

APPENDIX A

NSF Directorates and Management Offices

The Directorate for Biological Sciences (BIO) supports research programs ranging from the study of the structure and dynamics of biological molecules, such as proteins and nucleic acids, through cells, organs and organisms, to studies of populations and ecosystems. It encompasses processes that are internal to the organism as well as those that are external, and includes temporal frameworks ranging from measurements in real time through individual life spans, to the full scope of evolutionary times. Among the research programs BIO supports is fundamental academic research on biodiversity, environmental biology, and plant biology, including providing leadership for the Multinational Coordinated Arabidopsis Genome Project.

The Directorate for Computer and Information Sciences and Engineering (CISE) supports research on the theory and foundations of computing, system software and computer system design, human-computer interaction, as well as prototyping, testing and development of cutting-edge computing and communications systems to address complex research problems. CISE also provides the advanced computing and networking capabilities needed by academic researchers for cutting-edge research in all science and engineering fields.

The Directorate for Education and Human Resources (EHR) supports a cohesive and comprehensive set of activities that encompass every level of education and every region of the country. EHR promotes public science literacy and plays a major role in the Foundation's long-

standing commitment to developing our nation's human resources for the science and engineering workforce of the future. Focus is placed on programs that encourage the participation and achievement of groups underrepresented in science and engineering. NSF-supported education and training programs cover a broad spectrum—from supporting students and teachers to creating new ways of teaching and learning to assisting school districts and other systems forge greater gains in learning.

The Directorate for Engineering (ENG) supports research and education activities contributing to technological innovation that is vital to the nation's economic strength, security, and quality of life. ENG invests in fundamental research on engineering systems, devices, and materials, and the underpinning processes and methodologies that support them. Emerging technologies—nanotechnology, information technology and biotechnology—comprise a major focus of ENG research investments. ENG also makes critical investments in facilities, networks, and people to ensure diversity and quality in the nation's infrastructure for engineering education and research.

The Directorate for Geosciences (GEO) supports research in the atmospheric, Earth, and ocean sciences. Basic research in the geosciences advances our scientific knowledge of the Earth, and advances our ability to predict natural phenomena of economic and human significance, such as climate change, weather, earthquakes, fish-stock fluctuations, and disruptive events in the solar-terrestrial environment. GEO also supports the operation of national user facilities.

The Directorate for Mathematical and Physical Sciences (MPS) supports research and education in astronomical sciences, chemistry, materials research, mathematical sciences and physics. Major equipment and instrumentation such as telescopes and particle accelerators are provided to support the needs of individual investigators. MPS also supports state-of-the-art facilities that enable research at the cutting edge of science and research opportunities in totally new directions.

The Directorate for Social, Behavioral, and Economic Sciences (SBE) supports research to build fundamental scientific knowledge about human behavior, interaction, and social and economic systems, organizations, and institutions. SBE also facilitates NSF's international activities by promoting partnerships between U.S. and foreign researchers, enhancing access to critical research conducted outside the United States and increasing knowledge of mutually beneficial research opportunities abroad. To improve understanding of the science and engineering enterprise, SBE also supports science resources studies that are the nation's primary source of data on the science and engineering enterprise.

The Office of Polar Programs (OPP), which includes the U.S. Polar Research Programs and U.S. Antarctic Logistical Support Activities, supports multidisciplinary research in arctic and antarctic regions. These geographic frontiers—premier natural laboratories—are the areas predicted to be the first affected by global change. They are vital to understanding the past, present, and future responses of Earth systems to natural and man-made changes. OPP support provides unique research opportunities ranging from studies of the Earth ice and oceans to research in atmospheric sciences and astronomy.

The Office of Budget, Finance, and Award Management (BFA) is headed by the Chief Financial Officer, who has responsibility for budget, financial management, grants administration, and procurement operations and related policy. Budget responsibilities include the development of the Foundation's annual budget, long-range planning, and budget operations and control. BFA's financial, grants, and other administrative management systems ensure that the Foundation's resources are well managed and that efficient, streamlined business and management practices are in place. NSF has been acknowledged as a leader in the federal research administration community, especially in its pursuit of a paperless environment that provides more timely, efficient awards administration.

