

SCIENCE

	FY10 Enacted		FY11 Budget		Authorization Act		FY 2011 Enacted		Effective Planning Level (June 2011)
Science	4,469.0		5,005.6		5,005.6		4,935.4		4,931.7

P.L. 112-10 included \$4,945.3M for Science. The 0.2% rescission included in the Act was applied proportionately across all NASA accounts, resulting in funding of \$4,935.4M for Science.

FY 2011 effective planning level funding is \$73.9M below the FY 2011 budget request and the Authorization Act funding levels, and \$462.7M above the FY 2010 enacted amount. Program plans and changes are described below. The changes below are referenced from the 2010 Authorization Act and the FY 2011 President’s Request.

Earth Science

Earth Science Research

NASA Programmatic Changes (+\$23.1M)

- **-\$25.5M, Research** – Due to near-term reductions to competitively selected activities with sufficient prior-year carryover. Full funding will be reallocated at the end of the selection cycle. No impact to grants or other activities is expected.
- **+\$48.6M, Computing and Management** –
 - -\$1.5M, near-term reductions to competitively selected activities with sufficient prior-year carryover. Full funding will be reallocated at the end of the selection cycle. No impact to grants or other activities is expected.
 - +\$50.1M, will be used for CAS SBIR/STTR activities. This restores the funding that was transferred out of SBIR/STTR in the July 21, 2010 operating plan update, a result of CAS one-year funding and severability determination of SBIR/ STTR contracts. SBIR and STTR programs achieve a net zero change (across FY 2010 and FY 2011) and will meet legally-mandated funding levels.

Earth Systematic Missions

NASA Programmatic Changes (+\$41.9M)

- **-\$8.9M, Glory Mission** – Due to reduction in residual funding that is no longer needed due to the launch vehicle failure. Life cycle cost is reduced to \$392.2M, but remains under evaluation as closeout activities continue. A future operating plan change may be necessary.
- **+\$4.8M, Global Precipitation Measurement (GPM)** – Accommodates emerging FY 2011 requirements, including effects of the recent Japanese earthquake and its impact on our mission

partners. Offsetting reductions can be made in future years, with no change to project development or life cycle cost.

- **+\$9.2M, Landsat Data Continuity Mission (LDCM)** – Accommodates emerging FY 2011 requirements; offsetting reductions can be made in future years with no change to project development or life cycle cost.
- **+\$37.4M, NPOESS Preparatory Project (NPP)** – Restores funding previously reduced in the FY 2010 operating plan (February 2010). NPP incurred a launch delay until October 2011 as a result of issues with the non-NASA CrIS and VIIRS instruments (developed and delivered to NASA by the NPOESS Integrated Program Office) in FY 2010: FY 2010 planned activities and funding were shifted to FY 2011. Costs for Delta II launch pad sustainment have decreased by \$4.0M, and the estimated life cycle cost is reduced accordingly to \$895.3M.
- **-\$8.8M, Ice, Cloud, and land Elevation Satellite (ICESat) II** – Consistent with support of the project-estimated earliest possible launch date in 2016, as presented in the FY 2012 Budget.
- **+\$20.0M, Soil Moisture Active and Passive (SMAP)** – Consistent with support of the project-estimated earliest possible launch date in 2014, as presented in the FY 2012 Budget.
- **-\$11.8M, Other Missions and Data Analysis** – Reduces FY 2011 requirements for the Delta II launch pad sustainment activity. The funding can be restored in future years without impact.

Earth System Science Pathfinder

NASA Programmatic Changes (-\$107.1M)

- **+\$11.1M, Aquarius** – Accommodates partner-driven delays in the Aquarius/SAC-D spacecraft and instruments. NASA actively supported the Argentine space agency (CONAE), to enable completion of the spacecraft and successful shipment of the entire observatory to Vandenberg Air Force Base. The spacecraft is at the launch site and is being prepared for launch in June-July 2011. Estimated life cycle costs are increased to \$289.0M.
- **-\$68.1M, OCO-2** – Funding for Taurus X/L launch vehicle temporarily put on hold. NASA is evaluating launch services options for the OCO-2 mission, following the March 4, 2010 failure of the Taurus XL rocket for the Glory mission, and the February 24, 2009 failure of a Taurus XL for the original OCO mission. A launch delay of OCO-2 beyond February 2013, with associated increases in development and life cycle cost, is likely. NASA will inform the Congress as the plans are clarified.
- **-\$47.5M, Venture Class Missions** – Next Venture Class solicitations (Earth Venture 2 and Earth Instrument 1) have been delayed because competitively selected proposals from the Earth Venture 1 solicitation were not selected until late FY 2010. Funding can be restored to future years, enabling robust selections.
- **-\$2.6M, Other Missions and Data Analysis** – Curtails funding for a Climate Initiative, including additional data analysis awards, as requested in the President's FY 2011 budget request. Previously selected awards are unaffected.

Earth System Multi-Mission Operations

NASA Programmatic Changes (-\$13.8M)

- **-\$13.8M, Earth Science Multi-Mission Operations** – Due to delayed start of Earth System Data Record (ESDR) Uncertainty Analysis projects; elimination of data systems work related to Glory; deferral of ground system work due to NPP and GPM launch delays.

Planetary Science

Planetary Science Research

NASA Programmatic Changes (-\$21.6M)

- **-\$12.5M, Near Earth Object Observations** – Delays by one year the planned ramp up of efforts to find and characterize near-Earth objects.
- **-\$8.7M, Planetary Science Research and Analysis** – Reduces previously selected awards with costs to date below plan; funding will be restored in future years, without loss of science. Funding for some new awards has been delayed which will reduce science output.
- **+\$0.1M, Other Missions and Data Analysis** – Due to minor increase for sample curation improvements.
- **-\$0.5M, Education and Directorate Management** – Due to a reduction that is offset by administrative efficiencies.

Lunar Quest Program

NASA Programmatic Changes (-\$6.5M)

- **+\$6.5M, Lunar Atmosphere and Dust Environment Explorer** – Accommodates emerging FY 2011 requirements; offsetting reductions can be made in future years with no change to project development or life cycle cost.
- **-\$13.0M, Lunar Science** – Funding for Plutonium restart will be provided under the Planetary Technology program and the remainder will be allocated to Lunar Atmosphere and Dust Environment Explorer, as above.

New Frontiers

NASA Programmatic Changes (-\$5.6M)

- **+\$10.0M, Juno** – Minimizes risk as the project continues toward launch in August 2011. Offsetting reductions can be made in future years, with no change to project development or life cycle cost.
- **-\$15.6M, Other Missions and Data Analysis** – Reduces New Frontiers Future Missions, with selection of a single new mission for development in June 2011.

