

OVERVIEW



National Science Foundation

FY 2005 Budget Request

Overview

Knowledge and innovation are powerful forces for progress in the lives of people and nations. The leadership of the United States and its unsurpassed standard of living rest on the solid foundation of achievement in science and engineering. Investments in fundamental research and education have supported decades of U.S. global leadership in discovery, learning and innovation.

The National Science Foundation requests \$5.745 billion in FY 2005 to ensure that U.S. science and engineering capabilities and skills remain world class. These investments will enhance discovery and accelerate the country to greater economic and social prosperity.

NSF Funding by Appropriation (Dollars in Millions)

	FY 2003 Actual	FY 2004 Estimate	FY 2005 Request	Change over FY 2004	
				Amount	Percent
Research and Related Activities	4,054.43	4,251.36	4,452.31	200.95	4.7%
Education and Human Resources	934.88	938.98	771.36	-167.62	-17.9%
Major Research Equipment and Facilities Construction	179.03	154.97	213.27	58.30	37.6%
Salaries and Expenses	189.42	218.70	294.00	75.30	34.4%
National Science Board	2.88	3.88	3.95	0.07	1.8%
Office of Inspector General	8.70	9.94	10.11	0.17	1.7%
Total, NSF	\$5,369.34	\$5,577.83	\$5,745.00	\$167.17	3.0%

Totals may not add due to rounding.

NSF research and education programs have provided a steady stream of benefits to the nation for over fifty years. NSF investments in the physical sciences are allowing us to probe the origins of the universe, to create new materials for the 21st century, and to understand the basic forces and processes that enable and shape biological activity. Engineering research underpins the operational fabric and infrastructure of contemporary society, such as power grids, water systems, and computer-communications systems, and improves the safety of structures in earthquake zones. Fundamental research in the biosciences has laid the foundation for exploring the human genome and now offers new possibilities for understanding the living world from molecules to organisms to ecosystems, providing new options for health, environment, agriculture and energy. NSF investments have pioneered advances in computing and networking, driving productivity throughout our economy. Insights from the social sciences have led to increased efficiency, especially in such areas as pollution control and allocation of scarce resources. Studies of our planet, including its polar regions, have laid the foundation for improved understanding of weather, climate, natural hazards and natural resources. The emerging fields of nanotechnology and biotechnology promise economic and social benefits that may well outstrip those we have witnessed over the past several decades.

Today, the nation faces new economic, social and security challenges that make maintaining the strength of our science and engineering enterprise an imperative. That means pioneering new frontiers in every

field of science, engineering and technology. It means enriching education and experience for our world-class science, engineering and technology workforce and making it more diverse in the process.

At the same time, it means building strong partnerships within the global research community. The quest for knowledge has always been a global phenomenon, and it is even more so now. Expertise and creativity exist around the world. All nations understand the value of science and technology in transforming their economies and improving the well-being of their citizens. Many are making significant investments to promote research and education. The U.S. must strengthen and expand its international partnerships for mutual benefit, encouraging international collaborations that can deliver concrete solutions to stubborn national and global problems. Working with its partners, the U.S. can help shape a global research community committed to peace and prosperity.

We have crossed the threshold into a new era of exploration, one that will give us deeper understanding of our planet, the universe and ourselves. The opportunity to improve the quality of people's lives worldwide – through new products, processes and services – is within our reach.

