

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Federal Funds

General and special funds:

HUMAN SPACE FLIGHT

For necessary expenses, not otherwise provided for, in the conduct and support of human space flight research and development activities, including research, development, operations, services; maintenance; construction of facilities including repair, rehabilitation, and modification of real and personal property, and acquisition or condemnation of real property, as authorized by law; space flight, spacecraft control and communications activities including operations, production, and services; and purchase, lease, charter, maintenance and operation of mission and administrative aircraft, \$5,362,900,000 to remain available until September 30, 1998.

Note.—A regular 1996 appropriation for this account had not been enacted at the time this budget was prepared. The 1996 amounts included in this budget are based on the levels provided in three continuing resolutions: P.L. 104-91, P.L. 104-92 and P.L. 104-99.

Program and Financing (in millions of dollars)

Identification code 80-0111-0-1-252	1995 actual	1996 est.	1997 est.
Obligations by program activity:			
Direct program:			
00.01 Space station	1,693	1,967	1,805
00.02 US/Russian cooperative program	124	149	138
00.03 Payload and utilization operations	312	307	274
00.04 Space shuttle	3,110	3,037	3,151
00.91 Subtotal, direct program	5,239	5,460	5,368
01.01 Reimbursable program	81	97	108
10.00 Total obligations	5,320	5,557	5,476
Budgetary resources available for obligation:			
21.40 Unobligated balance available, start of year:			
Uninvested balance		276	273
22.00 New budget authority (gross)	5,596	5,554	5,471
23.90 Total budgetary resources available for obligation	5,596	5,830	5,744
23.95 New obligations	-5,320	-5,557	-5,476
24.40 Unobligated balance available, end of year:			
Uninvested balance	276	273	268
New budget authority (gross), detail:			
Current:			
40.00 Appropriation	5,574	5,457	5,363
40.35 Appropriation rescinded	-59		
43.00 Appropriation (total)	5,515	5,457	5,363
Permanent:			
Spending authority from offsetting collections:			
68.00 Offsetting collections (cash)	25	97	108
68.10 Change in orders on hand from Federal sources	56		
68.90 Spending authority from offsetting collections (total)	81	97	108
70.00 Total new budget authority (gross)	5,596	5,554	5,471
Change in unpaid obligations:			
Unpaid obligations, start of year:			
72.40 Obligated balance: Appropriation		1,711	2,101
72.95 Orders on hand from Federal sources		56	56
72.99 Total unpaid obligations, start of year		1,767	2,157
73.10 New obligations	5,320	5,557	5,476
73.20 Total outlays (gross)	-3,553	-5,167	-5,493
Unpaid obligations, end of year:			
74.40 Obligated balance: Appropriation	1,711	2,101	2,084
74.95 Orders on hand from Federal sources	56	56	56
74.99 Total unpaid obligations, end of year	1,767	2,157	2,140
Outlays (gross), detail:			
86.90 Outlays from new current authority	3,528	3,502	3,431

86.93 Outlays from current balances		1,568	1,954
86.97 Outlays from new permanent authority	25	97	108
86.98 Outlays from permanent balances			
87.00 Total outlays (gross)	3,553	5,167	5,493
Offsets:			
Against gross budget authority and outlays:			
Offsetting collections (cash) from:			
88.00 Federal sources	-22	-81	-79
88.40 Non-Federal sources	-3	-16	-29
88.90 Total, offsetting collections (cash)	-25	-97	-108
88.95 Change in orders on hand from Federal sources	-56		
Net budget authority and outlays:			
89.00 Budget authority	5,515	5,457	5,363
90.00 Outlays	3,528	5,070	5,385

The appropriation provides for human space flight activities, including development of the Space Station, and operation of the Space Shuttle. This includes support of planned cooperative activities with Russia, upgrades to the performance and safety of the Space Shuttle and required construction projects in direct support of Space Station and Space Shuttle programs.

Performance Objectives

Space Station.—The Space Station will be an international laboratory in low Earth orbit on which American, Russian, Canadian, European, and Japanese astronauts will conduct unique scientific and technological investigations in a microgravity environment. During 1993, the program underwent a major redesign activity to lower program costs. In 1994, the program began making the necessary management and design changes to integrate the augmented capabilities made possible by the addition of Russia to the International Partners. In 1995, the program completed transition to a new program structure, and began flight hardware fabrication. Activities are well underway to support crew training, payload processing, and hardware element processing requirements. Hardware fabrication activities will continue in 1996. Final fabrication of flight hardware will be the focus of the program. First element launch is scheduled for late 1997.

U.S./Russian Cooperative Program.—The United States and Russia are planning to undertake a program of joint space missions involving the Space Shuttle and Russian Mir Space Station. In 1995, a U.S. astronaut spent several months on the Mir Space Station, and the first rendezvous and docking mission between the Space Shuttle and Mir took place. In 1996, three Shuttle flights to Mir are planned. Flight hardware to conduct experiments will be carried on these flights. These flights will provide valuable opportunities to gain experience in working with our Russian partners, which will be crucial to the success of building and operating the international Space Station. These flights will continue in FY 1997, with three additional flights planned, completing phase I of this cooperative precursor to Space Station.

Payload and Utilization Operations.—These funds will support the mission planning and hardware preparation activities required to support the payload and experiment infrastructure, including the spacelab which is planned to be flown on the Space Shuttle. The Engineering and Technical Base provides basic engineering and technical capabilities to support the NASA mission assigned to the programs carried out by the human space flight centers. The program will support

General and special funds—Continued

HUMAN SPACE FLIGHT—Continued

seven missions planned in 1997, including the Microgravity Sciences Laboratory (MSL-1) spacelab mission, three missions to the MIR and the Hubble Telescope maintenance mission. In addition, 13 Hitchhiker and several GAS payloads will be supported. In FY 1997, over 23 major and secondary payloads will be launched. The Spacelab program is scheduled to be terminated in 1998.

