

FY 2012 House Funding Bill: NASA

There are 14 pages of text pertaining to NASA in the committee report accompanying the FY 2012 Commerce, Justice, Science Appropriations Bill that was passed by the House on July 13. In often great detail House appropriators spell out their recommendations for how the \$16,810,257,000 provided to NASA should be spent in FY 2012. Selections from this language, which starts on page 68 of the committee report (http://appropriations.house.gov/UploadedFiles/CJS_REPORT.pdf) follow. All figures are taken from the committee report.

Total NASA

The FY 2011 appropriation was \$18,448.0 million

The FY 2012 Administration request was \$18,724.3 million

The House Appropriations Committee recommends \$16,810.3 million, a decline of 8.9 percent or \$1,637.7 million

The report states:

"After several years of debate and compromise, the Congress and the Administration have finally settled on a consensus program for NASA in the form of the NASA Authorization Act of 2010 (Public Law 111-278). In order to successfully accomplish everything outlined in that Act, NASA needs to develop and pursue new and different ways of operating that will promote efficiency and economy; annual budget increases can no longer be counted on as the means for achieving mission goals.

"The new reality of constrained budgets, however, does not mean that NASA cannot or will not continue to make significant achievements in science, exploration and other areas. The Committee's fiscal year 2012 recommendation supports high priority scientific research missions; maintains aeronautics research and testing activities; formally establishes a new program to develop next-generation space technology; maintains current investments in the development of commercial crew capabilities while also funding implementation of NASA's own Multipurpose Crew Vehicle (MPCV) and Space Launch System (SLS); continues operations of the International Space Station and the closeout of obligations from the Space Shuttle program; promotes STEM education through a streamlined portfolio of programs; and sustains general agency mission operations and oversight."

Science

The FY 2011 appropriation was \$4,935.4 million

The FY 2012 Administration request was \$5,016.8 million

The House Appropriations Committee recommends \$4,504.0 million, a decline of 8.7 percent or \$431.4 million

Specific Administration program requests are provided at <http://aip.org/fyi/2011/024.html>, see page 70 of the committee's report for their recommended funding levels.

The full text of the committee report follows:

"Earth Science missions. - The Committee recommendation includes a reduction of \$100,000,000 below the request for Earth Science activities. While the Committee supports Earth Science functions, this area has rapidly grown over the past few fiscal years, and the current constrained fiscal environment simply cannot sustain the spending patterns envisioned by NASA in this field. The Committee has not included detailed, line-item reductions within the Earth Science portfolio. Instead, NASA should propose such reductions as part of the spending plan required by section 537 of this Act. In proposing reductions, NASA should take care to protect, to the extent possible, high priority missions of the Earth Science decadal survey, including Ice, Cloud, and land Elevation Satellite-2, the Soil Moisture Active-Passive mission, and the Deformation, Ecosystem Structure and Dynamics of Ice mission, as well as missions with near-term launch readiness dates. In addition, NASA should be careful to propose a funding portfolio that maintains an essential balance between actual spaceflight projects and the critical mission-enabling activities (research and data analysis, data application, etc.) that support and enhance the value of those projects.

"Planetary Science missions. - The Committee accepts the findings of the most recent Planetary Science decadal survey and supports the application of the survey's decision rules to determine how best to structure the program within the available budget. The program elements most significantly impacted by these decision rules are the flagship missions, which must be substantially descoped in order to remain within the portfolio. The Committee directs that \$4,000,000 of the Outer Planets Flagship (OPF) budget be used to conduct the necessary descoping studies for the decadal survey's two highest priority flagship missions: Mars Sample Return (MSR) and the Jupiter Europa Orbiter (JEO). The results of these studies shall be transmitted to the Committee as soon as they are complete. The remaining \$39,000,000 of OPF funds should be held pending the

completion of the descoping analysis and, depending on the results, either used in support of an acceptably descoped flagship mission or proposed for reprogramming to other Planetary Science project lines in accordance with the decadal survey's decision rules.

"Plutonium-238. - The bill makes available \$10,000,000 from this account, as requested, to restart production of Plutonium-238 (Pu-238), a radioisotope that is an essential source of electrical power for long-range planetary science missions. The Committee urges NASA to work expeditiously with the Department of Energy to bring Pu-238 production back online as quickly as possible while simultaneously pursuing Advanced Stirling Radioisotope Generator technology that will allow NASA to make better, more efficient use of available Pu-238 stocks.