The NSF FY 2005 Budget Request addresses these opportunities and challenges through an integrated portfolio of investments in People, Ideas, Tools, and Organizational Excellence, so that the job gets done effectively and meets the highest expectations of the U.S. public. In keeping with efforts to promote fiscal responsibility across the government, NSF's FY 2005 Request identifies three clear priorities:

- **Strengthen NSF management to maximize effectiveness and performance.** The FY 2005 Request assigns highest priority to strengthening management of the investment process and operations. The budget request includes an increase of over \$20 million to strengthen the NSF workforce and additional investments of over \$50 million to enhance information technology infrastructure, promote leading-edge approaches to eGovernment, and ensure adequate safety and security for all of NSF's information technology and physical resources.
- **Improve the productivity of researchers and expand opportunities for students.** Boosting the overall productivity of the nation's science and engineering enterprise requires increasing average award size and duration. The recent survey of NSF-funded principal investigators provides convincing evidence that an increase in award size will allow researchers to draw more students into the research process, and increasing award duration will foster a more stable and productive environment for learning and discovery. For FY 2005, NSF is focusing specifically on increasing average annual award size, devoting approximately \$40 million to increase average award size to an annual average of \$142,000. This represents a 2.2 percent increase over FY 2004 and a 51 percent increase over the past five years in average annual award size.
- **Strengthen the nation's performance with world-class instruments and facilities.** In an era of fast-paced discovery and technological change, researchers need access to cutting-edge tools to pursue increasingly complex avenues of research. NSF investments not only provide these tools, but also develop and creatively design the tools critical to 21st Century research and education. Consistent with the recent recommendations of the National Science Board, investment in infrastructure of all types (Tools) rises to \$1.47 billion, representing 26 percent of the FY 2005 Budget Request.

NSF Strategic Goals: People, Ideas, Tools and Organizational Excellence

The National Science Foundation supports discovery, learning and innovation at the frontiers of science and engineering, where risks and rewards are high, and where benefits to society are most promising. NSF encourages increased and effective collaboration across disciplines and promotes partnerships among academe, industry and government to ensure that new knowledge moves rapidly and smoothly throughout the public and private sectors.

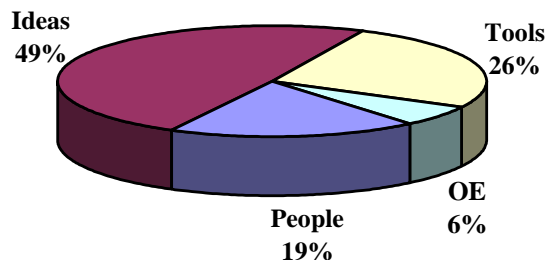
NSF Budget by Strategic Goal
(Dollars in Millions)

	FY 2003 Actual	FY 2004 Estimate	FY 2005 Request	Change over FY 2004	
				Amount	Percent
People	1,117.00	1,133.77	1,064.82	-68.95	-6.1%
Ideas	2,689.00	2,788.99	2,845.05	56.06	2.0%
Tools	1,312.70	1,367.89	1,472.08	104.19	7.6%
Organizational Excellence (OE)	250.63	287.18	363.05	75.87	26.4%
Total, NSF	\$5,369.34	\$5,577.83	\$5,745.00	\$167.17	3.0%

Totals may not add due to rounding.

NSF’s investment strategy establishes a clear path of progress for achieving four complementary strategic goals: People, Ideas, Tools and Organizational Excellence. “People, Ideas and Tools” is simple shorthand for a sophisticated system that integrates education, research, and cutting-edge infrastructure to create world-class discovery, learning and innovation in science and engineering. Organizational Excellence (OE) – a new NSF strategic goal on a par with the other three – integrates what NSF accomplishes through People, Ideas and Tools with business practices that ensure efficient operations, productive investments and real returns to the American people.

FY 2005 Budget Request of \$5.75 Billion



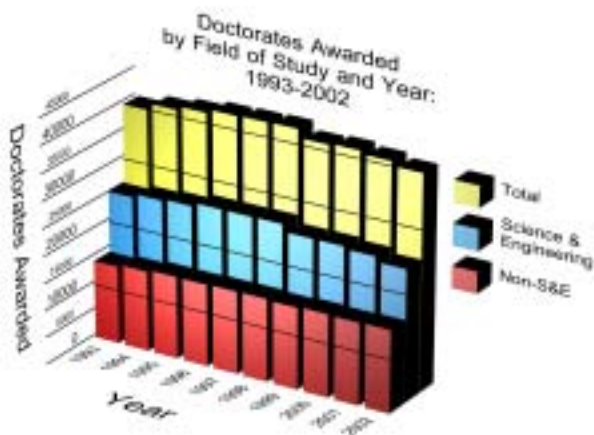
PEOPLE: Investing in the Nation’s Talent

“A diverse, competitive, and globally-engaged U.S. workforce of scientists, engineers, technologists and well-prepared citizens.”

