

**COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES**

***An Overview of the National Aeronautics and Space Administration Budget for
Fiscal Year 2013***

Wednesday, March 7, 2012
2:00 p.m. – 4:00 p.m.
2318 Rayburn House Office Building

Purpose

The purpose of the hearing is to review the Administration's FY 2013 budget request for the National Aeronautics and Space Administration and examine its priorities and challenges.

Witness

The Honorable Charles F. Bolden, Jr., Administrator, National Aeronautics and Space Administration

Background

NASA is our nation's civil aeronautics and aerospace research and development agency. Created by Congress in 1958 in response to the Soviet Union's successful launch of Sputnik, NASA was formed by evolving and expanding the mission of the National Advisory Committee on Aeronautics, which was established in 1915. NASA's achievements are well known and unmatched: successfully launching six manned missions to the moon; launching a series of space telescopes including Hubble; launching satellites to orbit or fly-by every planet in the solar system (Pluto is no longer considered a planet, but a NASA mission – New Horizons – is scheduled to fly-by in 2014); orbiting satellites around Earth that measure our atmosphere, oceans, and topography; building and operating (in conjunction with the Russians) the International Space Station; and conducting leading-edge aeronautics research.

NASA's name is instantly recognized throughout the world and is considered a source of inspiration for people of all nationalities. It leads the world community in new discoveries, advancing our understanding of Earth, the solar system, and universe.

In addition to its headquarters, the agency operates nine research facilities –

- Goddard Space Flight Center, Greenbelt, MD
- Kennedy Space Center, Merritt Island, FL
- Langley Research Center, Hampton, VA
- Glenn Research Center, Cleveland, OH
- Johnson Space Center, Houston, TX
- Ames Research Center, Mountain View, CA
- Dryden Flight Research Center, Edwards Air Force Base, CA

- Marshall Space Flight Center, Huntsville, AL
- Stennis Space Center, Bay St. Louis, MS

The Jet Propulsion Laboratory, Pasadena, CA is sponsored by NASA as a Federally Funded Research and Development Corporation. NASA also owns the Wallops Flight Facility in Wallops Island, Virginia and the Michoud Assembly Facility east of New Orleans, Louisiana.

NASA employs 18,000 civil servants and has a contractor workforce of 43,000.

