

3 – Agency R&D Budgets

(Full agency analyses of R&D in FY 2003 appropriations, including historical charts and supplemental material, are available on the AAAS R&D web site.)

Department of Defense (DOD)

In FY 2003, total research and development (R&D) at DOD rises to \$58.6 billion – an increase of 17.6 percent or \$8.8 billion from the FY 2002 level of \$49.9 billion, the largest increase in history. The FY 2003 appropriation would bring DOD R&D to an all-time high in inflation-adjusted dollars. In comparison with the request of the Bush Administration, this total represents an additional 7.7 percent or \$4.2 billion (see Table 4 and Figure 5).

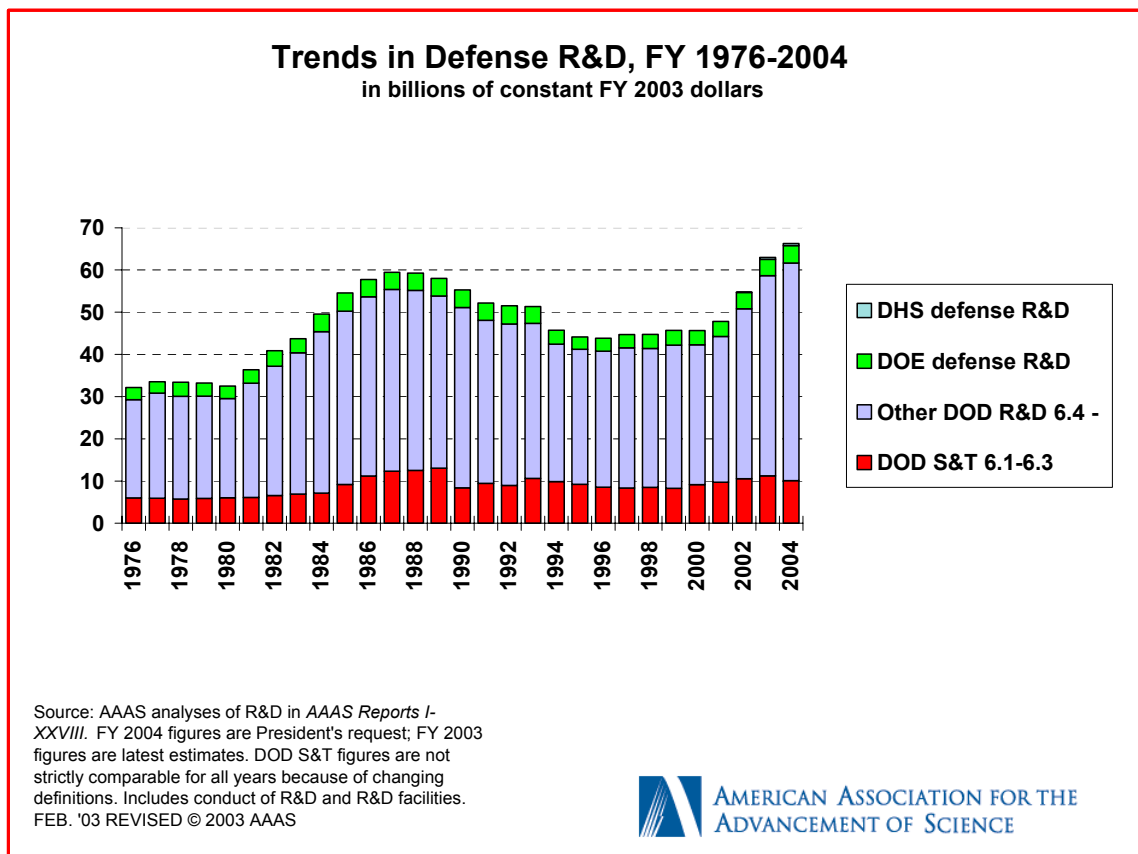


Figure 5.

DOD is by far the largest supporter of R&D in the federal government, accounting for half the total federal R&D portfolio. Because of defense cutbacks following the end of the Cold War, DOD's support for R&D declined by a third following a peak in FY 1987 but has increased dramatically in the past few years (see Figure 5). The Bush Administration has made increasing DOD spending in general and DOD development spending in particular a high priority, especially in the aftermath of September 11. Both the House and the Senate added to the already record-setting Administration request for DOD R&D, and the final appropriation exceeds both earlier versions. At \$58.6 billion for FY 2003, the final appropriation well exceeds the peak FY 1987 DOD R&D investment of \$55.4 billion in FY 2003 dollars (see Figure 1).