Space Shuttle.—The Space Shuttle is a reusable space vehicle which provides several unique capabilities to the United States space program. These include launching spacecraft and retrieving payloads from orbit for reuse, servicing and repairing satellites in space, safely transporting humans to and from space, and operating and returning space laboratories. In 1995, six Shuttle missions were accomplished, including the first docking mission between the Space Shuttle and the Russian Mir Space Station. In 1996, eight Shuttle missions are planned. Activities supporting consolidation of Shuttle contracts into one Space Flight Operations contract will be completed in FY 1996. This will result in significant reductions in the cost of operating the Space Shuttle through FY 2000 and beyond, with no impact on safety, performance or schedule.

In 1997, seven shuttle flights are planned. Continued emphasis will be placed on enhancements to the safety and performance of the Space Shuttle.

Object Classification (in millions of dollars)

Identification code 80-0111-0-1-252	1995 actual	1996 est.	1997 est.
Direct obligations:			
22.0 Transportation of things	4	4	4
23.3 Communications, utilities, and miscellaneous charges	38	40	39
24.0 Printing and reproduction	3	3	3
25.1 Advisory and assistance services	1,378	1,436	1,412
25.2 Other services	1,221	1,273	1,251
25.3 Purchases of goods and services from Government accounts	39	41	40
25.4 Operation and maintenance of facilities	8	8	8
25.5 Research and development contracts	2,301	2,397	2,358
25.7 Operation and maintenance of equipment	86	90	88
26.0 Supplies and materials	87	91	89
31.0 Equipment	28	29	29
32.0 Land and structures	44	46	45
41.0 Grants, subsidies, and contributions	2	2	2
99.0 Subtotal, direct obligations	5,239	5,460	5,368
99.0 Reimbursable obligations	81	97	108
99.9 Total obligations	5,320	5,557	5,476

SCIENCE, AERONAUTICS AND TECHNOLOGY

[(INCLUDING RESCISSION OF FUNDS)]

For necessary expenses, not otherwise provided for, in the conduct and support of science, aeronautics and technology research and development activities, including research, development, operations, services; maintenance; construction of facilities including repair, rehabilitation, and modification of real and personal property, and acquisition or condemnation of real property, as authorized by law; space flight, spacecraft control and communications activities including operations, production, and services; and purchase, lease, charter, maintenance and operation of mission and administrative aircraft, \$5,862,100,000, to remain available until September 30, 1998. Chapter VII of Public Law 104-6 is amended under the heading, "National Aeronautics and Space Administration," by replacing "1997" with "1998" and "1996" with "1997."

Note.—A regular 1996 appropriation for this account had not been enacted at the time this budget was prepared. The 1996 amounts included in this budget are based on the levels provided in three continuing resolutions: P.L. 104-91, P.L. 104-92 and P.L. 104-99.

Program and Financing (in millions of dollars)

Identification code 80-0110-0-1-999	1995 actual	1996 est.	1997 est.
Obligations by program activity:			
Direct program:			
00.01 Space science	1,590	2,094	1,864
00.02 Life and microgravity science	393	538	499
00.03 Mission to planet Earth	1,059	1,390	1,369
00.04 Aeronautical research and technology	866	873	886
00.05 Space access and technology	560	691	723
00.06 Launch services	282	52	.....
00.07 Mission communication services	455	445	423
00.08 Academic Programs	78	121	97
00.91 Subtotal, direct program	5,283	6,204	5,861
01.01 Reimbursable program	389	580	586
10.00 Total obligations	5,672	6,784	6,447
Budgetary resources available for obligation:			
21.40 Unobligated balance available, start of year:			
Uninvested balance		651	293
22.00 New budget authority (gross)	6,323	6,426	6,448
23.90 Total budgetary resources available for obligation	6,323	7,077	6,741
23.95 New obligations	-5,672	-6,784	-6,447
24.40 Unobligated balance available, end of year:			
Uninvested balance		651	294
New budget authority (gross), detail:			
Current:			
40.00 Appropriation	5,936	5,846	5,862
40.35 Appropriation rescinded	-52	.....	.....
42.00 Transferred from other accounts	50	.....	.....
43.00 Appropriation (total)	5,934	5,846	5,862
50.00 Reappropriation .....	.....	.....	365
50.35 Reappropriation deferred .....	.....	.....	-365
53.00 Reappropriation (total) .....	.....	.....	.....
Permanent:			
Spending authority from offsetting collections:			
68.00 Offsetting collections (cash)	117	580	586
68.10 Change in orders on hand from Federal sources	272	.....	.....
68.90 Spending authority from offsetting collections (total)	389	580	586
70.00 Total new budget authority (gross)	6,323	6,426	6,448
Change in unpaid obligations:			
Unpaid obligations, start of year:			
72.40 Obligated balance: Appropriation .....	.....	2,576	3,367
72.95 Orders on hand from Federal sources .....	.....	272	272
72.99 Total unpaid obligations, start of year .....	.....	2,848	3,639
73.10 New obligations	5,672	6,784	6,447
73.20 Total outlays (gross)	-2,824	-5,993	-6,218
Unpaid obligations, end of year:			
74.40 Obligated balance: Appropriation	2,576	3,367	3,596
74.95 Orders on hand from Federal sources	272	272	272
74.99 Total unpaid obligations, end of year	2,848	3,639	3,868
Outlays (gross), detail:			
86.90 Outlays from new current authority	2,695	2,689	2,748
86.93 Outlays from current balances .....	.....	2,724	2,884
86.97 Outlays from new permanent authority	129	580	586
86.98 Outlays from permanent balances .....	.....	.....	.....
87.00 Total outlays (gross)	2,824	5,993	6,218
Offsets:			
Against gross budget authority and outlays:			
Offsetting collections (cash) from:			
88.00 Federal sources	-113	-558	-561
88.40 Non-Federal sources	-4	-22	-25
88.90 Total, offsetting collections (cash)	-117	-580	-586
88.95 Change in orders on hand from Federal sources	-272	.....	.....
Net budget authority and outlays:			
89.00 Budget authority	5,934	5,846	5,862
90.00 Outlays	2,707	5,413	5,632

This appropriation provides for the research and development activities of the National Aeronautics and Space Admin-

istration. Funds are included for the construction, maintenance, and operation of programmatic facilities.