Budget Request

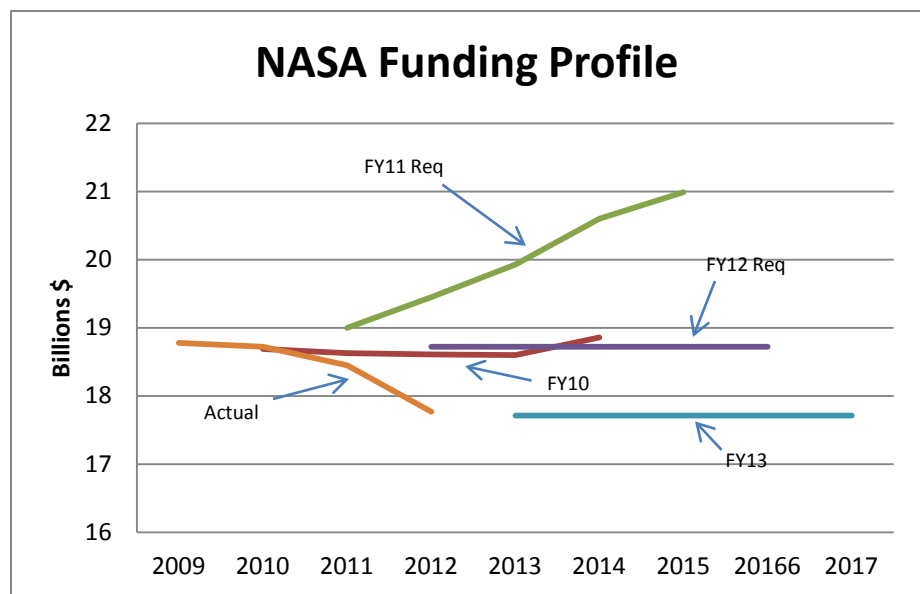
National Aeronautics and Space Administration President's FY 2013 Budget Request Summary										
Budget Authority, \$ in millions										
By Appropriation Account										
			FY2011	FY2012	FY2013	FY2013	FY2014	FY2015	FY2016	FY2017
			Actual	Estimate	Author.	Request	Notional	Notional	Notional	Notional
Science			4,919.7	5,073.7	5,509.6	4,911.2	4,914.4	4,914.4	4,914.4	4,914.4
Earth Science			1,721.9	1,760.5	2,089.5	1,784.8	1,775.6	1,835.5	1,826.2	1,772.8
Planetary Science			1,450.8	1,501.4	1,591.2	1,192.3	1,133.7	1,102.0	1,119.4	1,198.8
Astrophysics			631.1	672.7	1,149.1	659.4	703.0	693.7	708.9	710.2
James Webb Space Telescope			476.8	518.6	---	627.6	659.1	646.6	621.6	571.1
Heliophysics			639.2	620.5	679.8	647.0	643.0	636.7	638.3	661.6
Aeronautics			533.5	569.4	590.0	551.5	551.5	551.5	551.5	551.5
Space Technology			456.3	573.7	515.0	699.0	699.0	699.0	699.0	699.0
Exploration			3,821.2	3,712.8	5,264.0	3,932.8	4,076.5	4,076.5	4,076.5	4,076.5
Exploration Systems Develop			2,982.1	3,007.1	4,040.0	2,769.4	2,913.1	2,913.1	2,913.1	2,913.1
Commercial Spaceflight			606.8	406.0	500.0	829.7	829.7	829.7	829.7	829.7
Exploration R&D			232.3	299.7	724.0	333.7	333.7	333.7	333.7	333.7
Space Operations			5,146.3	4,187.0	4,253.3	4,013.2	4,035.1	4,035.1	4,035.1	4,035.1
Space Shuttle			1,592.9	556.2	0.0	70.6	0.0	0.0	0.0	0.0
Intl Space Station			2,713.6	2,829.9	3,129.4	3,007.6	3,177.6	3,170.9	3,212.8	3,234.3
Space & Flight Support			839.8	800.9	1,123.9	935.0	857.5	864.2	822.3	800.8
Education			145.4	136.1	145.7	100.0	100.0	100.0	100.0	100.0
Cross-Agency Support			2,956.4	2,993.9	3,276.8	2,847.5	2,847.5	2,847.5	2,847.5	2,847.5
Center Mang & Operations			2,189.0	2,204.1	---	2,093.3	2,093.3	2,093.3	2,093.3	2,093.3
Agency Mang & Operations			767.4	789.8	---	754.2	754.2	754.2	754.2	754.2
Construction and Environmental										
Compliance and Restoration			432.9	487.0	366.9	619.2	450.4	450.4	450.4	450.4
Construction of Facilities			373.3	441.3	---	552.8	359.5	362.9	360.0	360.0
Environmental Compliance			59.6	45.6	---	66.4	90.9	87.5	90.4	90.4
Inspector General			36.3	38.3	38.7	37.0	37.0	37.0	37.0	37.0
NASA TOTAL			18,448.0	17,770.0	19,960.0	17,711.4	17,711.4	17,711.4	17,711.4	17,711.4
1. Numbers may not add due to rounding.										
2. FY2012 Estimates include the impact of a \$30 million rescission included in the FY2012 appropriations act, in addition to ~ \$1 million from other prior appropriations included in the total.										
3. FY2013 Authorization for Astronphysics includes James Webb Space Telescope.										
4. FY2013 Space Technology request reflects shifting of some funds that were previously allocated to the Exploration R&D activity.										

For FY2013 NASA is requesting \$17.711 billion, a decrease of \$58 million from its FY2012 appropriation. The request is \$750 million less than amounts received in FY2011; and is about \$1 billion less than amounts received in FY2009 and FY2010.

