



FY 2025 President's Budget Request

SPACE OPERATIONS MISSION DIRECTORATE (SOMD)

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SOMD OVERARCHING STRATEGY

- **Maintains a safe and sustained human presence in LEO**
- **Provides *mission-critical* support to NASA and non-NASA customer missions**
 - Continues providing space communication and navigation services to missions and developing capabilities to ensure lunar communication and navigation support for Artemis system needs
 - Continues providing launch and test services
 - Continues providing training and readiness to support crew health and safety and mission success
 - Continues researching and developing capabilities to safeguard our astronaut explorers
- **Continues research to advance discoveries that benefit life on Earth and support Exploration**
 - Continues support of ISS operations and research
- **Supports development of an American-led space infrastructure and commercial economy in LEO**
- **Implements ISS End of Life activities**

FY 2025 PBR PROGRAM FINANCIAL PLAN (PFP)

The budget includes \$4.4 billion for Space Operations to enable sustained human exploration missions, scientific discovery, advanced operations in our solar system, and inspiration of the next generation of STEM leaders

<i>Budget Authority (\$ in millions)</i>	FY 2024 CR ¹	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Space Operations	4,250.0	4,389.7	4,497.6	4,587.6	4,679.4	4,773.0
International Space Station	1,286.2	1,269.6	1,267.8	1,262.8	1,259.4	1,259.4
Commercial LEO Development	224.3	169.6	302.3	435.2	465.2	629.3
Space Transportation	1,759.6	1,862.1	1,876.2	1,840.9	1,895.7	1,804.1
Crew and Cargo Program	1,642.0	1,761.5	1,773.4	1,735.8	1,788.3	1,694.3
Commercial Crew Program	117.5	100.6	102.8	105.1	107.4	109.8
Space and Flight Support²	979.9	1,088.4	1,051.3	1,048.7	1,059.0	1,080.2
Space Communications and Navigation	528.5	627.7	585.4	582.6	591.5	605.5
Communication Services Program	51.7	59.4	59.4	59.4	59.4	59.4
Human Research Program	151.2	143.4	155.5	155.5	156.5	159.5
Human Space Flight Operations	101.5	105.0	105.8	105.8	105.9	108.0
Launch Services	93.9	104.3	96.6	96.9	97.2	99.1
Rocket Propulsion Test	48.2	48.6	48.6	48.6	48.6	48.6
Construction of Facilities	-	19.7	-	-	-	-
Space Operations CoF	-	19.7	-	-	-	-

1/ - FY 2024 reflects annualized funding amounts based on funding specified in Public Law 117-328, Consolidated Appropriations Act, 2023

2/ - FY 2023 included \$5M allocated to 21st Century, FY 2024 allocation to 21st Century will change based on final appropriations

Low-Earth Orbit Transition: ISS to Commercial Destinations

FY 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032

International Space Station (ISS) Operations

U.S. Deorbit Vehicle Development

Delivery

Deorbit

Commercial LEO Destinations (CLDs) Development

CLD Operations

Phase 1: Early Design Maturation

Phase 2: Certification & Services

Continue valuable science and research on ISS through end of life

Develop U.S. Deorbit Vehicle to safely deorbit ISS at end of useful life

Balancing 3 Priorities

Partner with U.S. commercial space industry to develop and deploy commercial destinations to ensure American access to LEO



INTERNATIONAL SPACE STATION

International Space Station (\$M)	FY 2024 CR ¹	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
FY 2025 PBR	\$1,286.2	\$1,269.6	\$1,267.8	\$1,262.8	\$1,259.4	\$1,259.4

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- **The International Space Station Program brings together international flight crews, multiple launch vehicles, globally distributed launch and flight operations, training, engineering, and development facilities, communications networks, and the international scientific research community**
- **Fosters commercial space industry in collaboration with Commercial LEO Development, Commercial Crew, and Crew Cargo**
- **Budget provides for**
 - **Continuous ISS operations until it is retired in 2030**
 - **Enabling a transition to commercial LEO destinations as soon as they are available**
 - **Support for research and technology demonstrations, including:**
 - **Long-duration human deep space exploration research and demonstrations**
 - **Basic and Earth science research by NASA Science Mission Directorate, including projects to advance stem cell biology, optical fiber production, and crystal growth**
 - **ISS National Laboratory research by expanding the breadth of researchers and companies using ISS and enabling new public-private partnerships**
 - **Renewed focus on cancer research that supports the President's Cancer Moonshot**

