

House Boosts NASA R&D, Adds Crew Return Vehicle to Station

(This analysis is part of a series of AAAS R&D Funding Updates on the FY 2002 congressional appropriations process. This analysis includes information on R&D in House appropriations for NASA. The complete series of AAAS R&D Funding Updates, including continually updated analyses of R&D by agency in FY 2002 appropriations, is available on the AAAS R&D Web Site (<http://www.aaas.org/spp/R&D>) in the "FY 2002 R&D" or the "What's New" sections.)

The House Appropriations Committee has drafted an FY 2002 VA-HUD appropriations bill (HR 2620) that would provide a substantial budget increase for the National Aeronautics and Space Administration (NASA). The House would provide NASA with \$15.0 billion in FY 2002, \$698 million or 4.9 percent more than FY 2001. This would be \$440 million more than the Administration's request of \$14.5 billion, and more than the Senate's appropriation of \$14.6 billion. **In the House plan, NASA's R&D funding would rise 4.5 percent to \$10.4 billion, more than the \$10.0 billion request and Senate appropriation** (see Table).

The House FY 2002 VA-HUD bill would provide \$85 billion for discretionary programs, more than the Senate version of the bill (\$84 billion) and the request (\$83 billion). The bill funds science agencies including the National Science Foundation (NSF), NASA, the Environmental Protection Agency (EPA), and non-R&D programs for veterans and housing. (For information on Senate appropriations for NASA, please see the July 25 AAAS R&D Funding Update; for details of the FY 2002 request for NASA, please see Chapter 10 of *AAAS Report XXVI: R&D FY 2002*.)

Two-thirds of the NASA budget, which excludes the Space Shuttle program and its associated costs, is classified as R&D. **NASA's R&D would total \$10.4 billion in the House plan, \$446 million or 4.5 percent above FY 2001 and well above both the request and the Senate plan.** Because the Space Shuttle program would receive a large increase, the total NASA budget of \$15.0 billion would show a slightly higher increase (up 4.9 percent).

The troubled **International Space Station** is now projected to run \$4.8 billion over budget over the next five years. Earlier, the Senate proposed to cut the Space Station budget by 21.7 percent over FY 2001, for a total of \$1.7 billion instead of current-year funding of \$2.1 billion, and the report language accompanying the bill is harsh in its criticism of NASA management. The House, however, while expressing its concern over NASA management and cost overruns, would actually provide more money for the project than NASA requested after adjusting for a transfer of funds. The International Space Station account would receive \$2.1 billion, down slightly from the request and 1.6 percent below FY 2001, but the House would join the Senate in transferring Space Station research to the Biological and Physical Research account; the FY 2002 House appropriation for life and microgravity research aboard the Station would be \$344 million, up \$60 million from the request. Placing these research funds in a separate account would make it more difficult for NASA to siphon funds from research to construction of the Station.

Transferring these funds out of the Space Station account allows the House to provide \$275 million for a Crew Return Vehicle (CRV), a program deleted from the request and Senate plans. The CRV would be used as an emergency escape vehicle for the Station crew. Without this six or seven-person vehicle, Station crews would be limited to three, drastically reducing the amount of research that can be done on the Station to an estimated 20 person-hours a week. NASA had proposed to eliminate the CRV as a cost-cutting measure. The House bill contains language that would rescind these funds if NASA does not request least \$200 million for the project in next year's budget as a sign of the agency's commitment to placing adequate

research staff aboard the Station. The bill also delays the availability of these funds until August 2002 and would release these funds only after Congress is satisfied that NASA has solid plans for at least a six-person crew on the Station and a clear timetable for developing the CRV.

The **Science, Aeronautics, and Technology (SAT)** account, which funds nearly all of NASA's R&D not related to the Space Station, would receive \$7.6 billion, 7.6 percent or \$539 million above FY 2001. More than half of the increase would be due to the transfer of Space Station research to Biological and Physical Research (BPR). BPR, formerly known as Life and Microgravity Sciences and Applications, would receive \$711 million for a 87.7 percent increase. Taking out the Space Station research, however, would leave \$367 million, nearly the same as the request and below the FY 2001 funding level. This program funds ground and space-based research to advance the safety and health of astronauts in space, but covers investigations on a variety of life, medical, and microgravity sciences research topics. In addition to the transfer, the House bill contains \$132 million in congressional earmarks for R&D and other projects in SAT, leaving only a modest increase for core SAT programs.