For each of the Fiscal Years 2014 – 2017, the budget topline request is the same as FY2013, though the agency considers the outyear numbers to be ‘notional.’

There are three initiatives in this year’s request that are drawing the most attention: (1) cuts to the Planetary Sciences budget and withdrawing from the European Space Agency’s planned 2016 and 2018 Mars missions; (2) requesting substantially higher amounts for commercial crew (compared to current year’s funding) while constraining agency investment in a heavy-lift launch system; and (3) combining hypersonic and supersonic research into a single project to focus on fundamental research for high-speed flight. More on these initiatives will be discussed later in this charter.

The graph highlights the continuing decreases in funding proposed - and received - by NASA since 2009.



Science Mission Directorate

	FY11	FY12	FY13	FY13 Req vs. FY12 Est.	
	Actual	Estimate	Request	\$\$\$	%%%
Science Mission Directorate TOTAL	\$4,919.7	\$5,073.7	\$4,911.2	-\$162.5	-3.2%
Earth Science	1,721.9	1,760.5	1,784.8	24.3	1.4%
Planetary Science	1,450.8	1,501.4	1,192.3	-309.1	-20.6%
<i>Mars Program</i>	547.4	587.0	360.8	-226.2	-38.5%
Astrophysics	631.1	672.7	659.4	-13.3	-2.0%
James Webb Space Telescope	476.8	518.6	627.6	109.0	21.0%
Heliophysics	639.2	620.5	647.0	26.5	4.3%
(\$ = millions)					

Earth science. The Earth Science division at NASA advances the state of Earth System science through climate studies, spaceborne data acquisition, research and analysis, and predictive modeling. Spaceborne and airborne instruments are utilized to measure the Earth's atmosphere, oceans, sea ice, land surfaces and the interaction of these elements in the ecosystem. There are currently 16 missions in operation, including two new missions launched in 2011 – Aquarius and the Suomi National Polar-orbiting Partnership (Suomi NPP). The remaining 14 missions are all in extended operations, with many well beyond their designed lifetimes.

The budget request for FY2013 of \$1.78 billion reflects a modest increase of \$24.3 million over the FY2012 estimate. This increase is reflected in expected higher costs for launch vehicles for the Orbiting Carbon Observatory-2 and the Soil Moisture Active Passive (SMAP) spacecraft. This budget delays the launch readiness date of the Global Precipitation Measurement (GPM) mission but continues formulation and development of the recommended decadal survey missions including the Earth Venture instrument demonstrations.

Planetary science. The goal of NASA's planetary science program is to ascertain the content, origin, and evolution of the solar system and the potential for life elsewhere. Within this framework, NASA has embarked on a program strategy of flyby, orbit, land, and rove. In 2011 alone, missions to Jupiter (JUNO), Mars (Mars Science Laboratory – MSL), and the moon (GRAIL) were launched. While GRAIL is already at its destination, MSL will arrive at Mars in August 2012 and JUNO is expected to arrive at Jupiter in July 2017. Additionally, spacecraft are currently operating in orbit around the moon, Mercury, Mars, Saturn, and the asteroid Vesta; the rover Opportunity is operating on the surface of Mars; and New Horizons is 2/3rds of its way to Pluto.

The budget request for NASA's planetary science program is \$1.19 billion for FY2013, a decrease of \$309 million (20.6 percent) from the FY2012 estimate of \$1.5 billion. The Mars Exploration Program sees the bulk of this decrease, going from \$587 million in FY2012 to \$360.8 million in FY2013. The proposed budget effectively ends the planned joint NASA – European Space Agency (ESA) 2016 and 2018 Mars missions and calls into question the future of the Outer Planets program.