CREW AND CARGO

Crew and Cargo Program (\$M)	FY 2024 CR ¹	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
FY 2025 PBR	\$1,642.0	\$1,761.5	\$1,773.4	\$1,735.8	\$1,788.3	\$1,694.3

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- **The Crew and Cargo Program manages transportation services provided by both international partners and domestic**
- **Budget provides for commercial crew rotations and cargo resupply missions to the ISS, supporting ISS utilization and contributing to the foundation of a more affordable and sustainable future for American human spaceflight**
- **Budget includes funding to partner with industry to develop a U.S. deorbit capability for ISS**
- **Budget gradually reduces research and other activities on board the ISS to provide the funding necessary for the de-orbit vehicle and commercial space stations**

COMMERCIAL CREW

Commercial Crew Program (\$M)	FY 2024 CR ¹	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
FY 2025 PBR	\$117.5	\$100.6	\$102.8	\$105.1	\$107.4	\$109.8

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- **NASA's Commercial Crew Program partners with American private industry to deliver astronauts to and from the International Space Station**
- **Budget allows the program to continue NASA's collaboration with the U.S. commercial space industry to develop, certify, and operate safe, reliable, and affordable crew transportation systems capable of carrying humans to and from the ISS and other destinations in LEO**
- **Budget primarily supports the NASA workforce that provides technical insight to industry partners and certifies them to carry astronauts to and from the ISS on NASA missions**

COMMERCIAL LEO DEVELOPMENT

Commercial LEO Development	FY 2024 CR ¹	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
FY 2025 PBR	\$224.3	\$169.6	\$302.3	\$435.2	\$465.2	\$629.3

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- **Commercial LEO Development facilitates the development of safe, reliable, and cost effective privately-owned and operated commercial LEO destinations from which NASA, along with other customers, can purchase services**
- **Focus on maintaining a sustained U.S. human presence in LEO after ISS retirement in 2030 and on providing a microgravity platform to meet NASA research and technology needs**
- **Budget allows program to**
 - **Partner with U.S. space companies for design maturation and testing of Commercial LEO Destinations**
 - **Stimulates growth of commercial activities in LEO and competitiveness of the US commercial space industry**

SPACE COMMUNICATIONS AND NAVIGATION

Space Communications and Navigation (\$M)	FY 2024 CR ¹	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
FY 2025 PBR	\$528.5	\$627.7	\$585.4	\$582.6	\$591.5	\$605.5

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- **SCaN provides communication support to NASA and Non-NASA missions (100+) while facilitating develop of technologies for more robust capabilities**
- **Budget allows SCaN to:**
 - Ensure NASA networks provide communications and navigation services required by NASA human and robotic missions, including lunar, while infusing new technologies to improve efficiency and increase capacity
 - Continue to provide communication services to NASA users and missions utilizing NSN and DSN
 - Continue to pursue commercial services in near-Earth space
 - Continue to invest in leading-edge communications technologies required to enable, improve, and mature available spacecraft communication and navigation technologies for both ground and space-based use



COMMUNICATIONS SERVICES PROGRAM

Communications Services Program (\$M)	FY 2024 CR ¹	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
FY 2025 PBR	\$51.7	\$59.4	\$59.4	\$59.4	\$59.4	\$59.4

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- **Communications Services Program (CSP) demonstrates feasibility of commercially provided satellite communications (SATCOM) services to NASA missions to support planned retirement of TDRS in early 2030s**
- **Budget allows CSP to**
 - Validate commercial SATCOM capabilities through six end-to-end service demonstrations
 - Monitor partner progress through demonstration period
 - Collaborate with Near Space Network (NSN) for onboarding and certification activities

HUMAN SPACE FLIGHT OPERATIONS

Human Space Flight Operations (\$M)	FY 2024 CR ¹	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
FY 2025 PBR	\$101.5	\$105.0	\$105.8	\$105.8	\$105.9	\$108.0