Performance Objectives

Space Science:

Beginning in FY 1997, the Physics and Astronomy and Planetary Exploration budget line items will be consolidated into one budget line item, Space Science. This consolidation reflects the management and organization of space science activities at NASA and has no impact on program content.

Physics and Astronomy.—This program contributes to our understanding of the origin of the universe, the fundamental laws of physics, and the study of the Earth's and other naturally occurring plasmas in the universe. Development activities will continue in 1996–1997 on the Advanced X-ray Astrophysics Facility in support of a launch in late 1998. Development activities on the Global Geospace Science program are complete. The first of the two missions (Wind) was launched in November 1994 and initial operations are underway. The second mission (Polar) is due to be launched in the near future. Development activities continue on the Relativity (Gravity Probe-B) mission. The Preliminary Design Review was completed in March, 1995, four months ahead of schedule. In Explorers, the X-ray Timing Explorer was successfully launched in December 1995. Development activities continue on the Advanced Composition Explorer for a launch in late 1997. Selection of candidate missions for the Small- (SMEX) and Medium (MIDEX)-class Explorer programs continues. These missions emphasize reduced mission costs and accelerated launch schedules. Several significant scientific discoveries were reported in 1995 based on data gathered from the Hubble Space Telescope, and similar results are anticipated in the future. Preparations are currently underway for a second servicing mission in early-mid 1997 which will provide two new science instruments and other servicing requirements as needed. Funding is included to continue development activities on the Stratospheric Observatory for Infrared Astronomy (SOFIA). A commercial operator for development and operation of the SOFIA aircraft is expected to be selected in 1996. Initial operations are expected by the end of FY 2000. Definition activities on the Space Infrared Telescope Facility (SIRTF) and TIMED missions will continue.

Planetary Exploration.—This program encompasses the scientific exploration of the solar system including the planets and their satellites, comets and asteroids, and the interplanetary medium. Development activities will continue on the Cassini mission to Saturn for launch in 1997. Development activities on the Mars Global Surveyor mission continue with launch planned for late 1996. Funds are requested for development of future Mars missions in 1998 and beyond. Development activities on the first two Discovery class missions, Mars Pathfinder and the Near-Earth Asteroid Rendezvous, are nearing completion, and these missions are scheduled for launch in 1996. The Lunar Prospector mission is scheduled for launch in 1997. Funding is also included for future Discovery class missions. The New Millennium Spacecraft program is underway. This program will incorporate critical new technologies into a series of small test missions designed to greatly reduce the mass and cost of future science instruments and spacecraft subsystems. After a six-year cruise period, Galileo arrived at Jupiter in December 1995 to conduct a two-year tour of the planet and its moons.

Life and Microgravity Sciences.—This program uses the microgravity environment of space to conduct basic and applied research to understand the effect of gravity on living systems and to conduct research in the areas of fluid physics, materials science and biotechnology. In 1995, the 116 day

stay of an U.S. astronaut on the MIR, followed by the successful shuttle/MIR rendezvous, provided an excellent opportunity to conduct a wide range of research. Subsequent flights to MIR will provide the means for continuing research activities. In 1996, six major shuttle missions involving materials and life sciences experiments are planned. These missions will provide the opportunity to refine the definition, design and development of experiment hardware planned for use on the Space Station. In 1997, four major shuttle missions are planned with a life sciences or microgravity focus. These include the Materials Sciences Laboratory mission and three NASA/MIR missions. An aggressive four year cooperative program with the National Institute of Child Health and Human Development began in 1995. Research activities will focus on use of NASA's bioreactor technology in the area of AIDS research.

Mission to Planet Earth.—The goal of this program is to gain a better understanding of the processes in the atmosphere, oceans, land surface and interior of the Earth, and to advance our knowledge of the interactions between these environments. The Upper Atmosphere Research Satellite and TOPEX, supported by ground-based and airborne observations, continue to gather valuable scientific data on the Earth's environment. In 1994, three Space Shuttle missions were flown (SRL-1 and -2, and ATLAS-3) with Earth Science as the major focus. Funding is included for the continued development of the first Earth Observing Satellite (EOS) Mission (EOS AM-1) for launch in 1998 and development of the Earth Observing System Data Information System (EOSDIS). Fabrication of all AM-1 spacecraft subsystems is proceeding on schedule to support the planned launch in mid-1998. In 1996, work on EOSDIS Version 1 will continue, with completion planned in FY 1997. EOSDIS will complete Version 2, which will support the EOSDIS and Landsat-7 missions. Launch of the Total Ozone Mapping Spectrometer (TOMS) as a free-flying Earth probe is awaiting resolution of technical issues with the Pegasus XL launch vehicle. Launch of TOMS and the NASA Scatterometer is planned for 1996. The release of EOSDIS Version 1 in 1997 will support the 1997 launch of the Tropical Rainfall Measurement Mission (TRMM.)

Aeronautical Research and Technology.—The goal of this program is to conduct aeronautical research and develop technology to strengthen U.S. leadership in civil and military aviation. In 1995, the Advanced Subsonic Technology program continued to make substantial progress, and funding to continue all elements is included in FY 1996 and FY 1997. Funding is provided to continue Phase II of the High Speed Research program directed at developing and verifying technologies essential for an economically viable and environmentally compatible future High Speed Civil Transport system. In the area of High Performance Computing, NASA has pioneered the implementation of design and simulation software on parallel machines. Funding is included to continue NASA's leadership role in this area. In the Research and Technology base, research activities in various aeronautical disciplines will continue to develop innovative concepts, the physical understanding and the theoretical and computation tools required for the efficient design and operation of advanced aerospace systems. NASA will continue to operate critical national facilities for aeronautical research and for support of industry, Department of Defense and other NASA programs.