Within SAT, **Space Science** would receive \$2.8 billion, a 5.1 percent increase but \$27 million short of the request. Both the House and Senate would go along with NASA's requested steep cuts to the Earth Science program, with the House providing \$1.5 billion, the same as the request and 11.6 percent below the FY 2001 funding level.

The **Aero-Space Technology** program would rise 9.7 percent or \$215 million in the House plan to \$2.4 billion. Much of the increase would be due to a boost from \$272 million in FY 2001 to the requested \$475 million in FY 2002 for the Space Launch Initiative, which funds research and development efforts for reusable launch vehicle technology. There would also be nearly \$50 million for unrequested congressional earmarks.

The **Academic Programs** appropriation of \$189 million in the House would be a substantial 42.0 percent or \$56 million increase over FY 2001, slightly less than the Senate's \$211 million. The Senate bill contains 27 congressionally designated projects totaling \$53 million, while the House bill contains a partially overlapping list of 22 congressionally designated projects totaling \$35 million. Although all programs in this account are classified as R&D, the congressionally designated projects include funds for planetariums, science museums, education center, and even a dormitory.

The House and Senate versions of the VA-HUD bill are due for floor debate and approval before the August congressional recess. A House-Senate conference committee to produce the final version of the bill is not expected to meet until September.

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AAAS R&D Budget and Policy Program
1200 New York Ave, NW
Washington, DC 20005
(202) 326-6607; -6600
fax (202) 289 4950
science_policy@aaas.org
www.aaas.org/spp/R&D

**Table. National Aeronautics and Space Administration
House Appropriations Committee Action on R&D in the FY 2002 Budget
(budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	FY 2002 Senate	Action by House				
				FY 2002 House	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2001 Amount	Chg. from FY 2001 Percent
Summary of R&D by Appropriation:								
1. Human Space Flight (HSF)								
Space Station *	2,113	2,087	1,654	2,079	-9	-0.4%	-34	-1.6%
Other	788	737	692	737	0	0.0%	-51	-6.5%
Total R&D HSF	2,901	2,825	2,347	2,816	-9	-0.3%	-85	-2.9%
2. Science, Aeronautics and Technology (SAT)								
Space Science	2,625	2,786	2,752	2,759	-27	-1.0%	135	5.1%
Biological & Physical Research *	379	361	693	711	350	97.0%	332	87.7%
Earth Science	1,716	1,515	1,556	1,517	2	0.1%	-199	-11.6%
Aero-Space Technology	2,214	2,376	2,458	2,430	54	2.3%	215	9.7%
Academic Programs	133	154	211	189	35	22.6%	56	42.0%
Total R&D SAT	7,067	7,192	7,670	7,605	414	5.8%	539	7.6%
Less Non-R&D in SAT	-42	-50	-50	-50	0	0.0%	-7	17.5%
Total NASA R&D	9,925	9,966	9,967	10,371	405	4.1%	446	4.5%
NASA Non-R&D Activities:								
Space Shuttle (in HSF)	3,119	3,284	3,334	3,319	35	1.1%	200	6.4%
Other Non-R&D in HSF	1,144	1,188	1,188	1,188	0	0.0%	44	3.8%
Non-R&D in SAT	42	50	50	50	0	0.0%	7	17.5%
Inspector General	23	24	24	24	0	0.0%	1	3.5%
Total NASA Non-R&D Activities	4,328	4,545	4,595	4,580	35	0.8%	252	5.8%
TOTAL NASA Budget	14,253	14,511	14,561	14,951	440	3.0%	698	4.9%

AAAS estimates based on FY 2002 appropriations bills. Includes conduct of R&D and R&D facilities.

FY 2001 and FY 2002 request figures based on OMB R&D data and supplemental agency budget data.

Figures are rounded to the nearest million. Changes calculated from unrounded figures.

* - The FY 2002 House appropriation would transfer Space Station research from the International Space Station account to the Biological and Physical Research account. The FY 2002 House appropriation for Space Station research would be \$344 million.

July 27, 2001 - House Appropriations Committee-approved figures.

These appropriations may be amended or rejected on the House floor.

Senate figures reflect Senate Appropriations Committee-approved figures.