The rapid transformations that new knowledge and technology continuously trigger in our contemporary world make investments in people and learning a continuing focus for NSF. In our knowledge-based economy and society, we need not only scientists and engineers, but also a national workforce with strong skills in science, engineering and mathematics. Yet many of today’s students leave secondary school

without these skills. Fewer young Americans choose to pursue careers in science and engineering at the university level. Of those who do, fewer than half graduate with science or engineering degrees. The FY 2005 Request provides \$1.065 billion for programs that will address these challenges.

Graduate fellowships and stipends. The FY 2005 budget funds significant expansion from a projected 5,000 fellowships in FY 2004 to 5,500 fellowships in NSF's flagship graduate student investment programs: Graduate Research Fellowships (GRF), Graduate Teaching Fellows in K-12 Education (GK-12) and Integrative Graduate Education and Research Traineeships (IGERT).



The NSF-supported Survey of Earned Doctorates found that the number of research doctoral degrees in all fields earned by students attending U.S. universities declined by 2 percent in 2002, dipping under 40,000, marking the first time in nine years doctorates fell below that level. NSF's continuing commitment to graduate fellowships and traineeships aims to attract increasing numbers of U.S. students to advanced studies in science and engineering.

Adapted from NSF publication *Science and Engineering Doctorate Awards, 2002*

FY 2005 stipend levels for fellows will remain at the \$30,000 level established in FY 2004. Extending these increases to more graduate and postdoctoral students continues to be a high priority, long-range investment strategy for NSF. Total FY 2005 funding for these three programs is \$240.74 million, \$26.62 million over the FY 2004 Estimate.

Broadening Participation. Although the nation possesses an abundance of talent, we have not yet realized the full potential of our rich human resources and intellectual capital. The FY 2005 budget request furthers NSF's commitment to programs that make the science and engineering workforce more diverse and inclusive.

- **The Louis Stokes Alliances for Minority Participation Program (LSAMP)** has significantly increased the number of minority students earning baccalaureate degrees in science and engineering. The FY 2005 Request for LSAMP totals \$34.30 million, equal to the FY 2004 Estimate.
- **ADVANCE** supports approaches to increase the representation and advancement of women in academic science and engineering careers. Funding for this program increases by \$1.11 million over the FY 2004 Estimate for a total of \$20.27 million in FY 2005.

Course, Curriculum, and Laboratory Improvement (CCLI). CCLI aims to assure that undergraduate students in the nation's two- and four-year colleges and universities have access to high quality science, engineering, mathematics, and technology education. The program promotes the identification, development, adaptation, implementation, dissemination and assessment of exemplary curricular and laboratory educational materials and instructional models. FY 2005 support for CCLI and related efforts across NSF is \$50.97 million, an increase of \$5.98 million over the FY 2004 Estimate of \$44.99 million.

Partnerships for Innovation. The Partnerships for Innovation program stimulates the transformation of knowledge created by the national research and education enterprise into innovations that create new wealth and strong local, regional and national economies. Partnerships for Innovation are funded at \$10.0 million, slightly above the FY 2004 level of \$9.94 million.