Mars Exploration

NASA Programmatic Changes (+\$15.1M)

- **+\$11.3M, Mars Science Lab** – Reduces risks to assure achievement of a November launch. A decrease in launch vehicle cost reduces the estimated life cycle cost \$11.9M to \$2,464.3M.
- **+\$3.8M, Other Missions and Data Analysis** – Increased future Mars mission studies, consistent with the NRC Decadal Study recommendation.

Outer Planets

NASA Programmatic Changes (-\$6.6M)

- **-\$6.6M, Outer Planets** – Reduces study of the Europa-Jupiter system mission, consistent with the NRC Decadal Study recommendation

Planetary Science Technology

NASA Programmatic Changes (+\$8.7M)

- **+\$8.7M, Planetary Science Technology** –
 - +\$7.5M, begins efforts to restart domestic production of Pu-238.
 - +\$1.2M, maintains the Advanced Stirling Radioisotope Generator flight unit development schedule to support a 2015-2018 flight opportunity.

Astrophysics

Astrophysics Research

NASA Programmatic Changes (-\$7.6M)

- **-\$0.6M, Astrophysics Research and Analysis** – Reduces previously selected awards with costs-to-date below plan.
- **-\$0.3M, Balloon Project** – Reduces without impact due to favorable cost performance.
- **-\$6.7M, Other Missions and Data Analysis** – Reduces requirements for Agency contract audit costs; realigns Astrophysics Senior Review funding to highest priority operating missions.

Cosmic Origins

NASA Programmatic Changes (-\$13.8M)

- **-\$11.1M, Hubble Space Telescope** – Reduces without impact due to favorable cost performance on several major contracts and grants.
- **+\$0.3M, SOFIA** – Supports the release of the solicitation for second-generation instruments. This change is consistent with the life cycle cost reported in the FY 2012 budget request of \$3,002.9M.
- **-\$3.0M, Other Missions and Data Analysis** – Reduces future mission studies, consistent with NRC Decadal Survey priorities.

Physics of the Cosmos

NASA Programmatic Changes (+\$5.3M)

- **+\$5.3M, Other Missions and Data Analysis** – Additional support of NRC Decadal Survey mission concept and technology development priorities.

Exoplanet Exploration

NASA Programmatic Changes (+\$3.9M)

- **+\$3.9M, Other Missions and Data Analysis** – Additional support of NRC Decadal Survey mission concept and technology development priorities.

Astrophysics Explorer

NASA Programmatic Changes (+\$13.3M)

- **+\$4.0M, NuSTAR** – Reduces risk as the project nears launch in early FY 2012. Offsetting reductions can be made in future years, with no change to project development or life cycle cost.
- **+\$2.0M, GEMS** – Accommodates emerging FY 2011 requirements; offsetting reductions can be made in future years, with no change to project development or life cycle cost.
- **+\$7.3M, Other Missions and Data Analysis** – Increases funding for Astro-H, consistent with KDP-C approved budget and life cycle cost, established at mission confirmation review. Increases funding for WMAP ongoing operations, per Senior Review recommendations.

Heliophysics

Heliophysics Research

NASA Programmatic Changes (-\$6.2M)

- **+\$2.3M, Research and Analysis** – Minor increase enables all announced selections and award continuations to take place.
- **-\$3.0M, Sounding Rockets** – Reduces without impact due to favorable cost performance.
- **-\$0.1M, Research Range** – Reduces without impact due to favorable cost performance.
- **-\$5.4M, Other Missions and Data Analysis** – Reduction without impact due to favorable cost performance on several operating missions.

Living with a Star

NASA Programmatic Changes (+\$4.1M)

- **+\$6.1M, Radiation Belt Storm Probes** – Accommodates emerging FY 2011 requirements; offsetting reductions can be made in future years with no change to project development or life cycle cost.
- **-\$0.2M, Solar Probe** – Reduces without impact due to favorable cost performance; funding can be restored in future years with no change to project development or life cycle cost.
- **-\$1.8M, Other Missions and Data Analysis** – Minor reduction to program management activities.

Solar Terrestrial Probes

NASA Programmatic Changes (+\$5.4M)

- **+\$7.1M, Magnetospheric Multiscale (MMS)** –
 - +\$7.1M, accommodates emerging FY 2011 requirements; offsetting reductions can be made in future years, with no change to project development or life cycle cost.
- **-\$1.7M, Other Missions and Data Analysis** – Reduces without impact due to favorable cost performance on the STEREO operating mission.

Heliophysics Explorer Program

NASA Programmatic Changes (-\$6.1M)

- **-\$5.5M, Interface Region Imaging Spectrograph** – Consistent with the budget established at mission confirmation review. Estimated life cycle cost is \$180.2M.
- **-\$0.6M, Other Missions and Data Analysis** – Reduces without impact due to favorable cost performance on several operating missions.

AERONAUTICS

	FY10 Enacted	FY11 Budget	Authorization Act	FY 2011 Enacted	Effective Planning Levels (June 2011)
Aeronautics	501.0	579.6	579.6	533.9	533.5

P.L. 112-10 included \$535.0M for Aeronautics. The 0.2% rescission included in the Act was applied proportionately across all NASA accounts, resulting in funding of \$533.9M for Aeronautics.

FY 2011 effective planning level is \$46.1M below the FY 2011 budget request and the Authorization Act funding levels, and \$32.5M above the FY 2010 enacted amount. Program plans and changes are described below. The changes below are referenced from the 2010 Authorization Act and the FY 2011 President's Request.

The Aeronautics Research initial operating plan is consistent with the aeronautics research goals outlined in the FY 2010 Authorization Act. To accommodate the enacted funding levels, program realignments were incorporated into the initial operating plan.

Aeronautics

Aviation Safety Program

NASA Programmatic Changes (-\$12.0M)

- **-\$12.0M, Aviation Safety** – Cancels or delays research on methods and tools for verification and validation (V&V) of complex aviation systems, specifically in authority and autonomy, safety case analysis, and distributed systems.

Airspace Systems Program

NASA Programmatic Changes (+\$5.0M)

- **+\$5.0M, Airspace Systems Program** – Realignment to the Airspace Systems Program from Integrated Systems Research Program (ADS-B demonstration funding). Aligns funding with the planned increases in this research area in FY 2012.

Fundamental Aeronautics Program

NASA Programmatic Changes (-\$7.2M)

- **-\$5.3M, Fundamental Aeronautics** – Reduces Cross Program Operations with reductions or delayed funding for Mission Directorate-level administrative activities including contractor support, information technology, and studies and reviews.