NASA recently stood up a Mars Program Planning Group (MPPG) to develop a revised and more affordable Mars Exploration program with the goal of delivering an initial framework to Congress in March 2012. However, a full proposal is not due until late summer 2012. This latest re-plan effort comes to the dismay of the planetary science – and particularly the Mars science – community. The most recent decadal survey (delivered last year) for planetary science recommended a Mars sample return mission as its top priority and indicated that any flagship mission that would not lead to a Mars sample return should be shelved for other high priority missions, such as a mission to Jupiter's moon Europa. While the report acknowledged the necessity of scaling flagship missions appropriately to anticipated funding and recommended de-scoping such missions to achieve the science objectives less expensively, the report did not suggest abandoning flagship missions altogether as this budget proposes.

Astrophysics. The goal of NASA's Astrophysics program is to discover how the universe works, how it began and developed into its present form, and search for Earth-like planets. Among the highly-visible successes for the program in 2011 was the Nobel Prize in Physics awarded to

NASA Astrophysicist Adam Reiss using data he derived from the Hubble Space Telescope, and the Kepler spacecraft which has been instrumental in the discovery of thousands of possible exoplanets including the first such rocky exoplanet within a habitable zone of its parent star.

The Astrophysics Division currently operates 11 spacecraft, including the Hubble Space Telescope and Kepler. The Nuclear Spectroscopic Telescope Array (NuSTAR) is currently scheduled to launch on March 21, 2012.

The budget request for Astrophysics was \$659.4 million, a decrease of \$13.3 million compared to the FY2012 estimate. The budget does not provide for the Wide Field Infrared Survey Telescope (WFIRST) which was named the top priority mission identified by the *New Worlds, New Horizons in Astronomy and Astrophysics* decadal survey for 2011-2021.

James Webb Space Telescope. Beginning in FY2012, the James Webb Space Telescope (JWST) was taken out from under the Astrophysics division and was given its own budget line. After an extensive re-planning effort, NASA re-baselined JWST to a total life cycle cost of \$8.8 billion and a launch readiness date of October 2018. Based on this effort, the funding profile for FY2013 and beyond increased significantly, with the bulk of the increases in the early years of the re-plan. As such, JWST received a request for FY2013 of \$627.6 million, an increase of \$109 million over the FY2012 estimate.

Heliophysics. NASA's Heliophysics program focuses on understanding the Sun and its interactions with the Earth and the solar system. This research is achieved through a suite of missions ranging from spacecraft in Earth's orbit, those stationed at LaGrangian points and around the Sun itself, to suborbital sounding rockets. Taking full advantage of a system-wide observational capability enables heliophysics research that looks at the entire space environment.

The Heliophysics division currently operates 16 missions including Voyager, which launched in 1977, the Solar and Heliospheric Observatory (SOHO) and the Solar Terrestrial Relations Observatory (STEREO). The Radiation Belt Storm Probes (RBSP) is scheduled to launch in September 2012.

The budget request for FY2013 is \$647 million, an increase of \$26.5 million. This budget reflects an increased cost for launch vehicles and a modest investment in Sounding Rocket Sustainer Motor design activity. The proposed budget continues investments in the joint NASA-European Space Agency (ESA) Solar Orbiter Collaboration mission targeting launch in January 2017 and the Solar Probe Plus mission targeting launch in July 2018.

Aeronautics Research Mission Directorate

			FY11	FY12	FY13	FY13 Req vs. FY12 Est.	
			Actual	Estimate	Request	\$\$\$	%%%
Aeronautics Mission Research TOTAL			\$533.5	\$569.4	\$551.5	-\$17.9	-3.1%
Aviation Safety			67.3	80.1	81.1	1.0	1.2%
Airspace Systems			87.2	92.7	93.3	0.6	0.6%
Fundamental Aeronautics			206.3	186.3	168.7	-17.6	-9.4%
Aeronautics Test			76.4	79.4	78.1	-1.3	-1.6%
Integrated Systems Research			75.9	104.2	104.0	-0.2	-0.2%
Aero Strategy & Management			20.4	26.7	26.4	-0.3	-1.1%
(\$ = millions)							

NASA’s aeronautics programs are conducted by the Aeronautics Research Mission Directorate (ARMD) and focus on long-term investments in fundamental aeronautics research to improve aviation safety, efficiency and air traffic management. The ARMD includes four NASA centers: Ames Research Center (CA), Dryden Flight Research Center (CA), Glenn Research Center (OH) and Langley Research Center (VA).