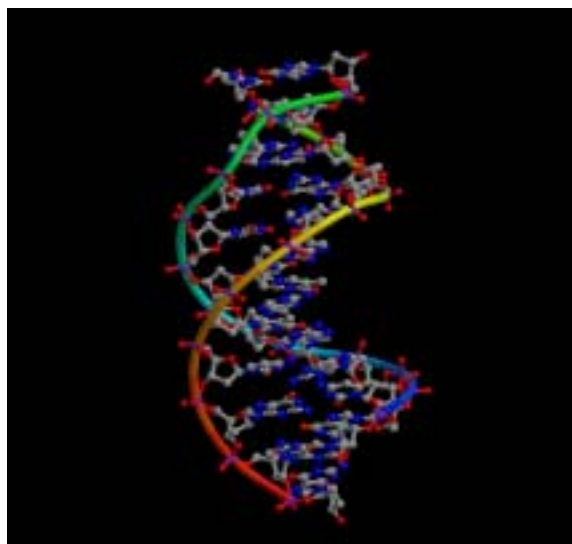
Math and Science Partnership. NSF will continue to support activities already initiated under the Math and Science Partnership program with an investment of \$80.0 million in FY 2005.

IDEAS: Opening New Frontiers

“Discovery across the frontier of science and engineering, connected to learning, innovation, and service to society.”

Fundamental Science and Engineering. New knowledge is the lifeblood of the science and engineering enterprise. Investments in Ideas are aimed at the frontiers of science and engineering. They build the intellectual capital and fundamental knowledge that drive technological innovation, spur economic growth and increase national security. They also seek answers to the most fundamental questions about the origin and nature of the universe, the planet and humankind. Investments totaling \$2.85 billion in FY 2005 will support the best new ideas generated by the science and engineering community.

Increasing both grant size and duration is a fundamental, long-term investment priority for NSF. Larger research grants of longer duration will boost the overall productivity of researchers by freeing them to take more risks and focus on more complex research goals with longer time horizons. More flexible timetables will also provide researchers with opportunities to provide expanded education and research experiences to students. Investments in FY 2005 bring NSF average annual research grant award size to approximately \$142,000, an increase of \$3,000 over FY 2004. Average annual award duration will continue at approximately 3.0 years.



This representation of the structure of DNA is housed in the Protein Data Bank (PDB), which holds the three-dimensional structures of nearly 24,000 proteins and other macromolecules in its growing – and publicly accessible – collection. The PDB’s holdings profile DNAs, RNAs, viruses, and various proteins, such as enzymes central to photosynthesis, growth, development and brain function. NSF and other agencies recently renewed their commitment to this “treasure chest of shared discoveries.” Credit: Protein Data Bank

Centers Programs. Centers bring together and integrate people, ideas and tools on scales that are large enough to have a significant impact on important science and engineering fields and cross-disciplinary areas. They assemble a critical mass of talented partners, from a number of disciplines and sectors, to focus on specific research challenges. Centers also provide opportunities to integrate research and education, conduct innovative and risky research and, through the development of partnerships, serve as resources for industry, government and the educational community at large. An important goal beyond

research results is developing leadership in vision, strategy, and management of the research and education enterprise.

- **Science and Technology Centers (STCs).** The FY 2005 Request provides \$30.0 million to initiate a new cohort of six Science and Technology Centers. The Science and Technology Centers Integrative Partnerships Program supports innovation in the integrated conduct of research, education and knowledge transfer in fields of basic science, mathematics and engineering. The total FY 2005 Request of \$72.39 million also provides \$42.39 million for continuing support of eleven ongoing STCs.
- **Science of Learning Centers.** The FY 2005 budget provides \$20.0 million to continue support for multidisciplinary, multi-institutional Science of Learning Centers. These centers will advance understanding of learning through research on the learning process, the context of learning and learning technologies. The Centers will strengthen the connections between science of learning research and educational and workforce development and build effective collaborative research communities.
- **Other Centers Programs.** The FY 2005 Request includes increases for a number of key Centers Programs. Nanoscale Science and Engineering Centers (NSECs) receive an additional \$3.10 million, to a total of \$33.79 million. These additional funds will support two new nanotechnology centers with multidisciplinary capabilities and will enhance award size of some existing centers. Following recommendations from the “Twenty-Year Review of the NSF LTER Program,” the Long Term Ecological Research (LTER) investment increases by \$2.30 million, to a total of \$22.82 million. Increased funding will provide incentives for interdisciplinary collaborations at LTER sites. Funding of \$3.50 million will support two or three centers that advance fundamental knowledge about Environmental Social and Behavioral Science. Activity in these centers will build on groundwork laid by the Human Dimensions of Global Change centers. The Request also provides increases totaling \$6.09 million for a number of mathematical and physical science centers, including: Chemistry Centers, Materials Centers, Mathematical Sciences Research Institutes and Physics Frontiers Centers. NSF investments in Engineering Research Centers continue to focus on next-generation advances in complex engineered systems.