Space Access and Technology.—The goal of this program is to provide new and innovative space technologies to meet the challenges and lower the cost of future space missions. The initial two Small Satellite Technology Initiative (SSTI) missions, "Lewis" and "Clark" are scheduled to be launched in 1996, pending resolution of technical concerns with the Lockheed launch vehicle. The SSTI program continues in FY

General and special funds—Continued

SCIENCE, AERONAUTICS AND TECHNOLOGY—Continued

[(INCLUDING RESCISSION OF FUNDS)]—Continued

1977 in close coordination with New Millennium program activities underway in the Office of Mission to Planet Earth. In 1995 and 1996, the Reusable Launch Vehicle (RLV) program continues to pursue technology development and concept definition activities in support of next-generation reusable systems and will also fund flight demonstration of the DC-XA, an upgrade of the DC-X vehicle developed and flown by DOD. Based on results of these activities, a decision will be made by the President no later than December, 1996, on whether to proceed with design, construction and flight testing of a large-scale, reusable launch vehicle demonstrator, designated the X-33. Funding for this program continues in FY 1997.

Mission Communication Services.—The primary goal of this operational program in all years is to provide highly reliable, cost-effective telecommunications services in support of NASA's science and aeronautics programs. Other U.S. agencies, international space-faring agencies, and U.S. commercial enterprises are also supported on a reimbursable basis. Ground network, space network, and mission systems are provided under this program in support of planetary, deep space, Earth-orbiting, aeronautic, and suborbital systems.

Academic Programs.—The goal of this program is to promote excellence in America's education system through enhancing and expanding scientific and technological competence. NASA's education programs span from the elementary through graduate level, and are directed at students as well as faculty. The goal of the Minority University Research Program is to expand opportunities for talented students from underrepresented groups pursuing degrees in science and engineering, as well as strengthening the research capabilities of minority universities and colleges. In 1995-1997, the range of activities conducted under this program will continue to capture the interest of all students in science and technology, develop talented students at the undergraduate and graduate levels, provide research opportunities for students and faculty members at NASA centers and strengthen and enhance the research capabilities of the nation's colleges and universities.

Funding is also provided in a government-wide account for several NASA science missions. These funds are included to make these programs consistent with OMB's fixed asset policy. This policy requires all or distinct portions of a fixed asset's budget authority be identified upfront. NASA will transition the rest of their fixed asset programs to be consistent with this policy in the FY 1998 budget.

Object Classification (in millions of dollars)

Identification code 80-0110-0-1-999	1995 actual	1996 est.	1997 est.
Direct obligations:			
22.0 Transportation of things	3	4	3
23.2 Rental payments to others	1	1	1
23.3 Communications, utilities, and miscellaneous charges	82	96	91
24.0 Printing and reproduction	2	2	2
25.1 Advisory and assistance services	743	868	825
25.2 Other services	708	827	785
25.3 Purchases of goods and services from Government accounts	207	242	230
25.4 Operation and maintenance of facilities	13	15	14
25.5 Research and development contracts	2,825	3,298	3,135
25.7 Operation and maintenance of equipment	46	54	51
26.0 Supplies and materials	131	153	145
31.0 Equipment	110	128	122
32.0 Land and structures	40	82	44
41.0 Grants, subsidies, and contributions	372	434	413
99.0 Subtotal, direct obligations	5,283	6,204	5,861
99.0 Reimbursable obligations	389	580	586

99.9 Total obligations	5,672	6,784	6,447
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MISSION SUPPORT

For necessary expenses, not otherwise provided for, in carrying out mission support for human space flight programs and science, aeronautical, and technology programs, including research operations and support; space communications activities including operations, production and services; maintenance; construction of facilities including repair, rehabilitation, and modification of facilities, minor construction of new facilities and additions to existing facilities, facility planning and design, environmental compliance and restoration, and acquisition or condemnation of real property, as authorized by law; program management; personnel and related costs, including uniforms or allowances therefor, as authorized by 5 U.S.C. 5901-5902; travel expenses; purchase, lease charter, maintenance, and operation of mission and administrative aircraft; not to exceed \$35,000 for official reception and representation expenses; and purchase (not to exceed \$3 for replacement only) and hire of passenger motor vehicles; \$2,562,200,000, to remain available until September 30, 1998.

Note.—A regular 1996 appropriation for this account had not been enacted at the time this budget was prepared. The 1996 amounts included in this budget are based on the levels provided in three continuing resolutions: P.L. 104-91, P.L. 104-92, and P.L. 104-99.

Program and Financing (in millions of dollars)