DOD Basic Research (“6.1”) and Applied Research (“6.2”) receive significant boosts in the final bill, though smaller than the increases for development. Basic Research rises by 5.0 percent to \$1.4 billion, a gain of \$68 million. Applied Research rises by 4.8 percent from \$4.1 billion to \$4.3 billion, in contrast to a requested cut (see Table 4). The “6.1” and “6.2” research accounts provide a significant share of federal support for several key science and engineering disciplines. DOD provides nearly 40 percent of all federal support for engineering research and a majority of federal support for some key engineering subfields. DOD also provides a third of total federal support for computer sciences research and plays a prominent funding role in other disciplines such as mathematics, oceanography, medical sciences, chemistry, physics, and environmental sciences. The “6.1” and “6.2” accounts are also important for the nation’s colleges and universities, which perform more than half of the “6.1” research and roughly 20 percent of “6.2” research.

The “6.1,” “6.2,” and “6.3” categories are often grouped together as “**Science and Technology**” (S&T). This category encompasses basic research, applied research, and advanced technology development, which contribute to a broad knowledge base with potential applications to a wide variety of military as well as civilian uses. S&T is separate from the “6.4” and higher categories, which are focused on the development and testing of specific weapons systems and are performed almost entirely by industrial firms. In the final bill, **DOD S&T**, including medical research appropriations outside the RDT&E account, **exceeds \$11 billion for the first time to reach \$11.2 billion**, an 8.6 percent increase, mostly because of an \$637 million or 14.4 percent boost for “6.3” funding. Advocates of DOD S&T investments pushed last year for \$10 billion in FY 2002 S&T funds, a goal Congress granted, and pushed successfully for an investment of at least \$11 billion in FY 2003. Advocates of DOD S&T in the science and engineering community argue that DOD S&T funding is essential for building the knowledge and technology base for future DOD needs, and have successfully argued that post-Cold War cutbacks over the past decade eroded this base. In the past year, there has been growing support inside and outside the Pentagon for setting 3 percent of the DOD budget as a target for the proper level of S&T investment. These efforts were dealt a setback by the Pentagon request, which would have cut DOD S&T to \$9.7 billion in FY 2003, just 2.6 percent of the overall DOD budget. The final S&T appropriation of \$11.2 billion would be 3.0 percent of the total DOD budget, meeting the target. The final appropriation brings DOD S&T back up to the FY 1993 level in inflation-adjusted dollars, its peak funding year before steep post-Cold War cuts in the mid-1990s (see Figure 5).

Nearly all (\$7.9 billion) of the enormous \$8.8 billion DOD R&D increase goes to weapons development activities (“6.4” through “6.7” plus other appropriations), which make up nearly all of the DOD R&D investment. Of the \$58.6 billion appropriation, 88 percent goes to development activities, leaving only 2.4 percent for basic research (“6.1”) and 8 percent for applied research (“6.2”; see Table A) plus medical research. Engineering and Manufacturing Development (EMD; “6.5”) and Operational Systems Development (“6.7”) receive the largest increases. EMD rises by 35.1 percent to \$14.4 billion while Operational Systems Development rises by 30.4 percent to \$18.7 billion. These categories cover advanced development work, mostly performed by industrial firms as defense contractors, on specific weapons systems. Most of the “6.5” increase comes from the \$3.5 billion appropriation (up from \$1.5 billion in FY 2002), divided between the Navy and Air Force, for the Joint Strike Fighter (JSF), a next-generation fighter in development for future use by all the services and U.S. allies.

The **Defense Advanced Research Projects Agency (DARPA)**, one of the Defense Agencies, receives \$2.7 billion in the Defense bill, 19.0 percent more than FY 2002 (see Table 5). DARPA’s Biological Warfare Defense program receives \$162 million, down \$10 million from FY 2002 but Defense Research Sciences, DARPA’s basic research program, climbs substantially from \$142 million to \$199 million. The Defense Agencies in general do very well, especially in the S&T accounts.

Last year’s big winner in the FY 2002 budget, **the Ballistic Missile Defense Organization (BMDO)**, declines 3.3 percent from the lofty FY 2002 level to \$6.7 billion for R&D; this amount is still well above the \$4.2 billion FY 2001 funding level. BMDO no longer funds research; there would be some funds for

generic technology development, but now nearly all BMDO R&D funds go to advanced development, testing, and evaluation of missile defense systems performed by industrial defense contractors. BMDO is charged with developing defensive systems to counter perceived theater and strategic ballistic missile threats.