The ARMD FY13 budget request represents a 3.1% decrease in funding from the previous year, dropping from \$569.4M in FY2012 to \$551.5M in FY2013. Major programmatic changes this year include combining funding for hypersonic research with supersonic research and transferring “entry, descent and landing” (EDL) research to the Space Technology account. The transfer of EDL research accounts for a significant amount of the ARMD funding reduction in FY13.

The ARMD program areas include;

- **Aviation Safety** – develops technologies to improve aviation system-wide safety, advances the state-of-the-art of aircraft systems and flight crew operations, and addresses the inherent presence of atmospheric risks to aviation.
- **Airspace Systems** – develops and explores fundamental concepts and technologies to increase throughput of the National Airspace System and achieve high resource efficiency, and transitions key technologies from the laboratory to the field.
- **Fundamental Aeronautics** – conducts fundamental research to improve aircraft performance and minimize environmental impacts, research for low boom supersonic aircraft, and improving the effectiveness of rotary wing vehicles.
- **Aeronautics Test Program** – manages NASA’s aeronautics test capabilities in partnership with the Department of Defense.
- **Integrated Systems Research Program** – conducts integrated system-level research to accelerate transitioning into major aircraft and operations systems.

- **Aeronautics Strategy and Management** – identifies new innovative aviation concepts through “seedling funds” that provide research and analysis of early stage concepts. Also funds ARMD’s institutional expenses, as well as NASA’s portion of the Joint Planning and Development Office (a program within NextGen) costs.

Over the last decade, the budget for ARMD has shrunk from a peak of approximately \$1B to just \$551.5M in the FY2013 request and remains flat in the budget run out over the next 5 years. Significant reductions in ARMD infrastructure and personnel have reduced necessary funding levels but a key question remains as to the impact on its mission areas.

Human Exploration and Operations

	FY11	FY12	FY13	FY13 Req vs. FY12 Est.	
	Actual	Estimate	Request	\$\$\$	%%%
Exploration TOTAL	\$3,821.2	\$3,712.8	\$3,932.8	\$220.0	5.9%
Exploration Systems Devel.	2,982.1	3,007.1	2,769.4	-\$237.7	-7.9%
Commercial Spaceflight	606.8	406.0	829.7	\$423.7	104.4%
Exploration Research & Develop.	232.3	299.7	333.7	\$34.0	11.3%
(\$ = millions)					

Exploration Systems Development

Exploration Systems Development is responsible for designing and building three systems that will form the centerpiece of America’s future space exploration beyond Earth’s orbit; the Space Launch System heavy lift rocket, the Orion Multi Purpose Crew Vehicle, and the associated Exploration Ground Systems necessary to prepare the systems for launch. Collectively, they will enable long-term human exploration of the Moon, asteroids, or other destinations in the Solar System such as Mars. In addition, the NASA Authorization Act of 2010 directed NASA to develop these systems as a backup capability to reach low Earth orbit to service the International Space Station if commercial or Russian systems are unavailable. NASA is planning for an initial test launch of the SLS and Orion in 2017.

The president’s FY2013 request for Exploration Systems Development is \$2.77 billion, a decrease of \$237.7 million (7.9 percent reduction) from the FY2012 estimate. The Orion Multi Purpose Crew vehicle sees the largest decrease, going from \$1.2 billion in FY2012 to \$1.02 billion in FY2013 (14.6 percent reduction). The request also cuts the Space Launch System budget from \$1.8 billion in FY2012 to \$1.74 billion in FY2013 (3.5 percent reduction). The request increases the Exploration Ground Systems budget from \$304 million in FY2012 to \$404 million in FY2013, a \$100 million addition (32.8 percent).