Identification code 80-0112-0-1-999	1995 actual	1996 est.	1997 est.
Obligations by program activity:			
Direct program:			
00.01 Safety, reliability and quality assurance	29	46	37
00.02 Space communication services	171	294	290
00.03 Research and program management	2,126	2,054	2,080
00.04 Construction of facilities	78	142	150
00.91 Subtotal, direct program	2,404	2,536	2,557
01.00 Total direct program	2,404	2,536	2,557
01.01 Reimbursable program	74	125	141
10.00 Total obligations	2,478	2,661	2,698
Budgetary resources available for obligation:			
21.40 Unobligated balance available, start of year:			
Uninvested balance		128	94
22.00 New budget authority (gross)	2,607	2,627	2,703
22.30 Unobligated balance expiring	-1		
23.90 Total budgetary resources available for obligation	2,606	2,755	2,797
23.95 New obligations	-2,478	-2,661	-2,698
24.40 Unobligated balance available, end of year:			
Uninvested balance	128	94	99
New budget authority (gross), detail:			
Current:			
40.00 Appropriation	2,572	2,502	2,562
40.35 Appropriation rescinded	-39		
43.00 Appropriation (total)	2,533	2,502	2,562
Permanent:			
Spending authority from offsetting collections:			
68.00 Offsetting collections (cash)	25	125	141
68.10 Change in orders on hand from Federal sources	49		
68.90 Spending authority from offsetting collections (total)	74	125	141
70.00 Total new budget authority (gross)	2,607	2,627	2,703
Change in unpaid obligations:			
Unpaid obligations, start of year:			
72.40 Obligated balance: Appropriation		375	501
72.95 Orders on hand from Federal sources		49	49
72.99 Total unpaid obligations, start of year		424	550
73.10 New obligations	2,478	2,661	2,698
73.20 Total outlays (gross)	-2,054	-2,535	-2,603
Unpaid obligations, end of year:			
74.40 Obligated balance: Appropriation	375	501	596
74.95 Orders on hand from Federal sources	49	49	49
74.99 Total unpaid obligations, end of year	424	550	645

Outlays (gross), detail:				
86.90	Outlays from new current authority	2,004	1,977	2,014
86.93	Outlays from current balances		433	448
86.97	Outlays from new permanent authority	50	125	141
87.00	Total outlays (gross)	2,054	2,535	2,603
Offsets:				
Against gross budget authority and outlays:				
Offsetting collections (cash) from:				
88.00	Federal sources	-25	-114	-123
88.40	Non-Federal sources		-11	-18
88.90	Total, offsetting collections (cash)	-25	-125	-141
88.95	Change in orders on hand from Federal sources	-49		
Net budget authority and outlays:				
89.00	Budget authority	2,533	2,502	2,562
90.00	Outlays	2,029	2,410	2,462

This appropriation provides for mission support, including: safety, reliability and quality assurance activities supporting agency programs; space communication services for NASA programs; salaries and related expenses in support of research in NASA field installations; design, repair, rehabilitation and modification of institutional facilities and construction of new institutional facilities; and other operations activities supporting conduct of agency programs.

Performance Objectives:

Safety, Reliability and Quality Assurance.—The goal of this program is to assure the safety and quality of NASA missions, through the development, implementation and oversight of Agencywide safety, engineering, reliability, maintainability, and quality assurance policies and procedures. During 1995–1997, flight program utilization of standards developed in this program will continue.

Space Communication Services.—Activities included in this program provide for the tracking, telemetry, command, data acquisition, communications and data processing required by NASA flight projects. In 1995–1997, the networks and support systems which accomplish these tasks will continue operation. In 1995, the seventh Tracking and Data Relay Satellite (TDRS) was launched. Completion of the upgrade of the TDRS White Sands Complex and early development of the TDRS Replenishment Spacecraft will occur in 1996.

Research and Program Management.—This activity provides for the salaries, travel support, other personnel expenses of the entire NASA civil service workforce. It also includes vital support to the civil service workforce and to the physical plant at the Centers and at NASA Headquarters.

Construction of Facilities.—This activity provides for the facility construction activities to preserve NASA’s core infrastructure, environmental compliance and restoration activities, the design of facilities projects, and the advanced planning related to future facilities needs. In 1995–1997, activities in support of discrete projects to repair and modernize the basic infrastructure and institutional facilities at NASA centers will be conducted, as well as activities in support of environmental compliance and restoration requirements.

Funding is also provided in a government-wide account for NASA’s Tracking and Data Relay System. These funds are included to make these programs consistent with OMB’s fixed asset policy. This policy requires all or distinct portions of a fixed asset’s budget authority be identified upfront. NASA will transition the rest of their fixed asset programs to be consistent with this policy in the FY 1998 budget.

Object Classification (in millions of dollars)

Identification code 80–0112–0–1–999	1995 actual	1996 est.	1997 est.	
Direct obligations:				
Personnel compensation:				
11.1	Full-time permanent	1,234	1,213	1,252
11.3	Other than full-time permanent	18	18	19

11.5	Other personnel compensation	22	23	21
11.8	Special personal services payments	6	7	8
11.9	Total personnel compensation	1,280	1,261	1,300
12.1	Civilian personnel benefits	261	235	245
13.0	Benefits for former personnel	37	37	38
21.0	Travel and transportation of persons	45	46	46
22.0	Transportation of things	7	8	8
23.1	Rental payments to GSA	18	22	21
23.2	Rental payments to others	2	2	2
23.3	Communications, utilities, and miscellaneous charges	59	72	70
24.0	Printing and reproduction	7	9	8
25.1	Advisory and assistance services	70	86	83
25.2	Other services	378	464	450
25.3	Purchases of goods and services from Government accounts	11	13	13
25.4	Operation and maintenance of facilities	11	13	13
25.5	Research and development contracts	57	70	68
25.7	Operation and maintenance of equipment	43	53	51
26.0	Supplies and materials	27	33	32
31.0	Equipment	12	15	14
32.0	Land and structures	76	93	91
41.0	Grants, subsidies, and contributions	3	4	4
99.0	Subtotal, direct obligations	2,404	2,536	2,557
99.0	Reimbursable obligations	74	125	141
99.9	Total obligations	2,478	2,661	2,698

Personnel Summary

Identification code 80–0112–0–1–999	1995 actual	1996 est.	1997 est.	
Direct:				
Total compensable workyears:				
1001	Full-time equivalent employment	22,048	21,450	20,940
1005	Full-time equivalent of overtime and holiday hours	220	220	220
Reimbursable:				
2001	Total compensable workyears: Full-time equivalent employment	116	105	90

Federal Funds

General and special funds:

RESEARCH AND DEVELOPMENT

Program and Financing (in millions of dollars)