National Institutes of Health (NIH)

The final FY 2003 appropriation for the National Institutes of Health (NIH) effectively completes the plan hatched in Congress to double the NIH budget over five years beginning in FY 1998. Although President Clinton never embraced the plan and never requested the increases needed each year to achieve the goal, President Bush made finishing the doubling effort a presidential campaign promise. In fact, the FY 2003 Bush request actually came in \$177 million higher than the final congressional appropriation (see Table 8). **NIH R&D, which makes up 97 percent of the NIH budget, climbs to \$26.2 billion (up 15.5 percent).** The remaining 3 percent of the NIH budget goes toward research training and overhead costs.

The National Institutes of Health, an agency within the Department of Health and Human Services (HHS), is the second-largest supporter of R&D in the federal government after the Department of Defense (DOD). It is by far the largest supporter of basic research, applied research, and R&D at colleges and universities, and has a disproportionate impact on support for the life and medical sciences and other fields.

In contrast to the strong across-the-board growth enjoyed by all of the institutes under the NIH umbrella over the first four years of the doubling plan, a new picture begins to emerge in FY 2003. As a result of increased priority-setting in the direction of homeland security, the final FY 2003 budget features disproportionate increases for **bioterrorism research** and **facilities construction** (see Table 8). Most of the new funds for bioterrorism research go to the **National Institute of Allergy and Infectious Diseases (NIAID)**, which enjoys a hefty 46.8 percent increase in its overall budget to \$3.7 billion as NIH's lead institute for bioterrorism R&D. Much of this funding will go toward basic and applied research aimed at developing biomedical tools to detect, prevent, and treat infection by biological agents. NIAID will also receive \$375 million for extramural facilities construction grants for research on biological and other agents. Additionally, the report language that accompanies the bill gives NIAID some latitude in determining the proper mix of bioterrorism research and infrastructure development.

The NIH **Buildings and Facilities** account more than doubles in size, jumping from \$296 million in FY 2002 to \$629 million in FY 2003. These funds will be used to address bioterrorism and laboratory security needs. Included in this amount is \$150 million for a new NIH laboratory on the grounds of Fort Detrick, Maryland, home to the United States Army Medical Research and Materiel Command. There are also construction funds in other accounts. In addition to the \$375 million for bioterrorism-related facilities in NIAID, there is also \$120 million for competitively awarded extramural facilities construction grants in the National Center for Research Resources (NCRR).

NCRR also fares well in general, seeing its budget rise 15.6 percent, or \$154 million, to \$1.1 billion. NCRR is charged with developing and supporting critical research technologies and shared resources that underpin biomedical research. One beneficiary of these increases in NCRR funding is the Institutional Development Award (IDeA) program, a program that provides capacity-building assistance for biomedical research in states that have not previously participated fully in the research programs of NIH. The final FY 2003 appropriations direct \$210 million to IDeA, up from \$160 million in FY 2002 and \$100 million in FY 2001. Established in FY 1993, IDeA has grown dramatically in the past few years and is open to proposals from 23 states and Puerto Rico. It is similar in intent to the National Science Foundation's Experimental Program to Stimulate Competitive Research (EPSCoR).

Among other HHS agencies, the Centers for Disease Control and Prevention (CDC) sees its R&D budget increase by 6.9 percent to \$557 million (see Table 9). In the aftermath of the fall 2001 anthrax attacks, the CDC received substantial sums of emergency money, mostly for non-R&D activities such as procuring

vaccines or improving security at CDC facilities, but also for CDC's anthrax and other bioterrorism R&D efforts. Most of CDC's bioterrorism R&D shifts to NIH in FY 2003, but the agency will continue some R&D efforts in its own laboratories. All other HHS agencies suffer cuts in their R&D budgets; one exception is the Administration for Children and Families (ACF), up 45.6 percent to \$35 million. ACF's research programs focus on Head Start, child care, and child welfare.

