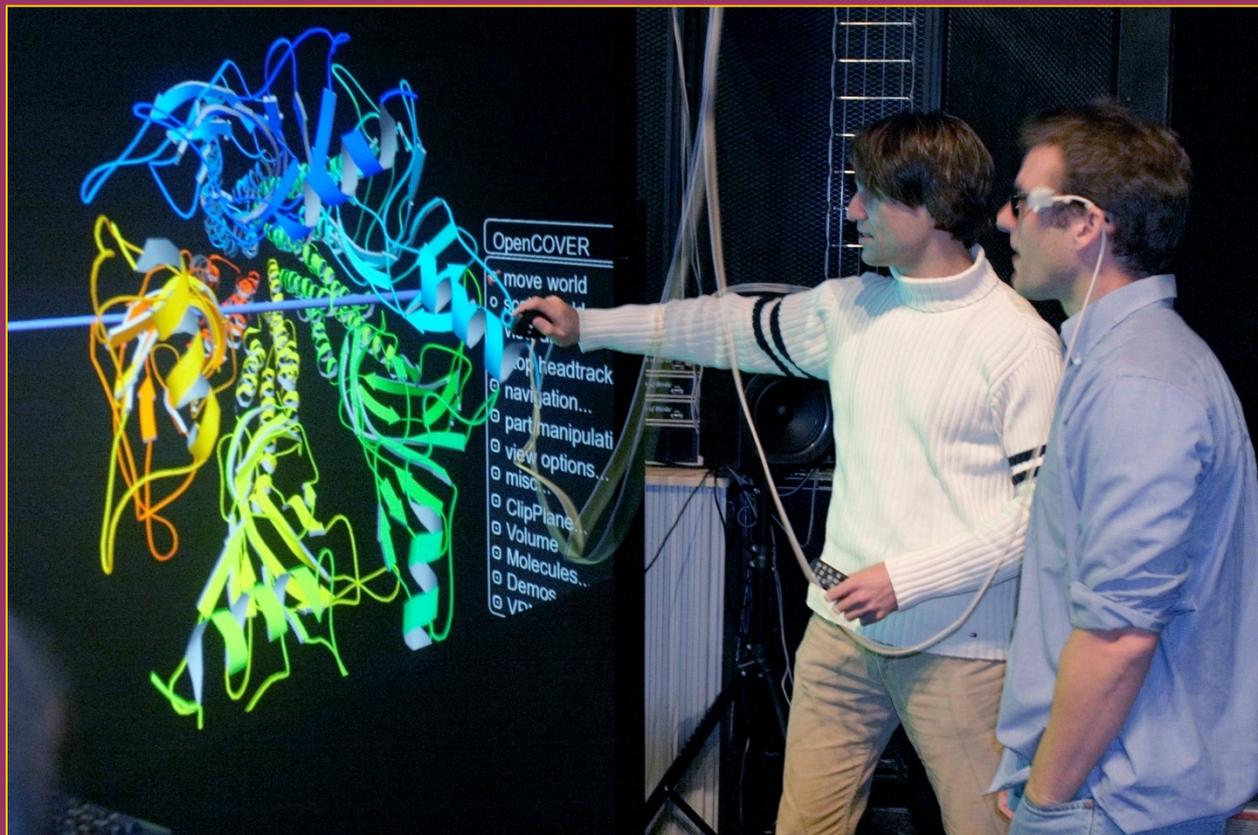
2009
BUDGET
REQUEST

Complexity in Natural, Built and Social Systems



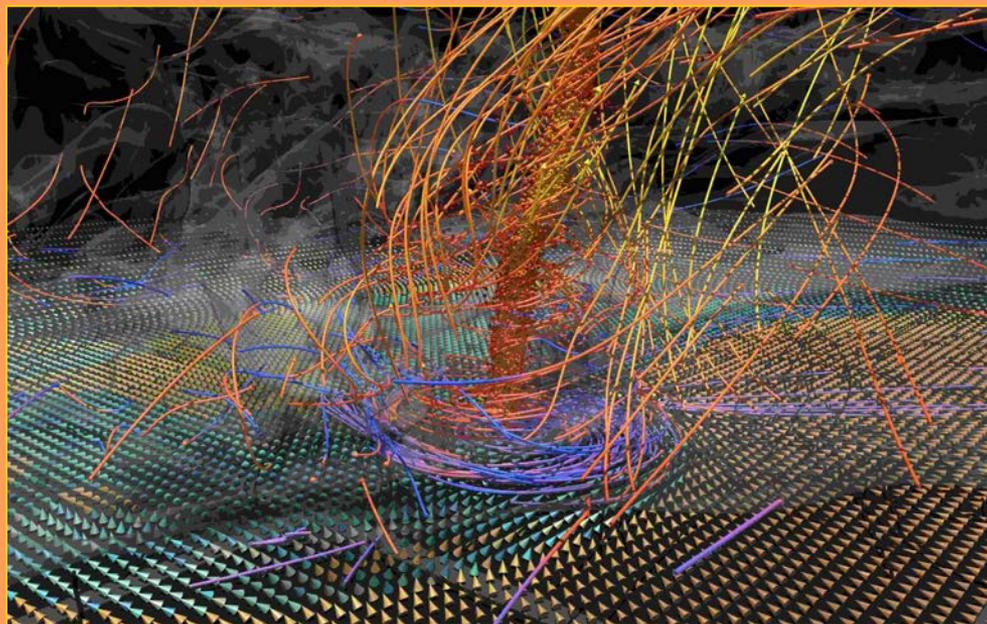
Cyber-enabled Discovery and Innovation:

Virtual Organizations



Petascale Computing & Cyberinfrastructure

FY 2009 Investment: \$682 million



Interdisciplinary Research

Science and Technology Centers
FY 2009 Investment: \$76 million





Climate Change

2009
BUDGET
REQUEST

U.S. Climate Change Science Program

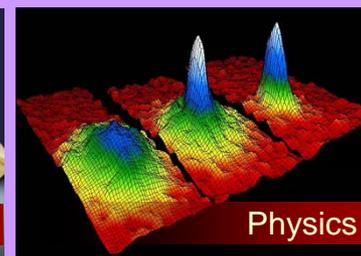
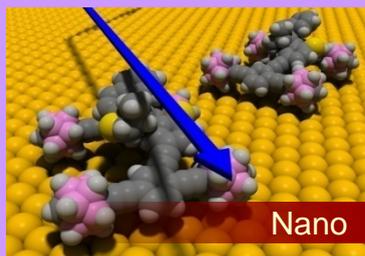
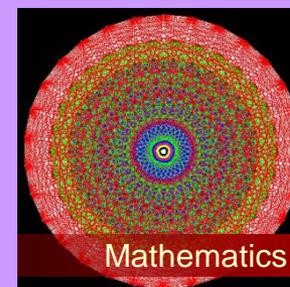