Identification code 80–0108–0–1–999	1995 actual	1996 est.	1997 est.	
Obligations by program activity:				
Direct program:				
00.01	Space transportation capability development	70		
00.02	Space station	230	2	
00.14	Physics and astronomy	114		
00.15	Planetary exploration	33		
00.22	Life and microgravity science	128		
00.23	Mission to planet earth	146		
00.29	Advanced concepts and technology	80		
00.42	Aeronautical research and technology	22		
00.43	Safety, reliability and quality assurance	7		
00.44	Academic program	30		
00.45	Tracking and data advanced systems	1		
00.91	Subtotal, direct program	861	2	
01.01	Reimbursable program	87		
10.00	Total obligations	948	2	
Budgetary resources available for obligation:				
21.40	Unobligated balance available, start of year:			
	Uninvested balance	906	2	
22.00	New budget authority (gross)	45		
22.30	Unobligated balance expiring	-1		
23.90	Total budgetary resources available for obligation	950	2	
23.95	New obligations	-948	-2	
24.40	Unobligated balance available, end of year:			
	Uninvested balance	2		

New budget authority (gross), detail:

Current:				
40.36	Unobligated balance rescinded	-42		

General and special funds—Continued
RESEARCH AND DEVELOPMENT—Continued

Program and Financing (in millions of dollars)—Continued

Identification code 80-0108-0-1-999	1995 actual	1996 est.	1997 est.
Permanent:			
Spending authority from offsetting collections:			
68.00			
68.10	424	146	
	Change in orders on hand from Federal sources	-337	-146
68.90			
	Spending authority from offsetting collections (total)	87	
70.00			
	Total new budget authority (gross)	45	
Change in unpaid obligations:			
Unpaid obligations, start of year:			
72.40			
72.95	3,193	753	5
	Orders on hand from Federal sources	483	146
72.99			
	Total unpaid obligations, start of year	3,676	899
73.10			
73.20	948	2	
73.20			
	Total outlays (gross)	-3,710	-894
73.40			
	Adjustments in expired accounts	-15	
Unpaid obligations, end of year:			
74.40			
74.95	753	5	
	Orders on hand from Federal sources	146	
74.99			
	Total unpaid obligations, end of year	899	5
Outlays (gross), detail:			
86.93			
86.98	3,286	748	5
	Outlays from permanent balances	424	146
87.00			
	Total outlays (gross)	3,710	894
Offsets:			
Against gross budget authority and outlays:			
Offsetting collections (cash) from:			
88.00			
88.40	-393	-146	
	Federal sources	-31	
	Non-Federal sources		
88.90			
	Total, offsetting collections (cash)	-424	-146
88.95			
	Change in orders on hand from Federal sources	337	146
Net budget authority and outlays:			
89.00			
90.00	-42		
	Budget authority	3,286	748
	Outlays		5

Starting in the FY 1996 budget, the NASA budget reflected an account restructuring that was adopted in FY 1995. NASA's Research and Development activities are now being performed in Human Space Flight; Science, Aeronautics and Technology; and Mission Support.

Object Classification (in millions of dollars)

Identification code 80-0108-0-1-999	1995 actual	1996 est.	1997 est.
Direct obligations:			
22.0	2		
23.1	2		
23.2	2		
23.3			
	Communications, utilities, and miscellaneous charges	12	
24.0	1		
25.1	540		
25.2	43		
25.3			
	Purchases of goods and services from Government accounts	9	
25.4	27		
25.5	107	2	
25.7	5		
26.0	26		
31.0	16		
32.0	5		
41.0	64		
99.0			
	Subtotal, direct obligations	861	2
99.0			
	Reimbursable obligations	87	
99.9			
	Total obligations	948	2

SPACE FLIGHT, CONTROL AND DATA COMMUNICATIONS

Program and Financing (in millions of dollars)

Identification code 80-0105-0-1-252	1995 actual	1996 est.	1997 est.
Obligations by program activity:			
Direct program:			
00.01			
00.02	168		
	Shuttle production and capability development		
00.03	65		
	Operations		
00.04	73		
	Launch services		
	Tracking and data acquisition	61	
00.91			
	Subtotal, direct program	367	
01.01			
	Reimbursable program	36	
10.00			
	Total obligations	403	
Budgetary resources available for obligation:			
21.40			
	Unobligated balance available, start of year:		
	Uninvested balance	411	1
22.00			
	New budget authority (gross)	-7	
23.90			
	Total budgetary resources available for obligation	404	1
23.95			
	New obligations	-403	
24.40			
	Unobligated balance available, end of year:		
	Uninvested balance	1	1
	Total	1	1
New budget authority (gross), detail:			
Current:			
40.36			
	Unobligated balance rescinded	-43	
Permanent:			
Spending authority from offsetting collections:			
68.00			
68.10	214	12	
	Offsetting collections (cash)	-178	-12
68.10			
	Change in orders on hand from Federal sources		
68.90			
	Spending authority from offsetting collections (total)	36	
70.00			
	Total new budget authority (gross)	-7	
Change in unpaid obligations:			
Unpaid obligations, start of year:			
72.40			
72.95	1,469	424	32
	Obligated balance: Appropriation	190	12
	Orders on hand from Federal sources		
72.99			
	Total unpaid obligations, start of year	1,659	436
73.10			
73.20	403		
	New obligations		
73.20			
	Total outlays (gross)	-1,623	-392
73.40			
	Adjustments in expired accounts	-3	-12
Unpaid obligations, end of year:			
74.40			
74.95	424	32	
	Obligated balance: Appropriation	12	
	Orders on hand from Federal sources		
74.99			
	Total unpaid obligations, end of year	436	32
Outlays (gross), detail:			
86.93			
86.98	1,409	392	32
	Outlays from current balances	214	
87.00			
	Total outlays (gross)	1,623	392
Offsets:			
Against gross budget authority and outlays:			
Offsetting collections (cash) from:			
88.00			
88.45	-138	-12	
	Federal sources	-76	
	Offsetting governmental collections		
88.90			
	Total, offsetting collections (cash)	-214	-12
88.95			
	Change in orders on hand from Federal sources	178	12
Net budget authority and outlays:			
89.00			
90.00	-43		
	Budget authority	1,409	380
	Outlays		32

Starting in the FY 1996 budget, the NASA budget reflected an account restructuring that was adopted in FY 1995. NASA's Space Flight, Control and Data Communications activities are now being performed in Human Space Flight; Science, Aeronautics and Technology; and Mission Support.