Fundamental Research to Enhance Homeland Security. The FY 2005 Request includes investments in fundamental research that will address new homeland security challenges facing the nation. The Ecology of Infectious Diseases program, jointly sponsored by NSF and the National Institutes of Health, and the Microbial Genome Sequencing program, jointly sponsored by NSF and the U.S. Department of Agriculture, will contribute to a better understanding of potential bioterrorism threats and how to combat them. The Scholarship for Service program, which supports the education of students in information security and assurance in exchange for service in federal government agencies, will increase the nation’s capacity to protect vital information infrastructure. The Critical Infrastructure Protection program will support research to identify potential vulnerabilities and strengthen protection for the nation’s infrastructure, including power grids, transportation networks and water supply systems. National Security-Related Information Technology research supports leading-edge approaches to securing IT systems and networks.

Climate Change Research Initiative (CCRI). As part of the Administration’s Climate Change Research Initiative, NSF will support research to reduce uncertainty related to climate variability and change, with the objective of improving decision making and informing the policy process. In FY 2005, NSF will continue to support the interdisciplinary centers being established in FY 2004 to explore Decision-Making Under Uncertainty. These Centers will improve understanding of risk management, risk communication and decision making in relation to climate change. These investigations complement

NSF's ongoing programs in climate change science. The FY 2005 Request also supports improved climate modeling through investments in the Community Climate Science Model.

Plant Genome Research Program. The FY 2005 budget provides \$89.47 million to support ongoing research on the genomics of plants of major economic importance. Multi-disciplinary, multi-investigator teams will explore the functional genomics of plants, conduct large-scale genome sequencing and develop tools for studies of plant genomes.

Innovation Fund. Funding of \$5.0 million in FY 2005 will initiate a new Innovation Fund. The Fund provides an opportunity for the Foundation to respond quickly to rapidly emerging activities at the frontiers of learning and discovery.

International Science and Engineering. Discoveries emerge from across the globe and it is essential that American scientists and engineers have opportunities to engage with the world's top researchers, to lead major international collaborations, and to have access to the best research facilities throughout the globe and across all the frontiers of science and engineering. In November 2001, the National Science Board called on the Foundation to make international leadership a high priority for NSF and a much stronger programmatic focus both in core disciplines and in NSF-wide activities. The FY 2005 Budget Request to carry out these activities is \$34.04 million, an increase of \$5.92 million, or 21.1 percent, over the FY 2004 Estimate of \$28.12 million.

Scientific Research in Education. The Research on Learning and Education (ROLE) program seeks to build a strong interdisciplinary approach to research on learning and education within the context of the nation's schools, colleges and universities. The FY 2005 funding increase is to support the increased emphasis on funding evidence-based, rigorous STEM education research. ROLE and related research funding totals \$47.46 million in FY 2005, an increase of \$8.13 million over the FY 2004 level of \$39.33 million. These investments build the capacity to go to larger scale in other NSF programs such as the Science of Learning Centers and Centers for Learning and Teaching.