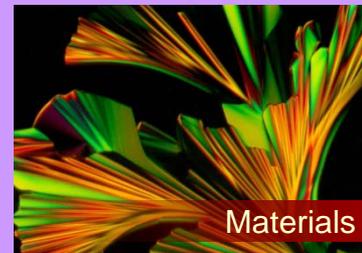
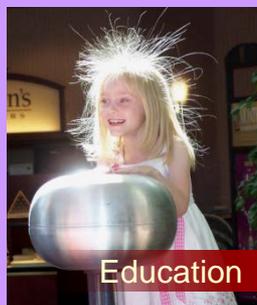
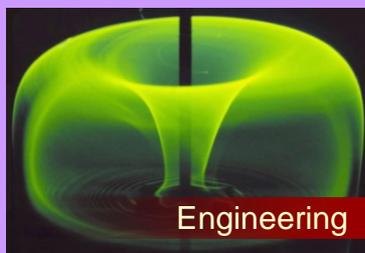
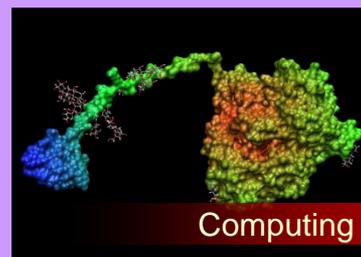
FY 2009 Investment: \$221 million



Climate Change in the Polar Regions



Sustained Support for All Disciplines



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**DIRECTORATE FOR
GEOSCIENCES**

Context of FY 2009 Request

- FY 2008 Omnibus Appropriation resulted in modest growth for GEO (\$7.81M or about 1%).
- Congress has consistently been a strong supporter of NSF.
- 2009 Request builds on 2008 Request (not appropriation) and maintains doubling track.