Object Classification (in millions of dollars)

Identification code 80-0105-0-1-252	1995 actual	1996 est.	1997 est.
Direct obligations:			
22.0 Transportation of things	1		
23.2 Rental payments to others	2		
23.3 Communications, utilities, and miscellaneous charges	1		
24.0 Printing and reproduction	1		
25.1 Advisory and assistance services	246		
25.2 Other services	49		
25.3 Purchases of goods and services from Government accounts	18		
25.5 Research and development contracts	37		
25.7 Operation and maintenance of equipment	3		
26.0 Supplies and materials	2		
31.0 Equipment	7		
99.0 Subtotal, direct obligations	367		
99.0 Reimbursable obligations	36		
99.9 Total obligations	403		

CONSTRUCTION OF FACILITIES

Program and Financing (in millions of dollars)

Identification code 80-0107-0-1-999	1995 actual	1996 est.	1997 est.
Obligations by program activity:			
00.01 Space transportation	34	30	5
00.11 Space science	7		
00.22 Mission to planet Earth	12	3	
00.31 Advanced concepts and technology	7	7	1
00.41 Aeronautical research and technology	141	57	13
00.42 Supporting activity	96	70	14
10.00 Total obligations	297	167	33
Budgetary resources available for obligation:			
Unobligated balance available, start of year:			
21.40 Treasury balance	535	197	32
21.41 U.S. Securities: Par value	6	3	1
21.99 Total unobligated balance, start of year	541	200	33
22.00 New budget authority (gross)	-44		
23.90 Total budgetary resources available for obligation	497	200	33
23.95 New obligations	-297	-167	-33
Unobligated balance available, end of year:			
24.40 Uninvested balance	197	32	
24.41 U.S. Securities: Par value	3	1	
24.99 Total unobligated balance, end of year	200	33	
New budget authority (gross), detail:			
Current:			
40.36 Unobligated balance rescinded	-44		
Permanent:			
Spending authority from offsetting collections:			
68.00 Offsetting collections (cash)	4		
68.10 Change in orders on hand from Federal sources	-4		
68.90 Spending authority from offsetting collections (total)			
70.00 Total new budget authority (gross)	-44		
Change in unpaid obligations:			
Unpaid obligations, start of year:			
72.40 Obligated balance: Appropriation	320	311	349
72.95 Orders on hand from Federal sources	4		
72.99 Total unpaid obligations, start of year	324	311	349
73.10 New obligations	297	167	33
73.20 Total outlays (gross)	-309	-129	-164
74.40 Unpaid obligations, end of year: Obligated balance: Appropriation	311	349	218
Outlays (gross), detail:			
86.93 Outlays from current balances	309	129	164
87.00 Total outlays (gross)	309	129	164

Offsets:

Against gross budget authority and outlays:			
Offsetting collections (cash) from:			
88.40 Non-Federal sources	-3		
88.45 Offsetting governmental collections	-1		
88.90 Total, offsetting collections (cash)	-4		
88.95 Change in orders on hand from Federal sources	4		
Net budget authority and outlays:			
89.00 Budget authority	-44		
90.00 Outlays	305	129	164

Starting in the FY 1996 budget, the NASA budget reflected an account restructuring that was adopted in FY 1995. NASA's Construction of Facilities activities are now being performed in Human Space Flight; Science, Aeronautics and Technology; and Mission Support.

Object Classification (in millions of dollars)

Identification code 80-0107-0-1-999	1995 actual	1996 est.	1997 est.
25.1 Advisory and assistance services	2		
25.2 Other services	46		
25.4 Operation and maintenance of facilities	6		
26.0 Supplies and materials	1		
31.0 Equipment	8		
32.0 Land and structures	234	167	33
99.9 Total obligations	297	167	33

RESEARCH AND PROGRAM MANAGEMENT

Program and Financing (in millions of dollars)

Identification code 80-0103-0-1-999	1995 actual	1996 est.	1997 est.
Budgetary resources available for obligation:			
Unobligated balance available, start of year:			
21.40 Uninvested balance	18		
22.00 New budget authority (gross)	-18		
23.90 Total budgetary resources available for obligation			
23.95 New obligations			
New budget authority (gross), detail:			
Current:			
40.36 Unobligated balance rescinded	-18		
Permanent:			
Spending authority from offsetting collections:			
68.00 Offsetting collections (cash)	9		
68.10 Change in orders on hand from Federal sources	-9		
68.90 Spending authority from offsetting collections (total)			
70.00 Total new budget authority (gross)	-18		
Change in unpaid obligations:			
Unpaid obligations, start of year:			
72.40 Obligated balance: Appropriation	129	23	
72.95 Orders on hand from Federal sources	9		
72.99 Total unpaid obligations, start of year	138	23	
73.10 New obligations			
73.20 Total outlays (gross)	-107	-23	
73.40 Adjustments in expired accounts	-8		
74.40 Unpaid obligations, end of year: Obligated balance: Appropriation	23		
Outlays (gross), detail:			
86.93 Outlays from current balances	107	23	
87.00 Total outlays (gross)	107	23	
Offsets:			
Against gross budget authority and outlays:			
Offsetting collections (cash) from:			
88.00 Federal sources	-8		
88.40 Non-Federal sources	-1		
88.90 Total, offsetting collections (cash)	-9		

General and special funds—Continued

RESEARCH AND PROGRAM MANAGEMENT—Continued

Program and Financing (in millions of dollars)—Continued

Identification code 80-0103-0-1-999	1995 actual	1996 est.	1997 est.
88.95 Change in orders on hand from Federal sources	9		
Net budget authority and outlays:			
89.00 Budget authority	-18		
90.00 Outlays	98	23	

Starting in the FY 1996 budget, the NASA budget reflected an account restructuring that was adopted in FY 1995. NASA's Research and Program Management activities are now being performed in Mission Support.