- **-\$1.5M, Fundamental Aeronautics** – Realigns seedling funding from the Fundamental Aeronautics Program to the Innovative Concepts in Aviation project in the Integrated Systems Research Program. Aligns funding with the planned increases in this activity in FY 2012.
- **-\$0.4M, Fundamental Aeronautics** – Transfers from Cross Program Operations to Cross Agency Support for critical mission support capabilities.

Integrated Systems Research Program

NASA Programmatic Changes (-\$31.9M)

- **-\$28.4M, Integrated Systems Research Program** – Delays or cancels upgrades to the ADS-B systems on test UAVs, flight demonstrations of ADS-B and flight management systems, procurement of UAV communications hardware, and simulation demonstrations. Cancels technology risk-reduction efforts associated with preliminary design efforts for flight experiments to support the environmentally responsible aviation research activities.
- **-\$3.5M, Integrated Systems Research Program** – Realigns ADS-B demonstration from the Integrated Systems Research Program to the Airspace Systems Program. Aligns research with the planned increases in FY 2012. Realigns seedling funding from the Fundamental Aeronautics Program to the Innovative Concepts in Aviation project in the Integrated Systems Research Program in order to align the funding with the planned increases in this activity in FY 2012.

SPACE TECHNOLOGY

	FY10 Enacted	FY11 Budget	Authorization Act	FY 2011 Enacted	Effective Planning Level (June 2011)
Space Tech	0.0	572.2	350.0	0.0	349.3
<u>Space Tech Funding</u>					
ST in CAS	(175.2)	(0.0)	(0.0)	(0.0)	(174.7)
ST in Space Ops	(0.0)	(0.0)	(0.0)	(0.0)	(174.7)

The FY 2011 budget request and the NASA Authorization Act of 2010 included Space Technology as a separate funding line. This activity included the Innovative Partnerships Program (IPP), which was funded in Cross-Agency Support (CAS) in 2010, a consolidation of additional ongoing Agency technology activities, and a set of competitively-awarded technology activities focused on NASA's future missions in Exploration and Science.

The NASA Authorization Act of 2010 provided \$350.0M for Space Technology. Applying the 0.2% rescission included in the P.L. 112-10 proportionately across all NASA activities, results in a funding level of \$349.3M for Space Technology. NASA is funding Space Technology activities in two accounts, CAS and Space Operations. Space Operations provides \$174.7M and CAS provides \$174.7M. Total FY 2011 funding is \$222.2M below the FY 2011 budget request and, subject to the rescission, at the same level as the Authorization Act.

Program plans and changes are described below.

Note that additional SBIR/STTR activities will be supported by funding from Science (\$50.1M) and Exploration (\$1.6M) and restores the \$51.7M that was transferred out of SBIR/STTR in the July 21, 2010 operating plan update, a result of CAS one-year funding and severability determination of SBIR/STTR contracts. The FY 2011 amounts are effectively increased by \$41.1M for SBIR and \$10.6M for STTR, and are required for the Agency to meet its FY 2010-2011 commitments for these important programs. SBIR and STTR programs achieve a net zero change (across FY 2010 and FY 2011) and will meet legally-mandated funding levels.

Space Operations funding for Space Technology
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Space Technology Program

The initial operating plan provides \$174.7M for Space Technology activities within the Space and Flight Support theme of the Space Operations Mission Directorate for continuation of ongoing, high-priority, mission-focused space flight technology development activities led by the NASA Centers to address known capability gaps and deficiencies, and competitively awarded, high-priority space flight technology development activities that engage the NASA Centers, industry and academia in reducing the risk and/or cost of NASA's future space flight missions.

NASA Programmatic Changes (\$174.7M)

- **\$4.4M, Strategic Integration** – Supports efforts in development of the NASA Space Technology Roadmaps (with National Research Council); increased planning and coordination required to organize NASA’s technology investments across the Mission Directorates and provide an integrated Agency technology assessment. Funding is consistent with the NASA Authorization Act of 2010.
- **\$24.9M, SBIR/STTR** – Provides SBIR/STTR program awards to spur aerospace innovation across the Nation’s small business community, in accordance with legally-required funding levels.
- **\$145.4M, High-Priority Space Flight Technology Development Projects** – Supports high-priority, mission-focused space flight technology development activities that address known capability gaps and deficiencies. Through these Center-led efforts, NASA will continue uninterrupted development of the following high-priority mission-focused space flight technology developments:
 - Spacecraft Servicing – Continuing ongoing satellite servicing development activities, including robotic satellite servicing technologies such as end effectors, refueling systems, autonomous rendezvous and docking sensors and algorithms and tools, enabling robotic and human exploration mission architectures and demonstrating the commercial utility for servicing satellites.
 - Optical Communications – Continuing the FY 2010 effort, an advanced ground receiver and designs for flight hardware capable of providing a high bandwidth downlink will be developed, enabling future beyond LEO exploration.
 - Composite Cryotanks – Continuing FY 2010 efforts, large-scale (5m and up to 10m diameter) composite cryogenic propellant tanks will be developed and tested, decreasing the mass of future enhancements to the Space Launch System and other in-space systems (e.g., lander systems).
 - Inflatable Aerodynamic Decelerators – Continuing FY 2010 efforts, develop and demonstrate hypersonic inflatable aeroshell technology suitable for an ISS down-mass capability and deep space exploration, and supersonic decelerator technology suitable for future Mars missions
 - Space Robotics, Propulsion and Autonomous Systems – Continuing FY 2010 efforts, advance robotics technology in order to increase human productivity and the effectiveness of human-robot teams, test nano-propellants and develop advanced propulsion technologies increasing the performance of future launch and in-space systems, and mature autonomous space system capabilities for use in small and standard size spacecraft.
 - Space Flight Technology ISS Demonstrations – Microgravity fluid dynamics and materials characterization testing on the ISS providing data to aid in the design of propellant management devices and structures of future in-space systems.
 - Commercial Reusable Suborbital Research – Continuing FY 2010 efforts, flight demonstration tests of at least two commercial reusable suborbital vehicles and development and/or integration of at least four suborbital technology payloads to stimulate the emerging commercial reusable suborbital research industry.