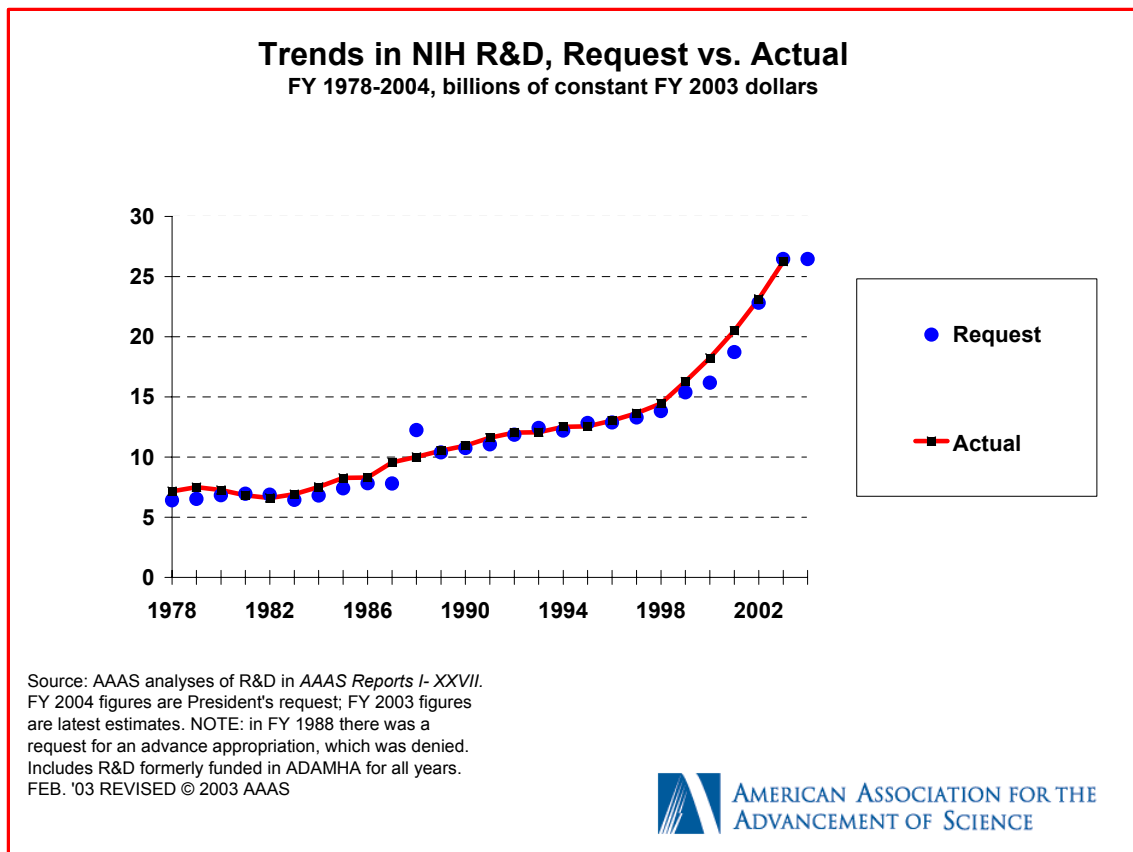


Figure 6.

Although other R&D funding agencies have struggled to maintain their budgets in the past several years, NIH has enjoyed extraordinary success on Capitol Hill and its budget growth accelerated over the past five years. As shown in Figure 6, NIH has enjoyed steady growth in its R&D budget over the past two decades. NIH's budget growth has accelerated in the last five years as the NIH budget doubled (in non-inflation adjusted terms) in the five years to FY 2003. The FY 2004 request for NIH would slow growth down to 2.7 percent, just ahead of the expected rate of inflation (see the *AAAS Report XXVIII: R&D FY 2004* for information on the FY 2004 budget proposal).

National Science Foundation (NSF)

NSF won \$5.3 billion in FY 2003 appropriations, up \$487 million or 10.1 percent from FY 2002. NSF R&D enjoys an even greater increase from FY 2002 levels, rising \$401 million or 11.4 percent (see Table 10). These totals incorporate an across-the-board cut of 0.65 percent affecting nearly all domestic programs funded in the omnibus bill.

The final appropriation is greater than the \$5.0 billion Administration request by \$282 million, and could be the first installment of a plan to double the NSF budget over the next five years. In December, President Bush signed a NSF authorization bill that called for the NSF budget to double over five years, and the final FY 2003 appropriation almost matches the FY 2003 authorization of \$5.5 billion but still falls short.

In February 2002, NSF won praise from the Bush Administration for its management, but only modest increases for its R&D programs. Excluding NSF's non-R&D education activities, NSF R&D would have totaled \$3.7 billion, a boost of 3.5 percent in which **more than half of the increase would have been due to the proposed transfer of three science programs** from other agencies. Without these transfers, NSF R&D would have increased only 1.4 percent. **The final FY 2003 budget rejects the proposed transfer** of a toxic hydrology program from the U.S. Geological Survey (USGS), the National Sea Grant College Program from the Department of Commerce, and an environmental education program from the Environmental Protection Agency (EPA), and funds these programs in their current agencies.

The **Research and Related Activities (R&RA)** account, which funds most of NSF's R&D, receives \$4.1 billion, 12.3 percent or \$444 million more than FY 2002. With the exception of Social, Behavioral & Economic Sciences and U.S. Polar Programs, each program within the R&RA account receives at least a 12 percent increase above FY 2002 (see Table 10).