The Office of Information and Resource Management (OIRM) provides information systems, human resource management, and general administrative and logistic support functions to the NSF community of scientists, engineers, and educators, as well as to the general public. OIRM is responsible for supporting staffing and personnel service requirements for staff members including visiting scientists; NSF's physical infrastructure; dissemination of information about NSF programs to the external community; and administration of NSF's sophisticated technological infrastructure, providing the hardware, software and support systems necessary to manage the Foundation's grant-making process and to maintain advance financial and accounting systems.

APPENDIX B

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APPENDIX C

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National Science Board

¹ Till May 8, 2002

² From May 8, 2002

³ Deceased October 29, 2002

⁴ Through July 13, 2002

⁵ From July 14, 2002

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Pictured above is a tiny, hollow iridium wire used as a reaction vessel for materials research. The wire is only a single millimeter in diameter, the hollow just over half a millimeter. Inside is yttrium aluminum garnet (YAG), an important component of lasers. NSF-supported researcher, Paul McMillan and members of the Arizona State University's Materials Research Group are using the wire in their research into new chemistry processes that involve the use of immense amounts of pressure to compress materials and alter their molecular structure. McMillan hopes that his research will lead to a better understanding of these processes, which are similar to those occurring in rocks and minerals deep within the Earth and other planets.



Filtered sunlight gives off a blue aura inside a fumarole (an ice tube formed around a volcanic steam vent) atop Mt. Erebus, the Earth's southernmost active volcano, in Antarctica. The United States maintains three research stations on Antarctica. Since 1956, NSF has supported American scientists in their research on the Antarctic and its interactions with the rest of the planet. These investigators and supporting personnel make up the U.S. Antarctic Program, which carries forward the nation's goals of supporting the Antarctic Treaty, fostering cooperative research with other nations, protecting the Antarctic environment, and developing measures to ensure only equitable and wise use of resources.

Recent Trends

The following table summarizes several of NSF's key workload and financial indicators. For the period FY 1999–2002, NSF's expenses, administrative and management costs, and competitive proposals and awards all increased, reflecting the increase in NSF's budget. However, over this period, the increase in staffing has been minimal. NSF property increased substantially because of the Antarctic South Pole Station modernization multiyear project that is under way. NSF's total assets increased mainly because of a larger cash balance with Treasury, which is also related to NSF's budget increase.

	FY 1999	FY 2000	FY 2001	FY 2002	% Change FY 1999–2002
Budget (Obligations)	\$3,690.54 M	\$3,948.43 M	\$4,532.32 M	\$4,774.06 M	29.4%
NSF Expenses (Net of Reimbursements)	\$3,366.42 M	\$3,484.51 M	\$3,698.14 M	\$4,132.27 M	22.7%
Administration & Management (Obligations)	\$177.05 M	\$189.32 M	\$213.72 M	\$230.58 M	30.2%
Number of Employees (Full-time equivalent, includes OIG)	1,189	1,200	1,220	1,242	4.5%
Competitive Proposals	28,578	29,508	31,942	35,164	23.0%
Competitive Awards	9,189	9,850	9,925	10,406	13.2%
Average Annual Award Size	\$94,000	\$105,800	\$113,601	\$115,666	23.0%
Average Annual Award Duration (In Years)	2.8	2.8	2.9	2.9	3.6%
Property (PP&E, Net of Depreciation)	\$101.47 M	\$167.36 M	\$203.24 M	\$224.14 M	120.9%
Total Assets	\$4,573.00 M	\$5,140.31 M	\$6,001.90 M	\$6,713.15 M	46.8%

Note: FY 2002 budget obligation of \$4,774.06M does not include Trust Funds, H–1B Nonimmigrant Petitioner Receipts, and upward adjustments of undelivered orders.



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