Approximately 75% of these funds will be applied to ongoing projects and planning activities that utilize existing workforce. A significant fraction of the remaining funds will provide meaningful research and development opportunities to assist in the transition of the human spaceflight workforce (within NASA and across our industry partners) from the Space Shuttle and Constellation programs through competitively-awarded, high-priority space flight technology development activities that engage the NASA Centers, industry and academia in reducing the risk and/or cost of NASA’s future space flight missions. A limited number of competitively selected awards are anticipated: NASA Innovative Advanced Concepts (July 15, 2011); Game Changing Development (July 15, 2011); and Technology Demonstration Missions (July 15, 2011) solicitations. Space flight technology development projects focus upon key Agency technology priorities identified in recent human space flight mission architecture studies, benefiting future enhancements of the Space Launch System (SLS) and Multi-Purpose Crew Vehicle (MPCV) and forming the basis for some of the additional space flight systems required for beyond LEO exploration. In some cases, these same activities will mature

capabilities that are also required for future Science missions identified in NRC decadal surveys. These activities have deep roots in technology development approaches NASA has successfully pursued in previous years.

Cross Agency Support funding for Space Technology - Innovative Partnership Program

Innovative Partnership Program

The initial operating plan provides \$174.7M for ongoing Innovative Partnership Program activities including SBIR/STTR, partnership development, technology transfer, commercialization, NASA innovation activities across the NASA Centers, and Space Technology Research Fellowships.

NASA Programmatic Changes (\$174.7M)

- **\$140.7M, SBIR/STTR** – Provides SBIR/STTR program awards to spur aerospace innovation across the Nation’s small business community, in accordance with legally-required funding levels.
- **\$34.0M, Partnership Development and other technology efforts** – Provides Agency management and dissemination of NASA intellectual property, technology transfer, partnership development, licensing and commercialization activities across the NASA Centers, prizes and challenges, and NASA innovation activities. There is no Centennial Challenges funding planned for this fiscal year; a limited number of competitively-selected awards are anticipated for Space Technology Research Fellowships (June 15, 2011).

EXPLORATION

	FY10 Enacted		FY11 Budget		Authorization Act		FY 2011 Enacted		Effective Planning Level (June 2011)
Exploration	3,746.3		4,263.4		3,868.0		3,800.7		3,928.6

P.L. 112-10 provided \$3,808.3M for Exploration. The 0.2% rescission included in the Act was applied proportionately, resulting in funding of \$3,800.7M for Exploration. Of note, this initial operating plan includes a transfer from Space Operations of \$139.8M, in order to align with direction provided in the NASA Authorization Act of 2010 with regard to the Commercial Cargo and Exploration Technology Development programs.

FY 2011 effective planning level funding is \$334.8 M below the FY 2011 budget request, \$60.6M above the Authorization Act funding level, and \$182.3M above the FY 2010 enacted amount. Program plans and changes are described below.

Human Exploration Capabilities

Multi-Purpose Crew Vehicle (\$1,196.0M)

The initial operating plan provides funding for the Multi-Purpose Crew Vehicle (MPCV), a new program also newly authorized by the NASA Authorization Act of 2010 to develop the primary crew vehicle for human exploration missions beyond low Earth orbit. MPCV will replace the Orion project and supporting elements from the former Constellation Program.

NASA is in the process of selecting an integrated exploration architecture and acquisition strategy for the SLS and MPCV that is consistent with direction in the NASA Authorization Act of 2010, and affordable and sustainable within likely available budgets over the long term. After extensive analysis, the Agency has determined that the Orion-based design reference vehicle is consistent with MPCV requirements, and will serve as the initial prototype for MPCV in the development phase. NASA will continue to execute this activity under the current Orion contract. NASA has also contracted for an independent cost analysis (ICA) to evaluate internal estimates as we continue architecture planning.

Additional information on NASA's progress in selecting an architecture and acquisition strategy will be provided to Congress in the Updated Report on MPCV and SLS in summer 2011. NASA will continue to perform due diligence to ensure final architecture and acquisition strategy choices will be the best value for the taxpayer with respect to cost, risk, schedule, performance, and impacts to critical NASA and industrial skills.

The initial operating plan for the MPCV program transfers \$1.6M to the CECR account for ongoing modifications to the Space Power Facility at Plum Brook Station (Glenn Research Center) and design activities at Kennedy Space Center.

Space Launch System (\$1,786.1M)

The initial operating plan provides funding for the Space Launch System (SLS), a new program newly authorized by the NASA Authorization Act of 2010 to develop a follow-on launch vehicle to the Space Shuttle that can access *cis*-lunar space and the regions of space beyond low Earth orbit. The SLS Program replaces the Ares I and Ares V projects and supporting elements from the former Constellation Program. SLS incorporates ground operations as a supporting element, including \$125M of content originally planned to be funded by 21st Century Space Launch Complex (21st CSLC) if SLS and 21st CSLC had been funded at the levels set in the Authorization Act.

NASA is in the process of selecting an integrated exploration architecture and acquisition strategy for the SLS that is consistent with the direction in the NASA Authorization Act of 2010, and affordable and sustainable within likely budgets over the long-term. SLS analysis includes three teams examining different launch vehicle architectures, a team assessing affordability, and evaluation of inputs from the thirteen heavy lift study contracts awarded in November 2010.

Additional information on NASA's progress in selecting an architecture and acquisition strategy will be provided to Congress in the Updated Report on MPCV and SLS in summer 2011. While NASA is performing due diligence to ensure final architecture and acquisition strategy choices will be the best value for the taxpayer with respect to cost, risk, schedule, performance, and impacts to critical NASA and industrial skills, work continues on elements of the former Constellation program likely to be applicable to SLS.

The initial operating plan for SLS supports ongoing A-3 Test Stand construction at the Stennis Space Center, as directed in the NASA Authorization Act of 2010. Transfer of \$7.5 M to the Construction and Environmental Compliance and Restoration (CECR) account has been provided for this effort.

Overall, the initial operating plans for Exploration, Space Operations, and CECR provide combined funding for the Kennedy Space Center ground operations and 21st CSLC totaling \$500.7M, distributed as follows: \$340.2M for SLS ground operations; \$142.8M for 21st CSLC; and \$17.7M for CECR projects related to 21st CSLC.

Other Notifications: (\$1.6M)

\$1.6M of SLS funding will be used to restore funding that was transferred out of SBIR/STTR in the July 21, 2010 operating plan update—the result of CAS one-year funding and severability determination of SBIR/ STTR contracts. SBIR and STTR programs achieve a net zero change (across FY 2010 and FY 2011) and will meet legally-mandated funding levels.