OFFICE OF INSPECTOR GENERAL

For necessary expenses of the Office of Inspector General in carrying out the Inspector General Act of 1978, as amended, \$17,000,000.

Note.—A regular 1996 appropriation for this account had not been enacted at the time this budget was prepared. The 1996 amounts included in this budget are based on the levels provided in three continuing resolutions: P.L. 104-91, P.L. 104-92 and P.L. 104-99.

Program and Financing (in millions of dollars)

Identification code 80-0109-0-1-252	1995 actual	1996 est.	1997 est.
Obligations by program activity:			
10.00 Total obligations	16	16	17
Budgetary resources available for obligation:			
22.00 New budget authority (gross)	16	16	17
23.95 New obligations	-16	-16	-17
New budget authority (gross), detail:			
40.00 Appropriation	16	16	17
Change in unpaid obligations:			
72.40 Unpaid obligations, start of year: Obligated balance:			
Appropriation	3	3	3
73.10 New obligations	16	16	17
73.20 Total outlays (gross)	-15	-16	-17
74.40 Unpaid obligations, end of year: Obligated balance:			
Appropriation	3	3	3
Outlays (gross), detail:			
86.90 Outlays from new current authority	11	14	15
86.93 Outlays from current balances	3	2	2
87.00 Total outlays (gross)	15	16	17
Net budget authority and outlays:			
89.00 Budget authority	16	16	17
90.00 Outlays	14	16	17

The mission of the Office of Inspector General is to conduct audits and investigations of agency activities. The Inspector General keeps the Administrator informed of problems and deficiencies in agency programs and operations.

Object Classification (in millions of dollars)

Identification code 80-0109-0-1-252	1995 actual	1996 est.	1997 est.
11.1 Personnel compensation: Full-time permanent	11	12	13
12.1 Civilian personnel benefits	2	2	3
21.0 Travel and transportation of persons	1	1	1
25.2 Other services	1	1	
26.0 Supplies and materials	1		
99.9 Total obligations	16	16	17

Personnel Summary

Identification code 80-0109-0-1-252	1995 actual	1996 est.	1997 est.
Total compensable workyears:			
1001 Full-time equivalent employment	191	210	207
1005 Full-time equivalent of overtime and holiday hours	2	2	2

SCIENCE, SPACE, AND TECHNOLOGY EDUCATION TRUST FUND

Unavailable Collections (in millions of dollars)

Identification code 80-8978-0-7-503	1995 actual	1996 est.	1997 est.
Balance, start of year:			
01.99 Balance, start of year			
Receipts:			
02.01 Earnings on investments; Science, Space and Technology Education, Trust Fund	1	1	1
Appropriation:			
05.01 Science, space, and technology education trust fund	-1	-1	-1
07.99 Total balance, end of year			

Program and Financing (in millions of dollars)

Identification code 80-8978-0-7-503	1995 actual	1996 est.	1997 est.
Obligations by program activity:			
10.00 Total obligations (object class 41.0)	1	1	1
Budgetary resources available for obligation:			
Unobligated balance available, start of year:			
U.S. Securities:			
21.41 Par value	16	16	16
21.42 Unrealized discounts	1	1	1
21.99 Total unobligated balance, start of year	17	17	17
22.00 New budget authority (gross)			
23.90 Total budgetary resources available for obligation	17	17	17
23.95 New obligations	-1	-1	-1
Unobligated balance available, end of year:			
U.S. Securities:			
24.41 Par value	16	16	16
24.42 Unrealized discounts	1	1	1
24.99 Total unobligated balance, end of year	17	17	17
New budget authority (gross), detail:			
60.27 Appropriation (trust fund, indefinite)	1	1	1
Change in unpaid obligations:			
73.10 New obligations	1	1	1
73.20 Total outlays (gross)	-1	-1	-1
Outlays (gross), detail:			
86.97 Outlays from new permanent authority	1	1	1
87.00 Total outlays (gross)	1	1	1
Net budget authority and outlays:			
89.00 Budget authority			
90.00 Outlays	1	1	1

ADMINISTRATIVE PROVISIONS

[(INCLUDING TRANSFER OF FUNDS)]

Notwithstanding the limitation on the availability of funds appropriated for "Human space flight", "Science, aeronautics and technology", or "Mission support" by this appropriations Act, when (1) any activity has been initiated by the incurrence of obligations for construction of facilities as authorized by law, or (2) amounts are provided for full-funding for the New Millennium Initiative, and for the Tracking and Data Relay Satellite (TDRS) replenishment program in the Treasury, Postal Service and General Government Appropriations Acts, 1997, such amount available for such activity shall remain available until expended. This provision does not apply to the amounts appropriated in "Mission support" pursuant to the authorization for repair, rehabilitation and modification of facilities, minor construction

of new facilities and additions to existing facilities, and facility planning and design.

Notwithstanding the limitation on the availability of funds appropriated for "Human space flight", "Science, aeronautics and technology", or "Mission support" by this appropriations Act, the amounts appropriated for construction of facilities shall remain available until September 30, 1999.

Notwithstanding the limitation on the availability of funds appropriated for "Mission support" and "Inspector General", amounts made available by this Act for personnel and related costs and travel expenses of the National Aeronautics and Space Administration shall remain available until September 30, 1997 and may be used to enter into contracts for training, investigations, cost associated with personnel relocation, and for other services, to be provided during the next fiscal year.