

GEO: Update

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THE FY 2014 BUDGET



GEO Advances NSF Priorities

- Empowering Discovery
 - Disciplinary and Interdisciplinary Research
 - Infrastructure
- Preparing Students for Tomorrow
 - CAUSE (Catalyzing Advances in Undergraduate STEM Education)
- Improving Effectiveness and Efficiency
 - Responding to Antarctic Blue Ribbon Panel Report

FY 2014 Request

In 2014, the President is requesting \$1,393,860,000 for GEO; an increase of \$72,720,000 or 5.5% above 2012 (enacted).

GEO Funding (Dollars in Millions)						
	FY 2012 Actual	FY 2012 Enacted/ Annualized FY 2013 CR	FY 2014 Request	Change Over FY 2012 Enacted		
				Amount	Percent	
AGS	\$258.65	\$258.66	\$266.61	\$7.95	3.1%	
EAR	\$183.43	\$183.50	\$191.20	\$7.70	4.2%	
ICER	\$91.30	\$91.21	\$93.71	\$2.50	2.7%	
OCE	\$351.79	\$351.90	\$377.44	\$25.54	7.3%	
PLR	\$436.20	\$435.87	\$464.90	\$29.03	6.7%	
<i>U.S. Antarctic Logistical Support</i>	(\$67.52)	(\$67.52)	(\$67.52)	--	--	
Total, GEO	\$1,321.37	\$1,321.14	\$1,393.86	\$72.72	5.5%	
Totals may not add due to rounding.						

AGS Investments

- FY 14 Request: \$266.61 M
- Highlights:
 - SEES research on coastal systems and mitigating the impacts of disasters
 - Disciplinary and interdisciplinary research including dynamics and predictability of high-impact atmospheric and space weather hazards
 - Observational infrastructure including operation of the NCAR-Wyoming supercomputer center



EAR Investments

- FY 14 Request: \$191.2 M
- Highlights:
 - SEES research on water sustainability and climate, coastal systems and mitigating the impacts of disasters
 - Disciplinary and interdisciplinary research activities
 - Observational infrastructure
 - Integrating existing seismic and geodetic facilities into two new facilities



ICER Investments

- FY 14 Request: \$93.71 M
- Highlights:
 - Frontiers of Earth System Dynamics, EarthCube (CIF21), sustainability networks (SEES) and fellowships (SEES)
 - CAUSE: consolidates prior investments in diversity and education into NSF's comprehensive framework for undergraduate learning