Commercial Spaceflight

Similar to the approach used by NASA since 2006 to develop dual launch systems for commercial cargo delivery to the ISS using two separate programs to fund the effort (the Commercial Orbital Transportation Services and Cargo Resupply Services programs), NASA plans to fund development of a commercial crew capability using two separate budget accounts. NASA’s Exploration account funds the partial development of commercial crew systems with industry partners contributing varying amounts of their own money, while the Space Operations

account (which will be discussed later) will be used to procure transportation services on a fixed price basis.

NASA's Commercial Crew program is working with commercial partners to develop the systems necessary to safely transport astronauts to and from the ISS in the 2017 timeframe. NASA has funded space act agreements with various commercial partners and plans to make additional awards this summer for further commercial crew systems development.

The president's FY2013 request for commercial crew is \$830 million, an increase of \$424 million, or 104 percent above the FY2012 estimate.

Exploration Research and Development

NASA's Exploration Research and Development program funds the development of new technologies needed to enable extended human space exploration. The program is comprised of two parts. The first is the Human Research Program which in 2011 flew 11 major medical experiments and added new ISS biomedical capabilities like second generation ultrasound for medical imaging, and the jointly developed ESA/NASA muscle atrophy research and exercise system. The second is the Advanced Exploration Systems program which began in 2012 and continues several of the Exploration Technology Development and Demonstration projects such as portable life support systems for advanced space suits and a radiation assessment detector for the Mars Science Lab.

The president's FY2013 request for Exploration Research and Development is \$334 million, an increase of \$34 million (11.3 percent) above the FY2012 estimate of \$299.7 million.

Space Operations

			FY11	FY12	FY13	FY13 Req vs. FY12 Est.	
			Actual	Estimate	Request	\$\$\$	%%%
Space Operations TOTAL			\$5,146.3	\$4,187.0	\$4,013.2	-\$173.8	-4.2%
Space Shuttle			1,592.9	556.2	70.6	-485.6	-87.3%
International Space Station			2,713.6	2,829.9	3,007.6	177.7	6.3%
Space & Flight Support			839.8	800.9	935.0	134.1	16.7%
21st Century Space Launch Complex			142.8	123.5	41.1	-82.4	-66.7%
Space Communications & Navigation			456.7	445.5	655.6	210.1	47.2%
(\$ = millions)							

Space Shuttle

In July 2011, the Space Shuttle flew its final mission following the completion and re-supply of the ISS. In FY2012 and FY2013 the Space Shuttle program undergoes final transition, retirement, and disposition of program assets, and will focus on identifying assets that can be transferred to future exploration programs and dispositioning property no longer needed. This includes the processing and delivery in FY2012 of the Space Shuttle orbiters for museum displays.

The president's FY2013 request is \$70.6 million, a decrease of \$485.6 million or 87.3 percent from the FY2012 estimate. The FY2012 estimate included a one-time payment of \$470 million for pension requirements related to the close out of the program that are not included in FY2013.

International Space Station

The ISS is now a functional, permanently crewed research laboratory and technology test bed for exploration and international cooperation, as well as a National Laboratory for non-NASA and potential non-governmental users. The NASA Authorization Act of 2010 directs NASA to take actions "*necessary to ensure the safe and effective operation, maintenance and maximum utilization of the U.S. segment of ISS through at least September 30, 2020.*" Now that assembly is complete, NASA faces a critical window for ISS utilization and research before a notional program end date of 2020. The Administration's request provides for continuous operations and maintenance to ensure the ISS remains viable as a National Lab through 2020. As noted earlier, funding to procure commercial crew or cargo transportation is in the ISS Crew and Cargo Transportation program within the ISS budget.

The president's FY2013 budget request for the International Space Station is \$3.0 billion, an increase of \$178 million, or 6.3 percent above the FY2012 estimate of \$2.83 billion.