EPSCoR. The Experimental Program to Stimulate Competitive Research (EPSCoR) builds capacity in educational institutions to participate more fully in NSF research activities. Funding in FY 2005 totals \$84.0 million from the Education and Human Resources account, with an additional investment of approximately \$30 million provided through the Research and Related Activities account.

Priority Areas. In partnership with the science and engineering community, NSF identifies emerging areas of research that offer exceptional promise to advance knowledge. A sustained level of investment builds research momentum and educates a critical mass of scientists and engineers. In FY 2005, NSF will continue to support five priority areas with promising research horizons.

NSF Funding by Priority Area
(Dollars in Millions)

	FY 2003 Actual	FY 2004 Estimate	FY 2005 Request	Change over FY 2004	
				Amount	Percent
Biocomplexity in the Environment	70.28	99.83	99.83	0.00	0.0%
Human and Social Dynamics	4.46	24.24	23.25	-0.99	-4.1%
Mathematical Sciences	60.42	89.09	89.11	0.02	0.0%
Nanoscale Science and Engineering	222.46	253.51	305.06	51.55	20.3%
Workforce for the 21st Century	N/A	N/A	20.00	20.00	N/A
Total, Priority Areas	\$357.62	\$466.67	\$537.25	\$70.58	15.1%

Totals may not add due to rounding.

- Biocomplexity in the Environment (BE).** BE explores the complex interactions among organisms and their environment at all scales and through space and time. This fundamental research on complex environmental systems will help us better understand and, in time, predict environmental change. Research on the complex interactions between freshwater and the rest of the environment will be encouraged in FY 2005.
- Human and Social Dynamics (HSD).** How we learn, make decisions, assess risk and adapt to change; how institutions are shaped by us and how we, in turn, are shaped by our decisions and institutions are central questions in an era marked by rapid and complex change. HSD will fund research on a range of topics from individual decision-making and risk, to the dynamics of human behavior, to global agents of change such as democratization, globalization and war. Support will also be provided for methodological capabilities in spatial social science and for instrumentation and data resources infrastructure.
- Mathematical Sciences.** Mathematics is the language of science and a powerful tool of discovery. The Mathematical Sciences priority areas will focus on fundamental research in mathematical and statistical sciences, interdisciplinary research connecting the mathematical sciences with science and engineering and targeted investments in mathematical sciences training activities.
- Nanoscale Science and Engineering.** NSF's investment in Nanoscale Science and Engineering targets the fundamental research that underlies nanotechnology, likely to be the next transformational" technology. Investments in this priority area will emphasize research on nanoscale structures and phenomena and quantum control. NSF is the lead agency for the government-wide National Nanotechnology Initiative.
- Workforce for the 21st Century (W21).** The FY 2005 Request provides \$20.0 million for the Workforce for the 21st Century priority area, which aims to strengthen the nation's capability to produce world-class scientists and engineers and a general workforce with the science,

engineering, mathematics and technology skills to thrive in the 21st Century workplace. This investment will support innovations to improve education at all levels, from K-12 through postdoctoral, as well as attract more U.S. students to science and engineering fields and broaden participation. Workforce for the 21st Century will capitalize on NSF's experience with a variety of successful investments in education and broadening participation by encouraging institutions and partnerships to integrate them into broader, innovative programs. The priority area will also support research that explores the issue of attracting and retaining students in science and engineering.