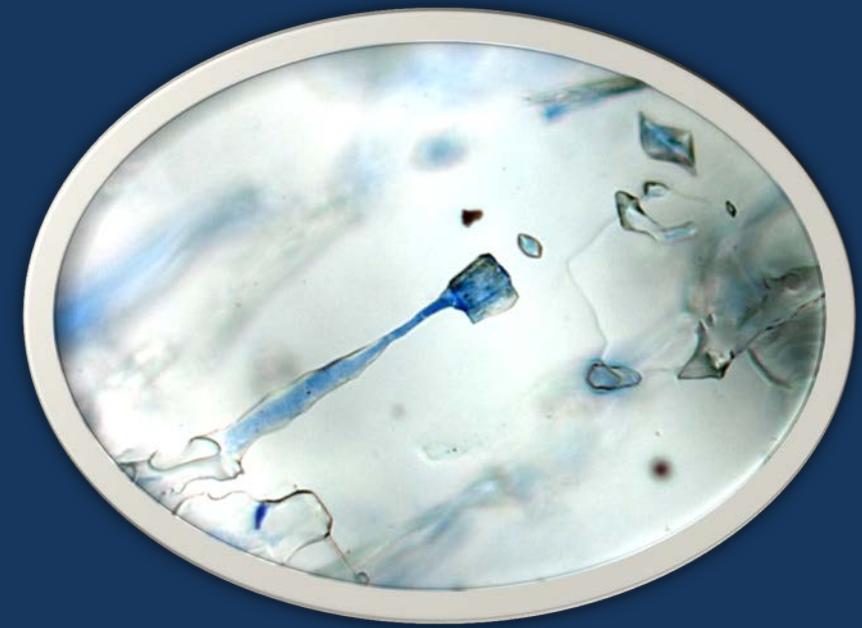
OCE Investments

- FY 14 Request: \$377.44 M
- Highlights:
 - SEES research on coastal systems, mitigating the impacts of disasters, and ocean acidification
 - President's Executive Order establishing a National Ocean Policy
 - Infrastructure including planning for potential new Regional Class Research Vessels and supporting OOI operations



PLR Investments

- FY 14 Request: \$464.90 M
- Highlights:
 - Cross-foundation and interagency priorities including SEES and CIF21
 - Disciplinary and interdisciplinary research activities
 - Improving efficiency of critical facilities that enable research in both polar regions and specifically implementing recommendations of the U.S. Antarctic Blue Ribbon Panel



Science, Engineering and Education for Sustainability (SEES)



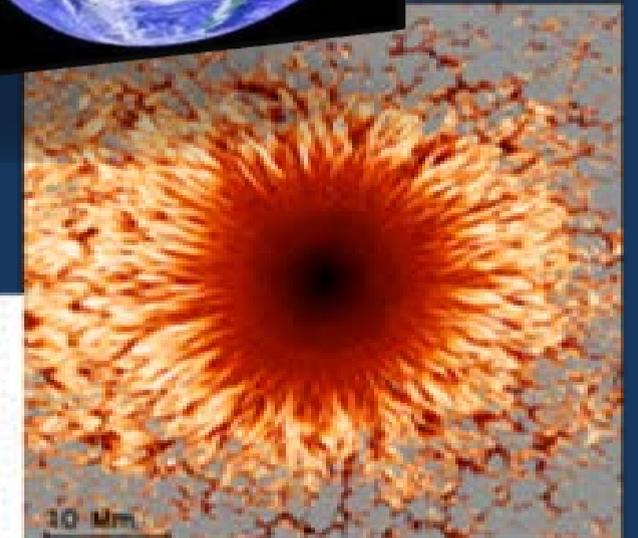
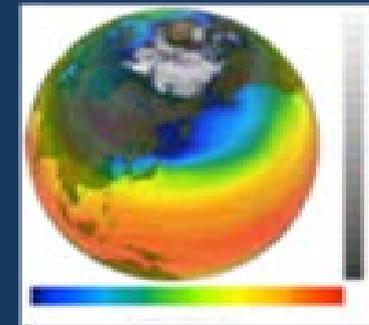
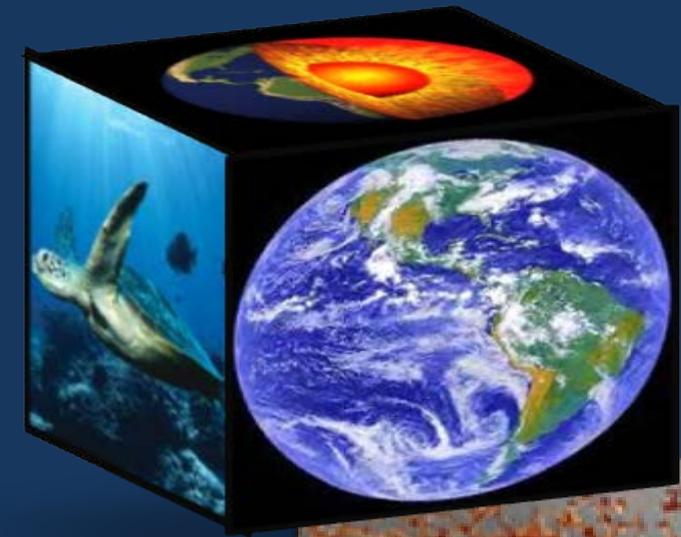
NSF FY14 SEES Request: \$222.79 M;
GEO FY 14 SEES: \$86.27 M