In pure percentage terms, the biggest winner within the R&RA account is **Integrative Activities**, which swells by 39.0 percent, up \$41 million from FY 2002 to \$147 million. The lion's share of these dollars is designated for the Major Research Instrumentation (MRI) program, which receives \$84 million for FY 2003, compared with a request of \$54 million. This program provides funds to address research equipment needs of research institutions, mostly universities. Additionally, with regard to MRI, the report language that accompanies the bill specifically directs the NSF "to support the merit-based instrumentation and infrastructure needs of developing, HBCU [historically black colleges and universities], and other minority-serving colleges and universities." Also within Integrative Activities, the Partnerships for Innovation program receives \$5 million in FY 2003.

The **Major Research Equipment and Facilities Construction (MRE)** account, which funds construction of large-scale scientific facilities, rises by 7.0 percent to \$149 million, up \$10 million from the FY 2002 level. Included within this amount is \$9.7 million for the Large Hadron Collider; \$13.6 million for the George E. Brown, Jr. Network for Earthquake Engineering Simulation; \$25.5 million to complete development of the High-Performance Instrumented Airborne Platform for Environmental Research (HIAPER); \$10 million for support of the Terascale Computing System and the Distributed Terascale Facility; \$24.7 million for continued research and development of the IceCube Neutrino Detector Observatory in Antarctica; \$30 million for construction of the Atacama Large Millimeter Array (ALMA) aperture-synthesis radio telescope; \$6 million for construction costs associated with expansion of new facilities at the Amundson-Scott South Pole Station; and \$30 million for initial costs associated with the new Earthscope project. Not funded in FY 2003 is the National Ecological Observatory Network (NEON).

NSF's **Education and Human Resources** programs would receive \$903 million, an amount just 1.0 percent above FY 2002. The heart of the Administration's request was \$200 million for the second year of a Math and Science Partnerships program to encourage academic institutions and schools to work together to improve math and science education. The final FY 2003 appropriations bill trims the request for the program to \$128 million and spreads the savings among other EHR programs. EHR's Graduate Education program receives \$140.9 million, an increase of \$12.5 million above the FY 2003 request. These above-request funds are directed toward raising graduate student stipends for those seeking advanced degrees in science and engineering. Shortages in the nation's science and engineering workforce has been a growing concern among policy makers in recent years; by making the study of science and engineering more attractive, policy makers hope to make a dent in these workforce shortages.