2009
BUDGET
REQUEST



GEO Ten-Year Funding History



FY 2009 Request: \$849M +12.8%

2009
BUDGET
REQUEST

Millions of \$

\$1,000

\$800

\$600

\$400

\$200

\$0

FY00

FY01

FY02

FY03

FY04

FY05

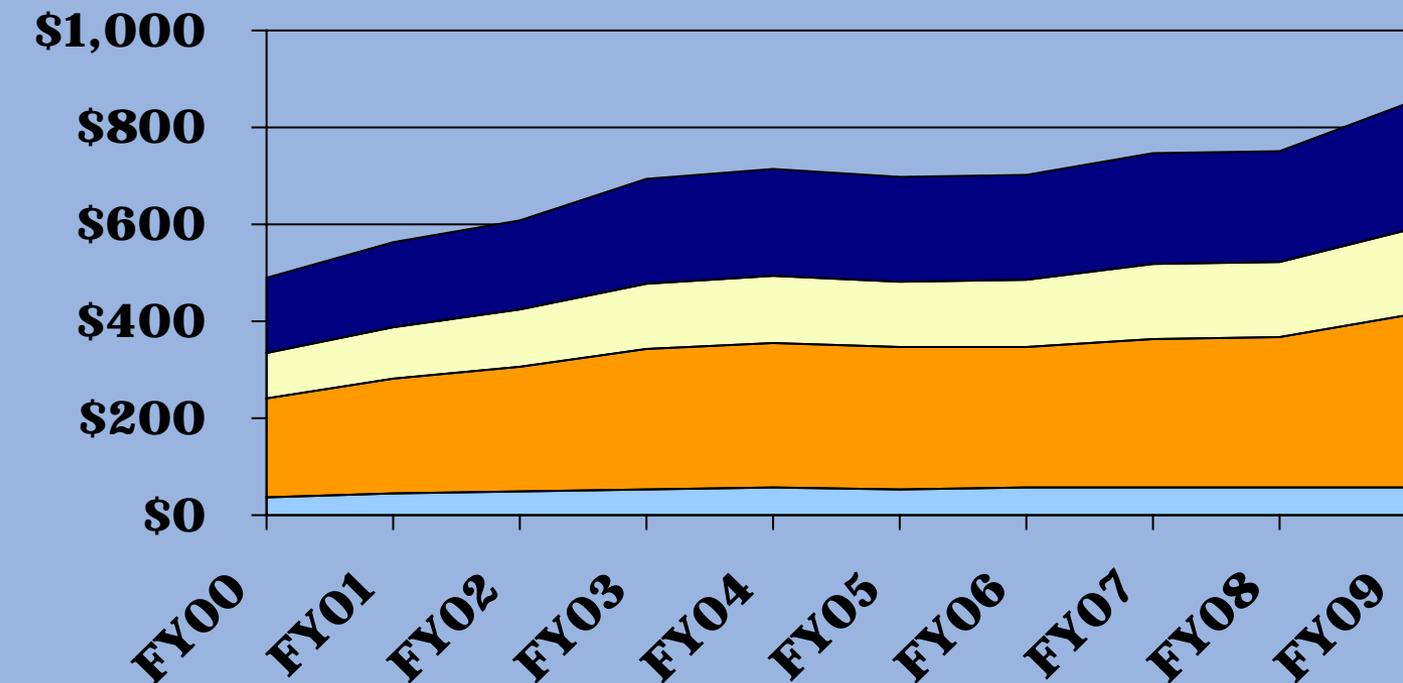
FY06

FY07

FY08

FY09

- ATM**
- EAR**
- OCE**
- ICER**



Budget Request by GEO Division



Appropriations Account	FY 2007 Actual	FY 2008 Estimate	FY 2009 Request	Change Over FY 2008 Estimate	
				Amount	Percent
Atmospheric Sciences	227.44	229.30	260.58	31.28	13.6%
Earth Science	152.83	156.08	177.73	21.65	13.9%
Innovative & Collaborative Education & Research	56.82	56.82	56.82	--	--
Ocean Sciences	308.76	310.46	353.54	43.08	13.9%
TOTAL, GEO	\$745.85	\$752.66	\$848.67	\$96.01	12.8%

Total may not add due to rounding.

FY 2008 priority of supporting EarthScope O&M was maintained.

FY 2009 priorities include EarthScope O&M, IODP operation, OOI R&D.