Space and Flight Support

Space and Flight Support is made up of a number of programs providing capabilities that play critical roles in several NASA missions. For example, the 21st Century Space Launch Complex program funds modernization at the Kennedy Space Center and Cape Canaveral Air Force Station to benefit multiple users. The Space Communications and Navigation program operates NASA's extensive network of ground-based and orbiting communications hardware and software necessary to receive vast quantities of data generated by NASA's fleet of crewed vehicles and robotic spacecraft. The Human Space Flight Operations (HSFO) program ensures that NASA's astronauts are prepared to safely carry out current and future missions. The Launch Support Program funds various NASA missions that require expendable launch vehicle services. The Rocket Propulsion Test program maintains NASA's wide variety of test facilities for use by NASA, other agencies, and commercial partners. Together these efforts comprise the Space and Flight Support segment of NASA's budget.

The president's FY2013 budget request for Space and Flight Support is \$935 million, an increase of \$134 million (16.7 percent) above the FY2012 estimate of \$801 million.

Education

			FY11	FY12	FY13	FY13 Req vs. FY12 Est.	
			Actual	Estimate	Request	\$\$\$	%%%
Education TOTAL			145.4	136.2	100.0	-36.2	-26.6%
Aerospace Research and Career Deve			70.4	56.2	33.0	-23.2	-41.3%
Space Grant			45.5	38.9	24.0	-14.9	-38.3%
EPSCoR*			24.9	17.3	9.0	-8.3	-48.0%
STEM Education & Accountability			75.0	80.0	67.0	-13.0	-16.3%
Minority Univ. Research Educ.Prog.			28.5	30.0	30.0	0.0	0.0%
STEM Educ. & Accountability Projects			46.5	50.0	37.0	-13.0	-26.0%
(\$ = millions)							
*Experimental Program to Stimulate Competitive Research							

The President's FY 2013 request for NASA's Education program is \$100M, a \$36.1M decrease (26 percent) from the FY12 estimated budget of \$136.1M. The proposed budget run out for five years is flat at \$100M. The FY13 request includes:

- Science, Technology, Engineering and Mathematics (STEM) Education and Accountability
 - \$37M for STEM Education and Accountability projects;
 - \$30M for the Minority University Research and Education Program (MUREP);
- Aerospace Research and Career Development
 - \$24M for the National Space Grant College and Fellowship Program (Space Grant); and
 - \$9M for the Experimental Program to Stimulate Competitive Research (EPSCoR).

The budget request aligns the projects within the priorities of the OSTP STEM Committee five-year strategic plan. The Office of Education proposes to allocate 63 percent of its funding in support of Space Grant, EPSCoR, and MUREP with the remaining funds supporting education efforts at NASA Centers and grantees.

The STEM Education and Accountability program was established as a new programmatic structure in FY2012. The program provides funding for NASA-unique STEM education opportunities, including internships, launch initiatives, and grants, and provides students and educators with NASA's STEM content. The program also supports a competitive process for science museums, NASA centers and planetariums to enhance education and outreach activities related to space exploration, aeronautics and space science. The STEM Education and Accountability program budget has been decreased by 16.3 percent in the FY2013 request. MUREP supports multi-year research grants at Historically Black Colleges and Universities, Hispanic Serving Institutions, and Tribal Colleges. Additionally, MUREP funds scholarships, internships, and mentoring for K-12 students. The MUREP budget remains flat at \$30M in the FY2013 request.

Space Grant supports undergraduate and graduate students with scholarships, internships and research challenges through a national network of 52 consortia representing over 1,000 universities, colleges, and state and local agencies in 50 states, the District of Columbia and Puerto Rico. In FY11, Space Grant programs reached over 21,000 higher education participants. For FY2013 the request proposes reducing the Space Grant budget from \$38.9M (FY2012) to \$24.0 M (38.3 percent).

EPSCoR develops academic research projects to establish competitive activities in states with modest research infrastructure in an effort to make the organization more competitive in attracting non-EPSCoR funding for research. EPSCoR funds states and regions that do not traditionally compete for Federal aerospace-related research activities. The EPSCoR budget has been decreased by 48 percent in the FY13 President's request.