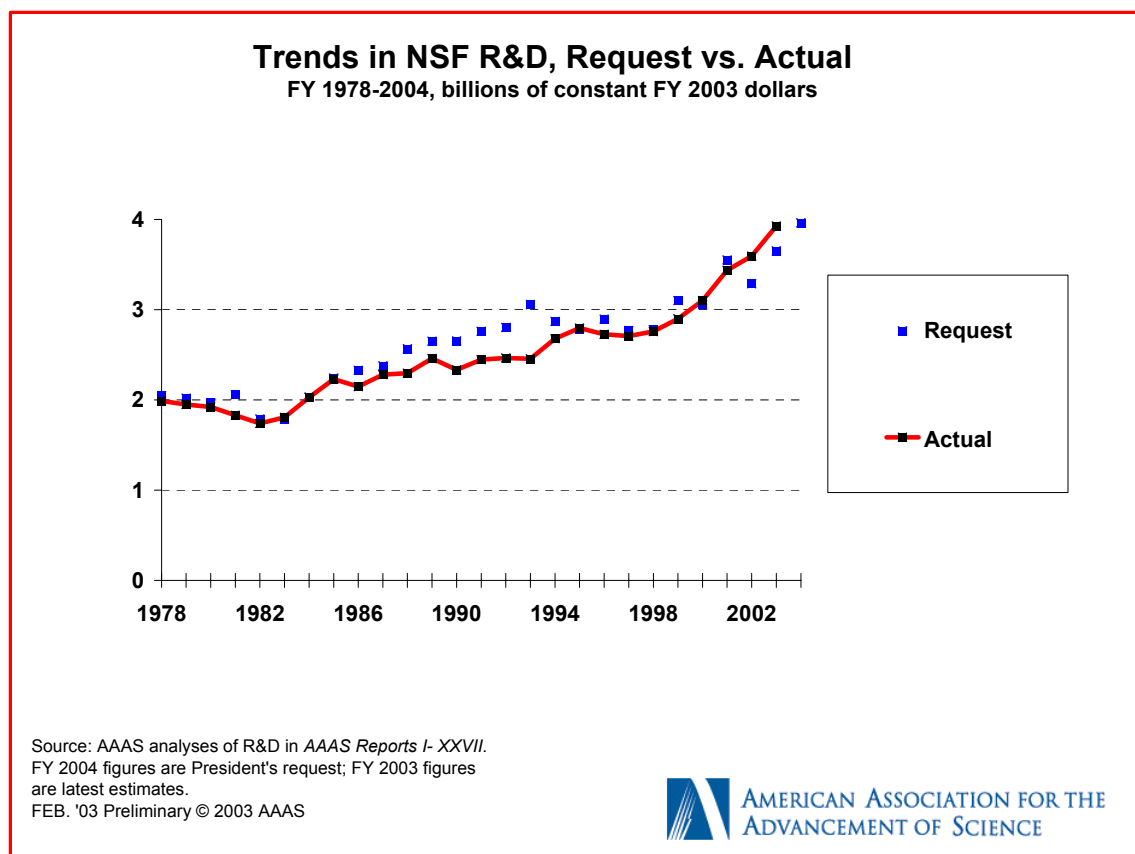


Figure 7.

The FY 2003 appropriation continues the recent trend of large increases for NSF. Figure 7 shows the recent history of NSF's budget for R&D and compares the final appropriated budgets with the requests. The line shows that NSF R&D grew steadily in the 1980s and until FY 1995, but then stagnated and even declined because of severe budget pressures in the mid-1990s as the federal government restrained discretionary spending to achieve a balanced budget. But the chart also shows that NSF's R&D investment resumed its long-term growth trend after FY 1998, when the government entered a (now-ended) age of surpluses. **The FY 2003 increase brings NSF R&D to an all-time high.** The FY 2004 request, just announced earlier this month, would bring these large increases to an end and would raise the total NSF budget only 3.2 percent above the FY 2003 level, falling nearly \$1 billion short of the FY 2004 'doubling track' authorization level. Advocates for doubling the NSF budget over five years hope that Congress will add funds to the FY 2004 request, as it did in FY 2002 and FY 2003, to keep the doubling plan on track.

National Aeronautics and Space Administration (NASA)

As part of the \$397.4 billion omnibus appropriations bill that brought an end to the FY 2003 appropriations process, the NASA received \$15.3 billion in FY 2003 funding, up \$443 million or 3.0 percent from FY 2002. Included in the total is \$50 million specifically allocated for expenses related to the investigation of the loss of the space shuttle *Columbia* on February 1. Two-thirds of the NASA budget, which excludes the Space Shuttle program and its associated costs, is classified as R&D. **NASA R&D rises 7.6 percent under the bill to \$11.0 billion, an increase of \$775 million above the FY 2002 level;** this exceeds the Bush Administration's request by \$283 million (see Table 6). A large portion of this above-request increase is due to the insertion of congressionally designated projects in the Science, Aeronautics, and Technology

account. These totals incorporate an across-the-board cut of 0.65 percent affecting nearly all domestic programs funded in the omnibus bill, except for the Space Shuttle.

Within the **Human Space Flight (HSF)** account, funding for the troubled **International Space Station** is reduced by \$238 million (13.8 percent) in comparison to FY 2002, some \$10 million beyond the Administration's proposed cut. When action on the (then stand-alone) VA-HUD appropriations bill that funds NASA was taken in the Senate last summer, report language accompanying the bill re-iterated lingering congressional concern over NASA's management of Station costs. With this reduction, and cutbacks in other HSF R&D activities, overall HSF R&D is down \$307 million from the FY 2002 level to \$1.9 billion, a 14.0 percent decrease (see Table 6).

These cuts stand in contrast to notable increases in the **Science, Aeronautics, and Technology (SAT)** account. **Space Science** enjoys the largest absolute and percentage increase from the FY 2002 level, climbing \$599 million to \$3.5 billion, a 20.7 increase. The single largest increase above the budget request in the SAT portfolio is \$95 million for the Pluto-Kuiper Belt mission, to be used to develop a spacecraft for a scheduled launch date of 2006 to Pluto, a program NASA proposed to cancel. Other notable increases include \$20 million for the Jupiter Icy Moons Orbiter program and \$19 million for the Mars program. The **Aero-Space Technology (AST)** program sees a 12.7 percent or \$307 million increase to \$2.9 billion for FY 2003. The single largest AST increase is for the Space Launch Initiative, which climbs from \$467 million to \$719 million in an effort to develop the next generation of space launch systems including possible replacements for the Space Shuttle. **Earth Science** and **Biological and Physical Research** grow by 7.3 percent and 4.7 percent respectively.