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- **HSFO provides the training and readiness to ensure crew health and safety, and mission success for all NASA human space flight endeavors**
- **Budget allows HSFO to**
 - Maintain Astronaut Occupational Health Program that includes clinical certification for active NASA astronauts, and an astronaut occupational surveillance program that identifies and mitigates crew health concerns resulting from both preparation for flight and exposure to space environments
 - Select, train, and fly astronaut corps, provides aircraft operations, and uses Vehicle Integration Test Office in support of launch, landing, recovery, and rescue, as well as vehicle hazard safety support for all programs to ensure crew and operations safety
 - Collect, through Scientifically Calibrated In-Flight Imagery (SCIFLI), real-time visual, infrared, and spectral data on vehicles while they are in-flight to improve effectiveness and safety of commercial and NASA missions (Artemis, CRS, CCP, etc.)
- **Requirements continue to be driven by ongoing human space flight operations and development**
 - ISS operations through 2030 and transition to Commercial LEO Destinations
 - Human exploration vision beyond LEO

LAUNCH SERVICES PROGRAM

Launch Services (\$M)	FY 2024 CR ¹	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
FY 2025 PBR	\$93.9	\$104.3	\$96.6	\$96.9	\$97.2	\$99.1

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- **LSP is responsible for procurement of launch services for NASA uncrewed missions and oversight of launch integration and launch preparation activity**
- **Budget allows LSP to**
 - Acquire launch services, provides expertise, and active launch mission management for over 70 NASA and civil sector science, technology demonstration, and exploration payloads in various stages of development
 - Enable CubeSat and Rideshare Initiatives
 - Certify new commercial rockets to launch high-value civil-sector payloads
 - Mitigate launch site risks including working with other government agencies to conduct tests and analysis to further understand the hazards risk associated with liquid oxygen and methane
- **Budget includes funding for Alphamagnetic Spectrometer Operations on ISS**

ROCKET PROPULSION TEST

Rocket Propulsion Test (\$M)	FY 2024 CR ¹	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
FY 2025 PBR	\$48.2	\$48.6	\$48.6	\$48.6	\$48.6	\$48.6

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- **RPT manages a wide range of facilities capable of ground testing rocket engines and components to meet U.S. rocket testing requirements**
- **Budget allows RPT to**
 - Maintain high-quality test facilities and skills critical to NASA Exploration
 - Provide state-of-the-art testing for hypergolic and other fueled engines for Artemis, Commercial Crew, and other customers with over 500 hot fire tests per year
 - Modernize test architecture to increase commonalties, efficiencies and reduce operation cost
 - Transform Stennis Space Center into a multi-user Rocket Engine Test complex

HUMAN RESEARCH PROGRAM

Human Research Program (\$M)	FY 2024 CR ¹	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
FY 2025 PBR	\$151.2	\$143.4	\$155.5	\$155.5	\$156.5	\$159.5

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- **HRP uses research to develop methods to protect the health and performance of astronauts in space**
- **Budget allows HRP to**
 - Continue research to reduce human health risks for long-duration ISS and future Exploration missions and focuses program strategies to include Artemis and operational collaborations
 - Addresses high priority Artemis risks
 - Utilizes Artemis to reduce Mars Risks
 - Maintain ongoing work that addresses Agency's goals for human exploration



SUMMARY

- The budget includes \$4.4 billion for Space Operations to enable sustained human exploration missions, scientific discovery, advanced operations in our solar system, and inspiration of the next generation of STEM leaders
 - Stimulating growth of the low-Earth orbit economy by developing commercial space stations
 - Providing for critical operations, infrastructure, communication, launch, and testing services indispensable to the Nation's access to and use of space
 - Supporting research and technology development, including research to enable human health and performance in future human exploration missions

For More Information on Station Benefits for Humanity, see [International Space Station Benefits for Humanity \(nasa.gov\)](https://www.nasa.gov/international-space-station-benefits-for-humanity)
For More Information on SOMD FY 2025 Budget, see [NASA FY 2025 Budget Request \(nasa.gov\)](https://www.nasa.gov/nasa-fy-2025-budget-request)