Commercial Spaceflight Development

Commercial Cargo (\$299.4M)

Consistent with the NASA Authorization Act of 2010, the initial operating plan provides \$299.4M for the Commercial Cargo Program to continue efforts to reduce risk and advance development of reliable means of launching cargo and supplies to the International Space Station (ISS). This includes \$85.2M transferred from Space Operations to ensure the negotiated milestone payments are fully funded. During FY 2011, NASA will continue to fund Space Exploration Technologies (SpaceX) and Orbital Sciences Corporation

milestones. Space X has already completed one flight demonstration with the Falcon 9 launch and recovery of their Dragon spacecraft in December of 2010, and another flight demonstration is planned for later this year. Orbital successfully tested two Aerojet AJ26 engines that will power the first stage of their Taurus II rocket, and integration of the engines with the rocket has begun, with an initial flight also scheduled for later this year.

Commercial Crew (\$307.4M)

As authorized, the initial operating plan provides \$307.4M for the Commercial Crew Program to advance development of commercial crew transportation services through the Commercial Crew Development (CCDev) effort. CCDev 2 awards have been announced, and work is already underway. NASA's commercial partners and the technical content of their awards are:

- Blue Origin – Space vehicle design development through Systems Requirements Review, ground and flight testing of their pusher escape system, and engine pump and thrust chamber testing.
- Boeing – CST-100 design maturation and launch vehicle integration with a focus on multiple high-risk items, including the launch abort engine, leading to a spacecraft Preliminary Design Review.
- Sierra Nevada Corporation – Mature the Dream Chaser crew transportation system focusing on multiple spacecraft high-risk items, leading to a spacecraft Preliminary Design Review.
- Space Exploration Technologies – Side-mount launch abort system engine design maturation and crew accommodation prototype development.

Exploration Research and Development

Human Research Program (\$154.7M)

The initial operating plan supports the funding level authorized for the Human Research Program, expanding research investigating and mitigating the highest risks to human health and performance to enable safe, reliable, and productive human space exploration. Major efforts supporting crew health and safety include space radiation health research, physiological countermeasures research and development to the effects of the space environment, behavioral health and performance research, biomedical technology development to support long-duration missions, and ISS biomedical research.

Exploration Technology Development (\$185.0M)

The initial operating plan provides for an Exploration Technology Development (ETD) program consistent with the NASA Authorization Act of 2010. Long-range technology development activities for FY 2011 include advanced in-space propulsion, cryogenic propellant storage, space power systems, robotics, atmospheric entry, descent, and landing systems, autonomous systems, lightweight structures, and in-situ resource utilization. Activities supporting Advanced Exploration Systems (AES) development include life support and habitation systems, advanced space suits and crew mobility systems. These efforts are strongly related to crew safety and operational readiness and coupled to future vehicle development consistent with the multi-destination, capabilities driven framework for human space exploration.

SPACE OPERATIONS

	FY10 Enacted		FY11 Budget		Authorization Act		FY 2011 Enacted		Effective Planning Level (June 2011)
Space Ops	6,146.8		4,887.8		5,508.5		5,497.5		5,320.9

P.L. 112-10 provided \$5,508.5M for Space Operations. The 0.2% rescission included in the Act was applied proportionately, resulting in funding of \$5,497.5M for Space Operations. Of note, this operating plan includes transfer to Exploration of \$139.8M, in order to align with direction provided in the NASA Authorization Act of 2010 with regard to the Commercial Cargo and Exploration Technology Development programs, and reprogramming of \$174.7M for Space Technology, consistent with the NASA Authorization Act of 2010.

FY 2011 effective planning level funding is \$433.1M above the FY 2011 budget request, \$187.6 M below the Authorization Act funding level, and \$825.9M below the FY 2010 enacted amount. Program plans and changes are described below. The changes are referenced from levels authorized by the NASA Authorization Act of 2010.

The initial operating plan provides \$5,320.9M for Space Operations, in alignment with the objectives and goals of the NASA Authorization Act of 2010. This includes support for the Space Shuttle, the International Space Station, and Space and Flight Support. The plan provides for modernization of the Kennedy Space Flight Center launch facilities and Florida range to support work that can be realistically accomplished during the remainder of FY 2011.

Space Shuttle

Space Shuttle Program (\$1,592.9M)

The initial operating plan provides \$1,592.9M in funding for the Space Shuttle Program, including support for flights through STS-135, the final mission of the program. Funding also supports flight and ground operations, flight hardware, and program integration. Upon completion of the STS-135 mission, the program will focus on transition and retirement activities.

The initial operating plan reflects \$9.6M in realignments of the program's funding to support the Space Shuttle manifest through completion of the final flight, including Space Communications Networks (\$5.0M) and the Launch Services Program (\$4.6M); and a \$4.1M transfer to Cross Agency Support to support numerous Agency-wide projects. Given these adjustments, the initial operating plan total is \$3.2M less than the authorized level, which is equal to the 0.2% rescission pursuant to section 1119 of P.L. 112-10.

NASA plans to use \$1.5M of residual funds from program year 2003 Space Shuttle discrete and minor revitalization projects for various other minor projects.

International Space Station

International Space Station (\$2,713.6M)

The initial operating plan provides \$2,713.6M in funding for the International Space Station (ISS) to operate and maintain this orbiting platform for basic and applied research, exploration technology development and demonstrations. Funding also provides crew and cargo transportation services to and from the ISS. In FY 2011, NASA will begin efforts to extend the ISS lifetime to 2020 or beyond, increase functionality, support full utilization, and engage an independent non-profit organization to further develop national usage and manage ISS National Laboratory research by U.S. organizations other than NASA.

The initial operating plan include transfers to Exploration of \$20.8M for ISS Research funding and \$33.8M for NASA Docking System support provided prior to enactment of P.L. 112-10. In addition, Space Operations would transfer \$6.0M to the Construction and Environmental Compliance and Restoration account to support construction of the High Pressure Industrial Water project at the Stennis Space Center. Given these adjustments, the initial operating plan total is \$5.6M less than the authorized level, which is equal to the 0.2% rescission pursuant to section 1119 of P.L. 112-10.

Space and Flight Support

The initial operating plan provides \$1,014.5M in funding for Space and Flight Support (SFS), including the 21st Century Space Launch Complex (21stCSLC), Space Communications and Navigation (SCaN), the Launch Services Program, the Rocket Propulsion Test program, Human Space Flight Operations, and Space Technology. Overall, the SFS initial operating plan level is \$104.5M lower than the authorized level, which includes adjustment reflecting \$26.6M in transfers to CECR for SFS construction-related activities, a \$9.6M reprogramming to support the Space Shuttle Program, and a \$85.2M transfer to Exploration to fully fund efforts within the Commercial Cargo Program at the authorized level, reducing risk and advancing development of reliable means of launching cargo and supplies to the ISS.