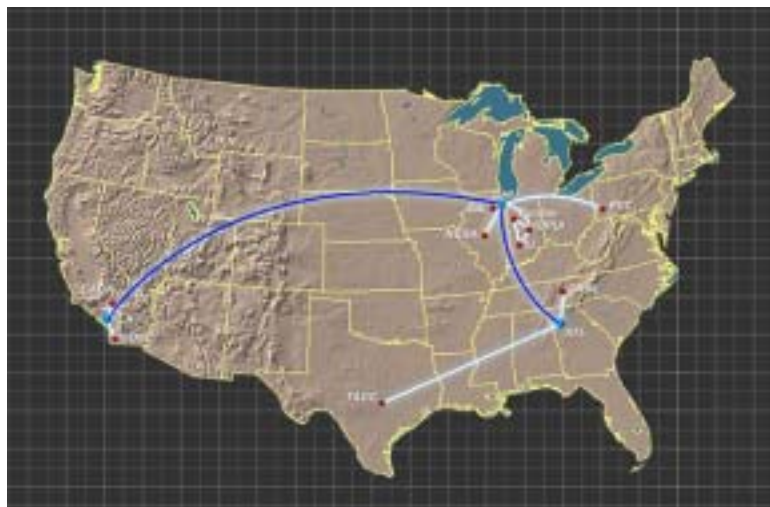
NSF's Information Technology Research (ITR) priority area, initiated in FY 2000 and funded through FY 2004, is an example of how fostering an emerging area creates a new landscape for research and education. ITR pioneered major advances in fundamental IT research and also opened new vistas at the interface between IT and other fields. Beginning in FY 2005, activities funded through ITR investments will be merged into new and ongoing research programs across NSF.

TOOLS: Getting the Job Done

"Broadly accessible, state-of-the-art S&E facilities, tools, and other infrastructure that enable discovery, learning and innovation."

The FY 2005 request for Tools totals \$1.47 billion, an increase of \$104.19 million over the FY 2004 Estimate. Consistent with the recent recommendations of the National Science Board, the increase continues an accelerated program to revitalize and upgrade the nation's aging infrastructure through broadly distributed investments in small, mid-sized and major research instruments and tools. Progress in research and education frequently depends upon the development and use of tools that expand experimental and observational limits. Researchers need access to cutting-edge tools to tackle today's complex and radically different research tasks, and students who are not trained in their use are at a disadvantage in today's technology-intensive workplace.

Cyberinfrastructure. In FY 2005, a total of nearly \$400 million supports the expansion of state-of-the-art cyberinfrastructure. Exponential growth in computing power, communication bandwidth and data storage capacity will continue into the foreseeable future, profoundly transforming research and education practices. Providing access to moderate-cost computation, storage, analysis, visualization and communication for every researcher will help to stimulate robust innovation and an even more creative and productive national research enterprise and broaden research vistas. NSF will invest in research to develop new generations of cyberinfrastructure and new capabilities for cyber-science.



A centerpiece of NSF's investment in Cyberinfrastructure, NSF's Extensible Terascale Facility now encompasses data, computing and instrumentation resources at ten sites connected by networks operating at ten gigabits-per-second or greater through network hubs in Los Angeles, Chicago, and soon Atlanta.
Credit: NSF

Major Research Equipment and Facilities Construction. In FY 2005, NSF's Major Research Equipment and Facilities Construction (MREFC) Account totals \$213.27 million. Funding supports three continuing projects: Atacama Large Millimeter Array (ALMA) Construction (\$49.67 million); IceCube Neutrino Observatory (\$33.40 million); and EarthScope (\$47.35 million). Three new projects will be initiated in FY 2005.