"James Webb Space Telescope. - The James Webb Space Telescope (JWST) Independent Comprehensive Review Panel revealed chronic and deeply rooted management problems in the JWST project. These issues led to the project cost being underestimated by as much as \$1,400,000,000 relative to the most recent baseline, and the budget could continue to rise depending on the final launch date determination. Although JWST is a particularly serious example, significant cost overruns are commonplace at NASA, and the Committee believes that the underlying causes will never be fully addressed if the Congress does not establish clear consequences for failing to meet budget and schedule expectations. The Committee recommendation provides no funding for JWST in fiscal year 2012. The Committee believes that this step will ultimately benefit NASA by setting a cost discipline example for other projects and by relieving the enormous pressure that JWST was placing on NASA's ability to pursue other science missions."

Aeronautics

The FY 2011 appropriation was \$533.9 million

The FY 2012 Administration request was \$569.4 million

The House Appropriations Committee recommends \$569.9 million, an increase of 6.7 percent or \$36.0 million

The report states:

"Research priorities. - The Committee recognizes the significant economic impact of NASA's aeronautics research, which increases the competitiveness of the American aviation industry, enables new job-creating technologies and improves the efficiency of domestic travel and commerce. To continue advancing innovative technical concepts, NASA has proposed a program plan to address critical research needs focusing on airspace capacity,

environmental sustainability and aviation safety. The Committee supports this plan, including NASA's discretion to descope hypersonic research activities if the determination is made that increasing investments in other research areas is a higher priority."

Space Technology

This is a new budget category

The FY 2012 Administration request was \$1,024.2 million

The House Appropriations Committee recommends \$375.0 million

The report states:

"The Committee recommends \$375,000,000 for Space Technology, which is \$649,200,000 below the request. This is a new account in fiscal year 2012. Funding for space technology activities was included in the Exploration, Cross Agency Support and Space Operations accounts in previous years. Funding under this heading consists of numerous existing activities, including the Small Business Innovative Research (SBIR) program, the Small Business Technology Transfer (STTR) program, and significant portions of the Exploration Technology Development and Demonstration (ETDD) program, as well as some newly evolving cross cutting activities."

Exploration

The FY 2011 appropriation was \$3,800.7 million

The FY 2012 Administration request was \$3,948.7 million

The House Appropriations Committee recommends \$3,649.0 million, a decline of 4.0 percent or \$151.7 million

The report states:

"Human Exploration Capabilities. - The Committee recommends funding above the request for the MPCV [Multi-Purpose Crew Vehicle] and SLS [Space Launch System] programs to help ensure that NASA can meet the programmatic deadlines contained in the most recent NASA authorization bill. The Committee recommends \$1,063,000,000 for the MPCV and \$1,985,000,000 for the SLS. The Committee notes that Administration delays in providing key details on designs, contracts, budgets and schedules have hindered the development of funding recommendations. The Committee expects such information to be provided immediately."

"SLS development. - The Committee understands NASA's stated desire to initially field a 70-100 metric ton vehicle that would be evolved over time

to the full 130 metric ton SLS. To the extent that flying a smaller vehicle can be achieved faster and will minimize the gap in our national human spaceflight capabilities, the Committee does not object to this proposal. However, the focus on initially flying a smaller vehicle cannot distract NASA from fulfilling its legal obligation to design the SLS from inception as a 130 metric ton vehicle and to proceed with simultaneous development of the core and upper stages. NASA is also directed to ensure that the work done on the 70-100 metric ton vehicle will be applicable to the 130 metric ton SLS. NASA should not expend funds on design or development of a smaller vehicle that does not add value to the overall SLS effort."

"Exploration destinations. - NASA's stated intention is to pursue a capabilities-based approach to human exploration, which means that the direction of the program will be driven by what technologies are available at a particular time. While this approach may offer some advantages in terms of flexibility, it also lacks the clearly defined goals that have historically driven space exploration achievements. Specific, aggressive goals are necessary both to focus the program and to provide a common vision around which public and political support can be rallied. Consequently, the Committee urges NASA to adopt a destination-based approach to exploration that would designate a specific target location, such as the Moon, to drive development decisions and timelines going forward."