21st Century Space Launch Complex (21st CSLC) (\$142.8M)

The initial operating plan provides \$142.8M for the 21stCSLC, a new program authorized by the NASA Authorization Act of 2010 to modernize NASA launch facilities to support future space exploration for a wide range of users. The program's activities at Kennedy Space Center and the Florida range have been scaled to support work that can be accomplished during the remainder of FY 2011.

The initial operating plan 21stCSLC total reflects \$25.0M in transfers to the CECR account for Complex-related construction activities, including \$3.0M for design of projects that will be constructed with future fiscal year resources; \$14.7M for modifications to Launch Complex 39 Pad B; an additional \$0.9M for the \$14.0M Wallops Range Assets project to complete upgrades to the Hypergolic Fuel Facility at the Wallops Flight Facility (WFF); and \$6.4M for two minor revitalization projects – one at KSC and one at WFF.

The initial operating plans for the Exploration, Space Operations, and CECR provide combined funding for KSC ground operations and 21stCSLC totaling \$500.7M, distributed as follows: \$340.2M for SLS ground operations; \$142.8M for 21st CSLC; and \$17.7M for CECR projects related to 21st CSLC.

Space Communication and Navigation (SCaN) (\$456.7M)

The initial operating plan provides \$456.7M (essentially the level requested in the FY 2011 President's Budget) to continue providing space communications and navigation capabilities to all missions, as well as define and coordinate future communications requirements for NASA programs and other users. SCaN will also continue to advance cross-support opportunities with foreign space agencies by defining and adopting common standards and protocols; proceed with implementing infrastructure upgrades; and continue developing enabling capabilities and technologies. In particular, acquisition activities will continue for Tracking and Data Relay Satellites (TDRS) K and L to replenish the aging TDRS fleet.

The initial operating plan provides a transfer to CECR for construction of facilities, including \$1.6M to replace the 2400 test-bus switchgear at Canberra, Australia; a \$1.3M funding realignment from the Human Space Flight Operations (HSFO) Program for continuation of the Delay Tolerant Networking (DTN) Phase II engineering development in support of NASA's future missions; and a \$5.0M realignment from the Space Shuttle Program to Space Communication Networks to support Space Shuttle manifest through June 2011 for Merritt Island Launch Annex (MILA) and Ponce de Leon (PDL) ground station operations at the Kennedy Space Center.

Launch Services (\$83.3M)

The initial operating plan provides \$83.3M (essentially the level requested in the FY 2011 President's Budget) for Launch Services to provide and assure reliable and cost-effective access to space for missions critical to achieving Agency goals, including six NASA launches planned for FY 2011. The initial operating plan reflects realignment of \$4.6M of Space Shuttle program funding to support the manifest through April 2011 for the Alpha Magnetic Spectrometer payload testing and integration to accommodate the launch slip from 2nd to 3rd quarter FY 2011.

Rocket Propulsion Test (\$44.2M)

The initial operating plan provides \$44.2M for the Rocket Propulsion Test program, which is equivalent to the FY 2011 President's Budget request, less the 0.2% rescission pursuant to P.L. 112-10 section 1119.

Human Space Flight Operations (HSFO) (\$112.8M)

The initial operating plan provides \$112.8M for HSFO—essentially the amount requested in the FY 2011 President's Budget—reflects a \$1.3M realignment of funding to Space Communication and Navigation for continuation of the Disruption Tolerant Networking (DTN) Phase II engineering development in support of NASA's future missions, including the potential provision of DTN services on the ISS.

Space Technology (\$174.7M)

See Space Technology, "Space Operations funding for Space Technology" for details.

EDUCATION

	FY10 Enacted		FY11 Budget		Authorization Act		FY 2011 Enacted		Effective Planning Levels (June 2011)
Education	182.5		145.8		145.8		145.5		145.4

P.L. 112-10 included \$145.8 M for Education. The 0.2% rescission included in the Act was applied proportionately across all NASA accounts, resulting in funding of \$145.5 M for Education. Of note, this operating plan is consistent with the FY 2011 funding level set in the FY 2010 Authorization Act, and funds the Experimental Program to Stimulate Competitive Research (\$25.0M) and the Space Grant Program (\$45.6M), as directed. The Minority University Research and Education Program (MUREP) is funded very close to the FY 2011 President Budget Request at \$27.1M. To accommodate these funding levels, program realignments have been made and are described below.

FY 2011 effective planning level funding is \$0.4 M below the FY 2011 budget request and the Authorization Act funding levels, and \$37.1 M below the FY 2010 enacted amount.

Education

Higher Ed STEM Education (+\$29.4M)

NASA Programmatic Changes

- **-\$3.9 STEM Opportunities (Higher Education) –**
 - -\$1.2M, reduces Innovation in STEM Opportunities (Higher Education) project. Decreases by eight percent awards to minority institutions under the Educational Opportunities project and deferral of further investment in pilot initiatives for student launch activities.
 - -\$2.7M, adjustment for labor split with CAS and other administrative costs.
- **+\$17.8M Space Grant –** Increases number of awards made, pending review of meritorious proposals. Space Grant institutions will compete for additional funds. A new strategy for release of funds and competition mechanism will be determined in June 2011. Increase meets the \$45.5M level in the FY 2010 Authorization Act.
- **+\$15.6M EPSCoR –** Increases the number of awards made pending review of meritorious proposals. EPSCoR recipients are limited to eligible states and institutions per guidance in the solicitation. Number and value of additional awards is dependent on results of peer review. Increase meets the \$25.0M level in the FY 2010 Authorization Act.
- **-\$0.1M MUREP –** Decreases MUREP Research Cluster without significant impact to the overall programmatic content and outcome.

K-12 STEM Education (-\$28.7M)

NASA Programmatic Changes

- **-\$5.8M STEM Teacher Development –** Decreases the number of teachers involved in professional development; number of new electronic materials developed for distance education, electronic

professional development, and Web resources. Meets \$1.0M FY 2010 Authorization Act funding goal for Classroom of the Future (COTF), through the LEARN project.

- **-\$22.9M STEM Student Opportunities –**
 - -\$10.0M, reduces student opportunities and limits new content development. Summer of Innovation is maintained at \$10M.
 - -\$12.9M, decreases by fifty-four percent the number of students (target reduced from 600,000 to 300,000) and educators (target reduced from 75,000 to 30,000) reached. Suspends planned K-12 grants, cooperative agreements, and solicitations for partners to collaborate on national projects. Reduces contractor and support functions that deliver services (Web feature development, fulfillment of materials/resources, professional development at schools, etc.).