And, though **Academic Programs** sees a 10.9 percent decrease as compared to the FY 2002 level, its \$203 million appropriation for FY 2003 is a 41 percent increase from the budget request. This rather sizable difference is due to 38 congressionally designated projects totaling \$54.4 million, many of them funded in FY 2002 but deleted in the FY 2003 request. Although all programs in this account are classified as R&D, the congressionally designated projects include funds for a rooftop observatory, an aquarium laboratory, science museums, and education centers. There are also congressional earmarks in the other SAT accounts, and they are responsible for most of the increases above the budget request for these programs.

Clearly the most scrutinized NASA activity at the moment, however, is the Space Shuttle program, officially classified as a non-R&D activity. With the loss of the *Columbia* and her seven-member crew, old questions have re-surfaced concerning the cost-effectiveness and safety of the Shuttle program specifically, and the wisdom of manned space flight more generally. And, while it is too early to tell whether these debates will lead to any meaningful changes in direction, the emergence of significant modifications or alternatives to the Space Shuttle program could mean larger R&D budgets as future directions are investigated. The budgetary impacts of the Columbia disaster will be felt in the FY 2004 budget, which was released on February 3 two days after the loss. The FY 2004 total request of \$15.5 billion will almost certainly be rewritten as the shuttle investigation and NASA reactions commence. (For details of the NASA FY 2004 request, please refer to *AAAS Report XXVIII: R&D FY 2004*.)

Department of Energy (DOE)

DOE receives \$8.2 billion for its R&D programs in FY 2003, a modest \$127 million or 1.6 percent increase over FY 2002. R&D in DOE's mission areas of energy and defense receive increases of 3.0 percent and 2.4 percent, respectively, but funding for R&D in the science mission (the Office of Science) remains flat (up 0.0 percent) at \$3.1 billion for the third year in a row (see Table 7).

Most Science programs receive funding close to FY 2002 levels, with cuts in the Biological and Environmental Research (BER) program (down 5.0 percent to \$527 million) distributed as increases to

other programs in High Energy Physics (up 3.6 percent), Nuclear Physics (up 8.9 percent), Fusion Sciences (up 3.0 percent), and Basic Energy Sciences (up 4.4 percent). Within Basic Energy Sciences, construction of the Spallation Neutron Source in Tennessee would continue with funding of the requested \$225 million, down from \$291 million last year because of a planned reduction in construction costs. The big winner in the Office of Science is Advanced Scientific and Computing Research (ASCR) with a 14.2 percent increase to \$172 million, driven by concern that U.S. civilian computing research capabilities for large-scale modeling of natural phenomena may be falling behind other nations, notably Japan. The ASCR is the nondefense complement to the Advanced Simulation and Computing program on the defense side of DOE (see below).

In Defense programs, Weapons Activities R&D totals \$2.9 billion, an increase of 5.5 percent, mostly to fund R&D at DOE's three weapons labs. Among the big winners in Weapons Activities is the program on Inertial Confinement Fusion (ICF), which receives \$290 million for research and development, an increase of \$30 million or 11.5 percent. In addition, the National Ignition Facility, the centerpiece of the ICF effort, receives \$214 million for continued construction in California. The ICF effort is the defense counterpart to the Fusion Energy Sciences program on the nondefense side which focuses on magnetic fusion rather than inertial confinement. The core Stockpile R&D program jumps 31 percent to \$467 million; this program is the centerpiece of DOE's efforts to use science-based modeling to ensure the reliability and safety of U.S. nuclear weapons in the absence of nuclear testing. The Advanced Simulation and Computing program, which develops the high-performance computing capabilities necessary to simulate nuclear explosions but also has nondefense research uses, would receive \$704 million, a slight decline of 0.9 percent from the FY 2002 level. Including other defense-related R&D activities, total DOE defense R&D would be \$3.8 billion, an increase of 2.4 percent.

Congress rejected the proposed steep cuts in DOE Fossil Energy and Energy Conservation R&D investments and gave Fossil Energy a substantial 8.2 percent increase to \$483 million and Energy Conservation a smaller-than-requested cut of 1.6 percent to \$427 million. In the Energy Supply program, Congress boosted funding for R&D in Solar and Renewable Energy to \$240 million, an increase of 9.2 percent, but saved the largest increase for R&D in Nuclear Energy, up 64 percent to \$69 million and slightly above the request.