"Robotic precursor missions. - Out of necessity, the Committee's recommendation adopts NASA's proposal to delay the start of the robotic precursor mission program for another fiscal year. The Committee is concerned, however, that continued delays will eventually impact NASA's long-term readiness for exploration missions beyond low Earth orbit, which may require robotic scouting and validation of destinations and landing sites. In order to jumpstart even a minimal level of robotic precursor activity, the Exploration Systems Mission Directorate is encouraged to work with the Science Mission Directorate to identify possible science missions that could serve as flights of opportunity for robotic precursor payloads. Flights of opportunity should only be pursued, however, if the addition of the robotic precursor activity does not negatively impact the overall program budget or launch schedule for the science mission in question."

Space Operations

The FY 2011 appropriation was \$5,497.5 million

The FY 2012 Administration request was \$4,346.9 million

The House Appropriations Committee recommends \$4,064.0 million, a decline of 26.1 percent or \$1,433.5 million

The report states:

"International Space Station. - The extension of International Space Station (ISS) operations to 2020 comes at a cost of nearly \$3,000,000,000 per year. To make this investment worthwhile, NASA needs to ensure that the Station's research capabilities are maximized. The Committee understands that the strategic target for maximum NASA research utilization (35 hours of crew time per week) will be reached during 2012 and directs NASA to keep the Committee apprised of progress toward that goal.

"Non-NASA research activities will be coordinated by the nonprofit manager of the ISS National Lab, who will receive NASA funding support in fiscal year 2012 and, likely, several years thereafter. The Committee believes that the nonprofit manager should ultimately be a self-funding entity and that all necessary steps should be taken to reduce the manager's overhead costs in order to maximize funding available for ISS National Lab research grants."

Education

The FY 2011 appropriation was \$145.5 million

The FY 2012 Administration request was \$138.4 million

The House Appropriations Committee recommends \$138.0 million, a decline of 5.2 percent or \$7.5 million

Cross Agency Support

The FY 2011 appropriation was \$3,105.2 million

The FY 2012 Administration request was \$3,192.0 million

The House Appropriations Committee recommends \$3,050.0 million, a decline of 1.8 percent or \$55.2 million

Of note, the report states:

"Comprehensive independent assessment. - The Committee has been frustrated by the uncertainty of leadership within the Administration on space policy and the resulting lack of focus within NASA itself. It is time for NASA to recommit itself to a bold vision for the future that will restore the sense of purpose and urgency that existed at the agency during the eras of its finest achievements. Accordingly, the Committee recommendation includes \$1,000,000, which shall be for transfer to the OIG [Office of Inspector General], to commission a comprehensive independent assessment of NASA's

strategic direction and agency management. "NASA regularly receives management and programmatic recommendations from GAO [Government Accountability Office], OIG and various commissions and other entities, as well as outside advice on scientific and technical priorities from the National Academies. While each of these reviews is useful on its own, they are all targeted to a specific issue or program and therefore do not provide a comprehensive assessment of NASA's activities. The Committee believes that such an agency-wide assessment will provide a means to evaluate whether NASA's overall strategic direction remains viable and whether agency management is optimized to support that direction.

"The assessment should consider the relevance and feasibility of NASA's strategic goals; the appropriateness of the budgetary balance between NASA's various programs; and the adequacy of NASA's internal policies, procedures and organizational structures that underpin its mission activities. Any recommendations made pursuant to the assessment should be predicated on the assumption that NASA's outyear budget profile will be constrained due to continuing deficit reduction efforts. Such recommendations should also take into account the need for a common, unifying vision for NASA's strategic direction. A report summarizing the conclusions of the assessment and any relevant recommendations shall be provided to the Congress and the President no later than 120 days after the enactment of this Act.

"To conduct this assessment, the Inspector General shall choose individuals with recognized relevant expertise and whose collective credentials sufficiently cover the whole range of NASA's mission activities, including space or Earth science; aeronautics; advanced technology development; space exploration; spaceflight operations and support; STEM education; and/or management of any of these activities. In order to promote objectivity, the Inspector General shall define and implement any conflict of interest protocols deemed necessary, but, at a minimum, the selected individuals shall not be currently employed or retained by NASA or any outside entity that competes for or receives NASA funding." Contact: Richard M. Jones, Government Relations Division