Informal STEM Education (-\$1.1M)

NASA Programmatic Changes

- **-\$1.1M NASA Informal Education Opportunities –** Eliminates grant funds available for science museums, planetariums, NASA visitor centers, Challenger Centers, and school districts. The remaining funding will be used to support the NASA Museum Alliance, a free-of-charge nationwide on-line community of science centers, museums, and planetariums.

CROSS-AGENCY SUPPORT

	FY10 Enacted		FY11 Budget		Authorization Act		FY 2011 Enacted		Effective Planning Level (June 2011)
CAS	3,194.0		3,111.3		3,111.4		3,105.2		3,130.7

Cross-Agency Support (CAS) provides critical mission support capabilities necessary to ensure the efficient and effective operation and administration of the Agency that cannot be directly aligned to specific program or project requirements. The goal of this initial operating plan is to provide funding for as many of the Mission Support/CAS authorized activities as outlined in the NASA 2010 Authorization Act.

The funding adjustments included in the initial operating plan from the FY 2010 enacted levels will sustain CAS to support NASA critical mission support capabilities. Additionally, adjustments made for administrative labor and Center institutional and programmatic capabilities are to align funding for Cross-Agency Support activities consistent with the FY 2010 enacted levels.

The overall Cross-Agency Support budget reflects a net increase of \$19M from the FY 2011 requested amount. The initial operating plan includes \$174.7 million for the Innovative Partnerships Program (IPP), which has been funded in CAS, but was included as part of the Space Technology FY 2011 budget request. The Cross Agency Support operating plan budget also includes funds for program administrative labor which was included as part of the program funding in the FY 2011 budget request. The CAS operating plan budget also includes funds for program administrative labor. To establish CAS funding consistent with the FY 2010 enacted level for like content, \$25.5M was transferred from program and Construction and Environmental compliance funds and reductions were made to CAS as outlined below. The changes below are referenced from the 2010 Authorization Act and the FY 2011 President’s Request.

Center Management and Operations

NASA’s Center Management and Operations (CMO) budget request funds the ongoing management, operations, and maintenance of nine NASA Centers, including four major component facilities, in ten separate states. As outlined in the FY 2010 Authorization Act, Section 1102, NASA is examining its structure, organization, and institutional assets to identify a strategy to evolve toward the most efficient retention, sizing, and distribution of facilities, laboratories, test capabilities, and other infrastructure consistent with NASA’s missions and mandates. In addition, NASA is examining its workforce, Centers, and related facilities in an effort to improve efficiency and productivity, while maintaining core Federal competencies and keeping appropriately governmental functions internal to NASA, as outlined in Section 1103 of the Authorization Act.

NASA Programmatic Changes (-\$81.2M)

- **-\$65.3M, Center Institutional Capabilities** – Reduces on-site contractors (~700) supporting operational activities at all Centers including: facility maintenance, IT support, financial management, security, and institutional safety. Further reductions have been ameliorated through transfers from other accounts to maintain the FY 2010 funding level for CAS.

- **-\$15.9M, Center Programmatic Capabilities** – Reduces science, engineering, technical, and laboratory support at the Centers. Defers replacement of obsolete laboratory equipment.

Other Notification (\$94.2M)

- **Center Institutional Capabilities** – NASA’s FY 2010 operating plan reflected the direction of the Conference Report accompanying the FY 2010 Consolidated Appropriations Act (P.L. 111-117). Five months into the year, NASA re-assigned to Center Management and Operations the budget for all civil servants originally assigned to projects, but not classified as scientists, engineers, mathematicians, medical, or quality assurance. As a result, in FY 2010, Mission Directorates provided five months (\$64.2M) and Center Management and Operations provided seven months (\$94.0M) of funding to cover the Center administrative labor. As FY 2011 is funded through a full-year Continuing Resolution, the Agency will fund the Center administrative labor in the same proportions (between Mission Directorates and Center Management and Operations) as was done in FY 2010.

Agency Management and Operations

Agency Management and Operations (AMO) provides management and oversight of Agency missions, programs, functions and performance of NASA-wide mission support activities. Funding in the initial operating plan will be used to accomplish the activities included in the NASA Authorization Act of 2010, Section 1202 to develop a coordinated approach towards the prevention, negation, and removal of orbital debris; and Section 1206, to plan, develop, and implement a program, in coordination with other Federal agencies, to detect, track, catalog, and reduce the number of counterfeit electronic parts in the NASA supply chain. Funds in the initial operating plan will support: \$40.0M to fund independent verification and validation (IVV); implementing an information security system to monitor risk for all information infrastructure and mission-related networks including contractor networks; and an information security awareness and education program for all operators and users of NASA information infrastructure, with the goal of reduction unauthorized remote, proximity, and insider use or access. (Authorization Act Section 1207(a,b) respectively).

Agency Management

NASA Programmatic Changes (-\$30.5M)

- **-\$30.5M, Agency Management** –
 - -\$2.5M, eliminates funding for lower-priority energy savings projects.
 - -\$3.6M, eliminate metering and utility information system upgrade.
 - -\$5.4M, reduces independent technical and programmatic assessment of the Agency’s programs and projects.
 - -\$4.3M, reduces Agency-wide training programs.
 - -\$3.9M, reduces funding for labor by delayed hiring to backfill vacancies. Restricted hiring on all civil servant recruitment actions as of January 2011.
 - -\$3.8M, reduces HQ IT contractor support, converting work efforts to maintenance only mode. Eliminated support for customer requested IT enhancements.
 - -\$2.3M, reduces JPL Director’s Discretionary Research fund by fifty percent.
 - -\$2.0M, defers building furniture refurbishments.
 - -\$0.5M, reduces HQ graphics design staff by twenty percent and deferred graphics equipment purchases.

- -\$0.5M, reduces travel.
- -\$0.2M, stands down backup HQ emergency operations at Glenn Research Center (GRC). GRC serves as a back-up to Langley Research Center, the primary alternate Headquarters operating facility for emergency operations.
- -\$1.5M, reduces other Agency-wide and Headquarters operations activities.

Safety and Mission Success

NASA Programmatic Changes (-\$10.4M)

- **-\$4.4M, Chief Engineer** – Eliminates funding for Agency program management and engineering initiatives.
- **-\$0.8M, Safety and Mission Assurance** – Reduces funding for independent assessment of specific launch anomalies at the human space flight Centers.
- **-\$5.1M, Independent Verification and Validation** – Same as FY 2010 enacted level. Reduces funding for lower priority projects to develop and test software and systems.
- **-\$0.1M, Chief Health and Medical Officer** – Delays the introduction of the Electronic Health Record System by three months (at select Centers).