Other Agencies

The **U.S. Department of Agriculture (USDA)** receives a modest boost in R&D funds to \$2.2 billion, up 2.6 percent from last year (see Table 12). USDA's intramural Agricultural Research Service (ARS) sees its R&D budget decline 2.5 percent to \$1.2 billion because the FY 2002 total was inflated with one-time emergency funds to improve security at two ARS laboratories that handle pathogens. But intramural research increases by 6.8 percent to \$1.1 billion, although that total includes congressionally designated projects, to offset the cuts in facilities funding. The budget also offsets cuts in intramural ARS funds with increases for the Cooperative State Research, Education and Extension Service (CSREES), which handles USDA's extramural research grants. CSREES receives \$608 million for R&D in FY 2003, a jump of 12.8 percent. The final FY 2003 Agriculture budget again prohibits CSREES' Initiative for Future Agriculture and Food Systems (IFAFS) program from spending mandatory R&D funds for competitively awarded research grants, but the National Research Initiative, USDA's regular competitive grants program, receives \$166 million, \$46 million more than FY 2002. The final CSREES budget boosts funding for congressionally designated research projects, including \$112 million (up 15.0 percent) for Special Research Grants. In other USDA agencies, the Forest Service receives \$265 million for its R&D portfolio, an increase of 3.6 percent, including a growing portfolio in fire management research to combat forest fires.

The **Department of Commerce's** R&D programs receive \$1.2 billion in FY 2003, \$21 million or 1.8 percent more than FY 2002, and a substantial \$185 million more than the request (see Table 11). Commerce's two major R&D agencies—the National Institute of Standards and Technology (NIST) and the National Oceanic and Atmospheric Administration (NOAA)—both receive modest increases. NOAA R&D rises by 1.1 percent to \$684 million, with increases across several NOAA accounts, including the National Ocean Service (NOS) and Oceanic and Atmospheric Research (OAR). The budget keeps the Sea Grant program in OAR instead of transferring it to NSF, and funds this extramural grant program at \$62 million.

The final Commerce budget keeps NIST's Advanced Technology Program (ATP) alive at an R&D level of \$153 million out of a total budget of \$180 million, in contrast to the Administration proposal to eliminate it. Total NIST R&D increases 4.7 percent to \$527 million. NIST's intramural R&D programs rise by 9.0 percent to \$308 million. Funding for NIST's Construction of Research Facilities account climbs to \$66 million, of which \$28 million is reserved for 5 congressionally designated research projects. The budget also rejects the request to close out the non-R&D Manufacturing Extension Partnership (MEP) program that offers technical assistance to small and medium-sized U.S. businesses in cooperation with states; MEP receives \$106 million in FY 2003, down just slightly from last year.

The **Department of the Interior's (DOI)** R&D budget totals \$647 million in FY 2003, a small increase of 1.0 percent (see Table 14). Although the President's FY 2003 request would have cut R&D in Interior's U.S. Geological Survey (USGS) by 7 percent, the final budget restores the cuts and gives USGS a small additional increase of 1.1 percent over FY 2002 to \$589 million, and keeps a toxic hydrology program proposed for transfer to NSF within USGS. R&D in all four USGS divisions increases, even though all four were proposed for cuts; the largest increase would go to the smallest portfolio of National Mapping R&D, up 4.7 percent to \$46 million.

The **Environmental Protection Agency (EPA)** has an FY 2003 R&D budget of \$641 million, a substantial \$49 million or 8.2 percent boost over last year (see Table 15). The large increase is due to \$86 million in Superfund research funds (up \$49 million), with the increase going for building decontamination research to better respond to future building contaminations such as the anthrax attacks on congressional office buildings in fall 2001. R&D in the regular Science and Technology (S&T) account would stay essentially even with FY 2002 at \$549 million, a decline of 0.6 percent. Most S&T programs would be funded at slightly less than the FY 2002 level in FY 2003 to make room for 50 congressionally designated research projects to the S&T account, similar in number but higher in dollar terms than the FY 2002 earmarks. The total EPA budget falls slightly to \$8.1 billion (down 0.3 percent), but this is still significantly higher than the requested \$7.6 billion.

Department of Transportation (DOT) R&D falls to \$835 million in FY 2003, \$57 million or 6.4 percent less than FY 2002 (see Table 13). The decline would be due to the Federal Aviation Administration (FAA) receiving emergency counterterrorism funds in FY 2002 to develop better aviation security technologies in the immediate aftermath of the September 11 attacks, funds that would not be renewed in FY 2003. FAA receives a total of \$271 million for R&D in FY 2003, \$99 million less than last year. The Transportation Security Administration (TSA) takes over part of FAA's aviation security portfolio in FY 2003 with an R&D appropriation of \$110 million, up 16 percent from last year. TSA and the Coast Guard are included in DOT totals for this year, but these agencies will transfer to the new Department of Homeland Security (DHS) in a few weeks and their R&D programs will be included in the DHS R&D portfolio in future years.