

Senate Cuts Space Station, Shifts Funds to Science

(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 Senate 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.)

Last week, the Senate Appropriations Committee drafted an FY 2002 VA-HUD appropriations bill (S. 1216) that would provide a modest budget increase for the National Aeronautics and Space Administration (NASA). The Senate would provide NASA with \$14.6 billion in FY 2002, \$308 million or 2.2 percent more than FY 2001. This would be \$50 million more than the Administration's request of \$14.5 billion. **In the Senate plan, NASA's R&D funding would rise 0.4 percent to \$10.0 billion. This amount would be the same as the request, but the Senate would shift nearly \$500 million in R&D funds from the International Space Station to other NASA R&D programs** (see Table). The Senate bill contains harsh words for NASA on its management of the Space Station, and expresses alarm at continuing cost overruns in the project.

The Senate FY 2002 VA-HUD bill would provide \$84 billion for discretionary programs. 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. The President requested \$83 billion for the bill's programs, and thus the Senate had more money to allocate for science programs than the request. The House version of the bill is expected to total \$85 billion (details of House appropriations for NASA will be available shortly).

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 \$10.0 billion in the Senate plan, a slight 0.4 percent or \$41 million above FY 2001 and the same as the request.** Because the Space Shuttle program would receive a large increase, the total NASA budget of \$14.6 billion would show a higher increase (up 2.2 percent).

The troubled **International Space Station** is now projected to run \$4.8 billion over budget over the next five years, and the Senate language accompanying the VA-HUD bill expresses dismay over NASA's management of Station costs, and states that continuing cost overruns are "a grave risk to other important programs within the agency." by endangering funding for NASA's other R&D programs. Despite the projected cost overruns, the Senate would cut the Space Station budget by \$458 million or 21.7 percent over FY 2001, for a total of \$1.7 billion instead of current-year funding of \$2.1 billion. Most of the cut, however, would be due to the transfer of Space Station research to the Biological and Physical Research account; the FY 2002 Senate appropriation for life and microgravity research aboard the Station would be \$334 million, up \$50 million from the request but well below the FY 2001 funding level of \$457 million. Alarmed at NASA's past practice of siphoning off money from the research account to pay for cost overruns in construction, the Senate bill would place the Office of Biological and Physical Research in charge of the Station research program and would forbid NASA from transferring any Station research funds out of the office. In addition, the Senate would transfer \$50 million out of the Station to the Space Shuttle, and would make additional cuts to the Space Station account.

In another move to contain costs, the Senate VA-HUD bill caps Space Station costs at \$6.7 billion over FY 2002-2006 and would write these limits into law. In a notable omission, the Senate bill would not provide funding for a crew return vehicle (CRV) that would be used as an emergency escape vehicle for the Station crew. The House is considering \$275 million for a CRV; 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.

The **Science, Aeronautics, and Technology (SAT)** account, which funds nearly all of NASA's R&D not related to the Space Station, would receive \$7.7 billion, 8.5 percent or \$603 million above the request. 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 \$693 million for a 82.9 percent increase. Taking out the Space Station research, however, would leave \$360 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 Senate bill contains \$113 million in congressional earmarks for R&D and other projects, leaving only a modest increase for core SAT programs.

Within SAT, **Space Science** would receive \$2.8 billion, a 4.8 percent increase but \$35 million short of the request. The Senate would make small adjustments to the NASA request, including additional funds for the "Living with a Star" initiative, a reorganized future outer planets program built around the Europa Orbiter program, and a reorganized Pluto program. The Senate would go along with NASA's requested steep cuts to the Earth Science program, providing \$1.6 billion, \$41 million more than the request but \$161 million short of the FY 2001 funding level.

The **Aero-Space Technology** program would rise 11.0 percent or \$244 million in the Senate plan to \$2.5 billion. Much of the increase would be due to a boost from \$272 million in FY 2001 to \$460 million in FY 2002 for the Space Launch Initiative, which funds research and development efforts for reusable launch vehicle technology. The Senate appropriation would be \$15 million less than the request. There would also be \$32 million for unrequested congressional earmarks.

The **Academic Programs** appropriation of \$211 million would be a substantial 59.3 percent or \$79 million increase over FY 2001 because the Senate bill contains 27 congressionally designated projects totaling \$53 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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**Table. National Aeronautics and Space Administration
Senate Appropriations Committee Action on R&D in the FY 2002 Budget
(budget authority in millions of dollars)**

	FY 2001 Estimate	FY 2002 Request	Action by Senate				
			FY 2002 Senate	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	-433	-20.7%	-458	-21.7%
Other	788	737	692	-45	-6.1%	-96	-12.2%
Total R&D HSF	2,901	2,825	2,347	-478	-16.9%	-554	-19.1%
2. Science, Aeronautics and Technology (SAT)							
Space Science	2,625	2,786	2,752	-35	-1.2%	127	4.8%
Biological & Physical Research *	379	361	693	332	91.9%	314	82.9%
Earth Science	1,716	1,515	1,556	41	2.7%	-161	-9.4%
Aero-Space Technology	2,214	2,376	2,458	83	3.5%	244	11.0%
Academic Programs	133	154	211	58	37.5%	79	59.3%
Total R&D SAT	7,067	7,192	7,670	478	6.6%	603	8.5%
Less Non-R&D in SAT	-42	-50	-50	0	0.0%	-7	17.5%
Total NASA R&D	9,925	9,966	9,967	0	0.0%	41	0.4%
NASA Non-R&D Activities:							
Space Shuttle (in HSF)	3,119	3,284	3,334	50	1.5%	215	6.9%
Other Non-R&D in HSF	1,144	1,188	1,188	0	0.0%	44	3.8%
Non-R&D in SAT	42	50	50	0	0.0%	7	17.5%
Inspector General	23	24	24	0	0.0%	1	3.5%
Total NASA Non-R&D Activities	4,328	4,545	4,595	50	1.1%	267	6.2%
TOTAL NASA Budget	14,253	14,511	14,561	50	0.3%	308	2.2%

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 Senate appropriation would transfer Space Station research from the International Space Station account to the Biological and Physical Research account. The FY 2002 Senate appropriation for Space Station research would be \$334 million.

July 25, 2001 - Senate Appropriations Committee-approved figures.

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