Agency IT Services

NASA Programmatic Changes (-\$32.9M)

- **-\$1.1M, IT Management** – Eliminates EA Domain Architectures funding for mission-adopted architecture domain standards.
- **-\$3.8M, Applications** –
 - \$1.9M, eliminates the upgrade/replacement of the legacy Nortel routers and other devices resident in the multicast portion of the NISN Closed IONet (mission networks), currently being replanned/rescheduled.
 - \$1.9M, eliminates Strategic Institutional Investments (SII) funding for Center cost-sharing initiatives planned for realignment to AITS budget.
- **-\$27.9M, Infrastructure** –
 - \$18.6M, eliminates funding for the common IT model in FY 2011, previously approved for reallocation within the Agency for Agency Consolidated End-User Services (ACES). Implementation will be deferred to FY 2012.
 - \$9.3M, eliminates SII funding planned for realignment to AITS budget.

Strategic Capabilities Assets Program

NASA Programmatic Changes (-\$0.4M)

- **+\$0.5M, Simulators** – Provides emergency air bags, air monitors, and human and robotic simulation for faster real-time simulations.
- **-\$1.1M, Thermal Vacuum Chambers** – Reduces funding for vacuum chamber maintenance. Some James Webb Space Telescope (JWST) funding will be used for part of the chamber's maintenance and enhancement costs.
- **+\$0.2M, Arc Jets** – Enables safety upgrades to remote controls for test conductors.

Innovative Partnerships Program

See Space Technology, “Cross Agency Support funding for Space Technology” for details.

CONSTRUCTION and ENVIRONMENTAL COMPLIANCE AND RESTORATION (CECR)

	FY10 Enacted		FY11 Budget		Authorization Act		FY 2011 Enacted		Effective Planning Levels (June 2011)
CECR	448.3		397.3		394.3		393.5		420.9

Construction and Environmental Compliance and Restoration (CECR) provides for design and execution of programmatic and non-programmatic discrete and minor revitalization construction of facilities projects, facility demolition projects, and environmental compliance and restoration activities.

Construction of Facilities (CoF)

Exploration CoF

NASA Programmatic Changes (+\$9.1M)

- **+\$7.5M, for Construction of the A-3 Test Stand at Stennis Space Center** – Allows for work underway prior to FY 2011 to continue through the remainder of the fiscal year. No funds were identified in the CECR account for Exploration CoF in FY 2011. There is no increase to the total cost of the project.
- **+\$1.2M for Modifications to the Space Power Facility at Plum Brook Station in Ohio (GRC)** – Allows completion of work underway prior to FY 2011. No funds were identified in the CECR account for Exploration CoF in FY 2011. There is no increase to the total cost of the project.
- **+\$0.4M for Facility Planning and Design** – Allows design of modifications to the Canister Rotation Facility (CRF) at KSC. No funds were identified in the CECR account for Exploration CoF in FY 2011.

Space Operations CoF

NASA Programmatic Changes (+\$32.6M)

- **+\$25.0M, for Construction in Support of the 21st Century Launch Complex Program** – Rehabilitates and upgrades facilities infrastructure in order to modernize launch facilities and improve launch operations.
 - **+\$3.0M**, for design of 21st Century Launch Complex CoF projects that will be constructed with future fiscal years resources.
 - **+\$14.7M**, Modify Launch Complex 39B at KSC, Phase 2; continues the modification and upgrade of the structures, features and systems that make up and service the launch complex to enable safe and affordable launch capabilities in support of future missions. Although Phase 1 was initiated under the Constellation Program all work included in Phase 2 is fully extensible to multiple, potential, future launch vehicles. Future phases will be required to complete work on Pad B.
 - **+\$6.4M**, provides construction support for 21st Century Launch Complex Program including one minor revitalization project at KSC and one minor revitalization project at WFF.

- +\$0.9M, provides upgrades to Wallops Range Assets, including launch pad and range infrastructure (improvements to roads, utility systems, and facilities for payload processing, fuel, and integration). Additional funding is needed to complete upgrades to the Hypergolic Fuel Facility at WFF to support Cargo Resupply. This increases the total project funding to from \$14M (FY 2009) to \$14.9M.
- **+\$6.0M, Restore High Pressure Industrial Water (HPIW) Piping System at SSC** – Enables procurement of long-lead time items and start of work on high priority test stand HPIW systems. (A specific long-lead example would include the large diameter valves needed for the distribution system.) Recent failures have increased the urgency for updating test stand piping. Efforts are ready to begin upon allocation of resources and can be obligated by the end of FY 2011.
- **+\$1.6M, Deep Space Network Minor Revitalization to Replace 2400V Test-Bus Switchgear at Canberra, Australia** – Supports upgrades identified by recent failures and upcoming requirements for additional support for spacecraft mission loading. This project is part of the Deep Space Network plan to replace aging switchgear, eliminate single points of failure and add redundancy to the power distribution systems at the Canberra Complex.

Institutional CoF

NASA Programmatic Changes (-\$15.7M)

- **-\$10.0M, Construct Shared Services Building, Phase 1 at LaRC** – Transfer from Institutional CoF to Cross Agency Support for Center operations and maintenance of facilities. This is a \$50.4M project; deferring \$10.0 M in FY 2011 leaves \$20.4M in the first phase, with the balance of project being \$30M in FY 2012.
- **-\$4.4M, Deferred Demolition Projects at GRC and MSFC** – Transfer from Institutional CoF to Cross Agency Support for Center operations and maintenance of facilities. Reduction defers GRC Demolish Plumbrook Station Reactor Facility project for \$3.42M, will be deferred. Various demolition projects at MSFC, totaling \$1.0M, will be deferred.
- **-\$1.3M, Minor Revitalization Project at ARC** – Reduces funding for installing automatic sprinkler and fire suppression systems in various buildings at ARC project. This \$6.43M project is reduced by \$1.3M, leaving a \$5.13M project.

Environmental Compliance and Restoration

Environmental Compliance and Restoration

NASA Programmatic Changes (-\$2.5M)

- **-\$2.5M, Phased Deferral of Cleanup Projects** –
 - -\$1.0M, JPL
 - -\$1.0M, Santa Susana Field Laboratory
 - -\$0.5M, program contingency

Inspector General

	FY10 Enacted		FY11 Budget		Authorization Act		FY 2011 Enacted		Effective Planning Levels (June 2011)
OIG	36.4		37.0		37.0		36.3		36.3

The FY 2011 enacted funding level for the Inspector General is set at \$36.4M. This funding is reduced by the proportional application of the 0.02% rescission resulting in a \$36.3M initial operating plan request.