Research Activities

- **Continue strong support for climate change science: \$164.72M (+\$7M)**
- **Research on Dynamics of Water Processes in the Environment: \$5.26M**
 - Initial GEO funding of \$5.26 million will focus on defining frontier research opportunities and advancing activities in foundational water systems research.
- **Support near-term priorities of the Ocean Research Priorities Program: \$17M (+\$12M)**
- **Cyber-enabled Discovery and Innovation: \$4.42M (+\$3.42M)**
 - GEO investments in CDI will focus on enhancing our ability to study natural phenomena involving large numbers of interacting elements, non-linear interactions, and emergent phenomenon observed at diverse spatial and temporal scales in order to improve both predictive and deductive capabilities for a better understanding of the complex world in which we live.



MREFC



2009
BUDGET
REQUEST

South Pole Station

2009
BUDGET
REQUEST

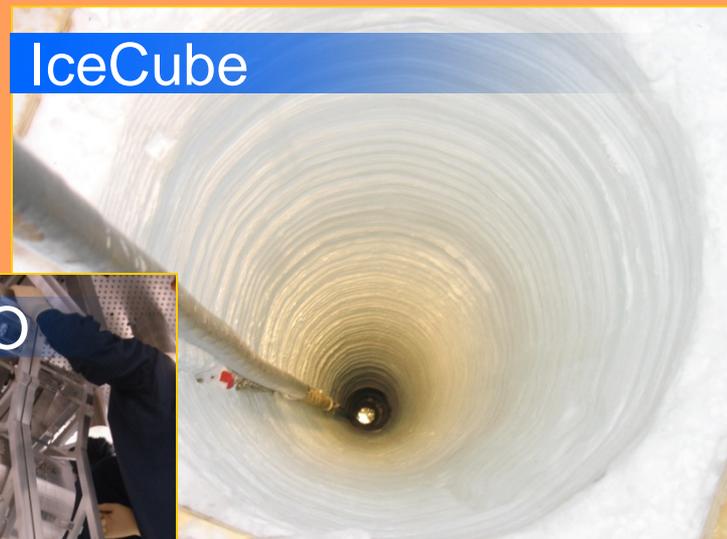


Major Research Equipment and Facilities Construction

ALMA



IceCube



AdvLIGO



Major Research Equipment and Facilities Construction

ATST

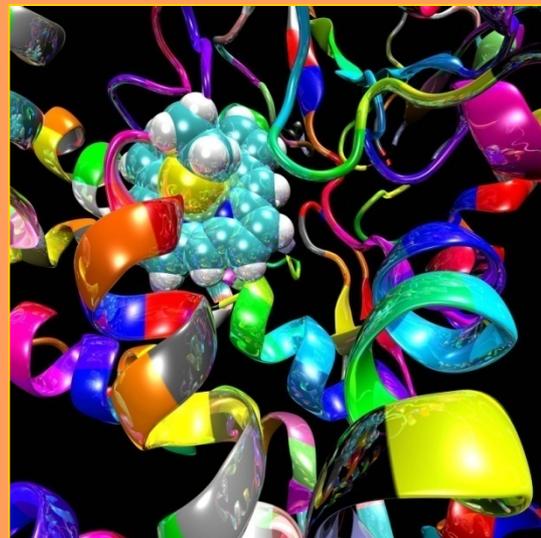
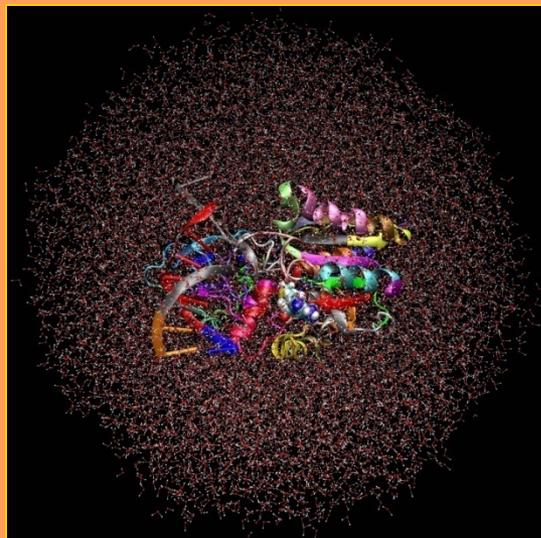


Major Research Equipment and Facilities Construction



Major Research Instrumentation

FY 2009 Investment: \$ 115 million



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Questions and/or Comments