- **National Ecological Observatory Network (NEON).** Funding of \$12.0 million in FY 2005 will launch the National Ecological Observatory Network (NEON), a continental scale research instrument with geographically distributed infrastructure, linked by state-of-the-art networking and communications technology. NEON will encompass cutting-edge lab and field instrumentation, site-based experimental infrastructure, natural history archive facilities and computational, analytical and modeling capabilities. NEON will facilitate studies on major environmental challenges at regional to continental scales and will provide a virtual laboratory for research to obtain a predictive understanding of the environment. Disciplinary and multidisciplinary programs will support NEON research projects and educational activities. Data from standard measurements made using NEON will be publicly available.
- **Scientific Ocean Drilling Vessel (SODV).** FY 2005 funding of \$40.85 million supports the conversion and scientific outfitting of a state-of-the-art drill ship to be used by the newly constituted Integrated Ocean Drilling Program (IODP), an international collaboration that strengthens U.S. scientific ocean drilling activities through cooperation with Japan and other nations. The IODP program will use measurements as well as cores of sediment and rock from the ocean floor to study the geologic processes that modify our planet, the history of those changes in oceans and climate and the extent and depth of the planet's biosphere. The U.S. operated vessel will be used to obtain high-resolution cores to address climate, environmental and sea-floor observatory objectives, and it will complement the Japanese-operated *Chikyu*, a heavier vessel for drilling deep sedimentary and crustal holes up to 10,000 meters below sea surface. Both ships are accessible to the international scientific community.
- **Rare Symmetry Violating Processes (RSVP).** The FY 2005 budget provides funding of \$30.0 million for RSVP, a project to mount two highly sensitive experiments to study fundamental symmetries of nature. The standard model of particle physics accounts for the existence of both matter and antimatter, but does not fully explain the "asymmetry" between them in the laws of physics or the absence of antimatter in the observable universe. The two RSVP experiments will search for extremely rare decays of elementary particles that can shed on these puzzles. In so doing,

RSVP could uncover evidence for a new symmetry of nature (‘supersymmetry’), which predicts a doubling of the number of fundamental particles and could answer questions ranging from the origins of our universe to the nature of dark matter and dark energy. The experiments will be performed at the existing Brookhaven National Laboratory Alternating Gradient Synchrotron.

ORGANIZATIONAL EXCELLENCE: Meeting the Highest Standards for Stewardship

“An agile, innovative organization that fulfills its mission through leadership in state-of-the-art business practices.”

With activities that involve over 200,000 scientists, engineers, educators and students and over 40,000 proposals to process each year, NSF relies on efficient operations and state-of-the-art business practices to provide quality services and responsible monitoring and stewardship of the agency’s investments. NSF’s Request includes \$363.05 million to support Organizational Excellence (OE). This represents an increase in the share of the total NSF budget for OE from 5 percent in FY 2004 to 6 percent in FY 2005.

A number of considerations have elevated the Organizational Excellence portfolio in NSF’s FY 2005 Request. For the past two decades, NSF staffing has remained level as the total budget and workload increased significantly. Proposals increasingly involve large, multidisciplinary and interdisciplinary projects and require sophisticated monitoring and evaluation. NSF is also committed to maintaining its traditional high standards for stewardship, innovation and customer service, in keeping with the broad set of challenges identified in the President’s Management Agenda (PMA), the NSF business analysis and by GAO and other organizations. Key priorities for FY 2005 include award monitoring and oversight, human capital management and IT system improvements necessary for leadership in eGovernment, security upgrades and world class customer service.

NSF has a history of adopting state-of-the-art management approaches, maintaining a learning environment and providing leadership in both policy and e-business innovation. The agency has received two “greens” on the PMA scorecard and received the President’s 2003 Award for Management Excellence, in recognition of the success of NSF’s FastLane system for handling grant applications 100 percent electronically.

It is central to NSF’s mission to provide effective stewardship of public funds, to realize maximum benefits at minimum cost and to ensure public trust in the quality of the process. The FY 2005 investment in Organizational Excellence will streamline and update NSF operations and management by enhancing cutting edge business processes and tools. It will also fund the addition of 25 new permanent employees (bringing the total increase to 75 over the past three years) to address mounting workplace pressure, add new skills to the workforce and improve the quality and responsiveness of customer service. NSF also continues to foster close ties to the research and education community through the use of “rotators” - scientists, engineers and educators from academic and other nongovernmental institutions who work at NSF for 1-2 years on average and then return to their home institutions. Rotators represent nearly 10 percent of NSF’s total staffing, and they help provide a continuous inflow of up-to-date information and fresh, invigorating viewpoints on needs and opportunities across all of research and education.