- Augment focus areas begun in FY13: Arctic; Coastal; Cyber-enabled; Hazards; Sustainable Chemistry, Engineering & Materials
- Highlights:
 - Workforce development of next generation sustainability scientists and engineers
 - Streamlining current programs into grand challenges
 - Evaluation protocols to inform decisions on sun-setting and/or refining existing programs.
 - Engaging scientific, engineering, and education communities to update or redirect programs



CIF21 (Cyberinfrastructure Framework for 21st Century Science & Engineering)

- NSF FY 14 Request: \$155.47 M; GEO FY14 Request: \$16.5 M
- Highlights:
 - In partnership with CISE, continuing support for EarthCube to create an integrated data management infrastructure across the geosciences



Earth System Modeling

Infrastructure Highlights

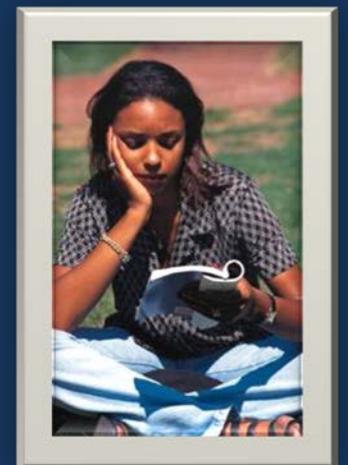
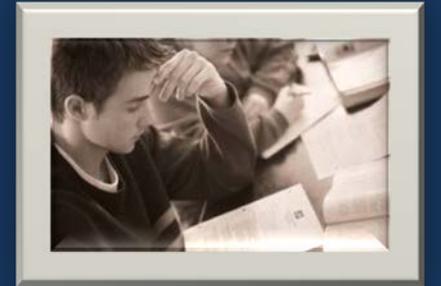
- Operational support for Ocean Observatories Initiative
- Start of operation of the *R/V SIKULIAQ*
- Consolidation of EAR seismic and geodetic facilities
- Implementation of strategic Antarctic Blue Ribbon Panel recommendations

GEO Funding for Facilities

	FY 2012 Actual	FY 2012 Enacted/ Annualized FY 2013 CR	FY 2014 Request	Change Over FY 2012 Enacted Amount	Percent
Facilities Total	\$614.79	\$591.53	\$647.66	\$56.13	9.5%
Academic Research Fleet (OCE)	92.96	78.75	86.00	7.25	9.2%
Arctic Research Support & Logistics (PLR)	42.08	43.54	44.00	0.46	1.1%
Arecibo Observatory (AGS)	3.63	3.20	3.50	0.30	9.4%
Geodesy for the Advancement of Geoscience & EarthScope (EAR)	11.92	13.18	12.70	-0.48	-3.6%
IceCube Neutrino Observatory (PLR)	3.45	3.45	3.45	-	-
International Ocean Discovery Program (OCE)	51.68	44.40	50.00	5.60	12.6%
National Nanotechnology Infrastructure Network (ICER)	0.60	0.60	0.30	-0.30	-50.0%
National Center for Atmospheric Research (AGS)	103.00	98.60	99.00	0.40	0.4%
Ocean Observatories Initiative (OCE)	26.80	26.80	52.80	26.00	97.0%
Seismological Facilities for the Advancement of Geosciences & EarthScope (EAR)	26.12	26.76	25.70	-1.06	-4.0%

A New Approach to STEM Education

- Government-wide reorganization
 - Four Key Areas: K-12 instruction; undergraduate education; graduate fellowships; informal education
 - Consolidating, restructuring and streamlining functions programs
- New NSF Program: Catalyzing Advances in Undergraduate STEM Education (CAUSE)





Where discoveries begin