

National Aeronautics and Space Administration



FY 2023
Budget Request

NASA

www.nasa.gov

FY23 Request Invests in U.S. Innovation and Leadership



- Strengthens NASA's position as a global leader in exploration, science, technology innovation, and discovery
- Advances the Artemis Program to land the first woman and person of color on the Moon, and establish long-term exploration in preparation for human missions to Mars



- Emphasizes NASA's critical role in addressing climate change, as a leading provider of Earth observations open data and models that inform scientists, policy makers, and affected communities
- Furthers scientific discovery of Earth, the Sun and Solar System, and beyond

FY23 Request Invests in U.S. Innovation and Leadership



- Continues U.S. leadership in aeronautics with cutting-edge technologies to reduce aviation emissions and increase the speed and safety of air travel
 - Drives technology development with commercial partners that increases U.S. space capabilities, stimulates the U.S. economy, and creates jobs
- Engages diverse STEM learners in NASA's mission to create our Nation's next generation of scientists, engineers, and explorers
- Promotes diversity, equity, inclusion, and accessibility

NASA's 2022 Strategic Plan



Vision	Exploring the secrets of the universe for the benefit of all.
Mission	NASA explores the unknown in air and space, innovates for the benefit of humanity, and inspires the world through discovery.



Theme	Discover	Explore	Innovate	Advance
Strategic Goals	1. Expand human knowledge through new scientific discoveries	2. Extend human presence to the Moon and on towards Mars for sustainable long-term exploration, development, and utilization	3. Catalyze economic growth and drive innovation to address national challenges	4. Enhance capabilities and operations to catalyze current and future mission success

This framework strongly supports NASA's priorities of maintaining America's global standing, driving economic growth, and addressing climate change

Artemis: Landing Humans On the Moon



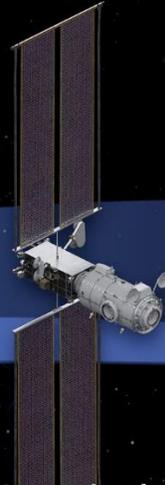
Lunar Reconnaissance Orbiter: Continued surface and landing site investigation



Artemis I: First human spacecraft to the Moon in the 21st century



Artemis II: First humans to orbit the Moon and rendezvous in deep space in the 21st century



Gateway begins science operations with launch of Power and Propulsion Element and Habitation and Logistics Outpost



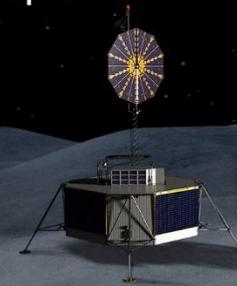
Artemis III-V: Deep space crew missions; cislunar buildup and initial crew demonstration landing with Human Landing System



Early South Pole Robotic Landings
Science and technology payloads delivered by Commercial Lunar Payload Services providers



Volatiles Investigating Polar Exploration Rover
First mobility-enhanced lunar volatiles survey



Uncrewed HLS Demonstration



Humans on the Moon - 21st Century
First crew expedition to the lunar surface



LUNAR SOUTH POLE TARGET SITE

Sustainable Lunar Architecture

First lunar surface expedition through Gateway; external robotic system added to Gateway; Lunar Terrain Vehicle delivered to the surface

Sustainable operations with crew landing services; Gateway enhancements with refueling capability, additional communications, and viewing capabilities

Pressurized rover delivered for greater exploration range on the surface; Gateway enables longer missions

Surface habitat delivered, allowing up to four crew on the surface for longer periods of time leveraging extracted resources. Mars mission simulations continue with orbital and surface assets



Lunar Terrain Vehicle (LTV)

Crew Landing Services

Pressurized Rover

Fission Surface Power

ISRU Pilot Plant

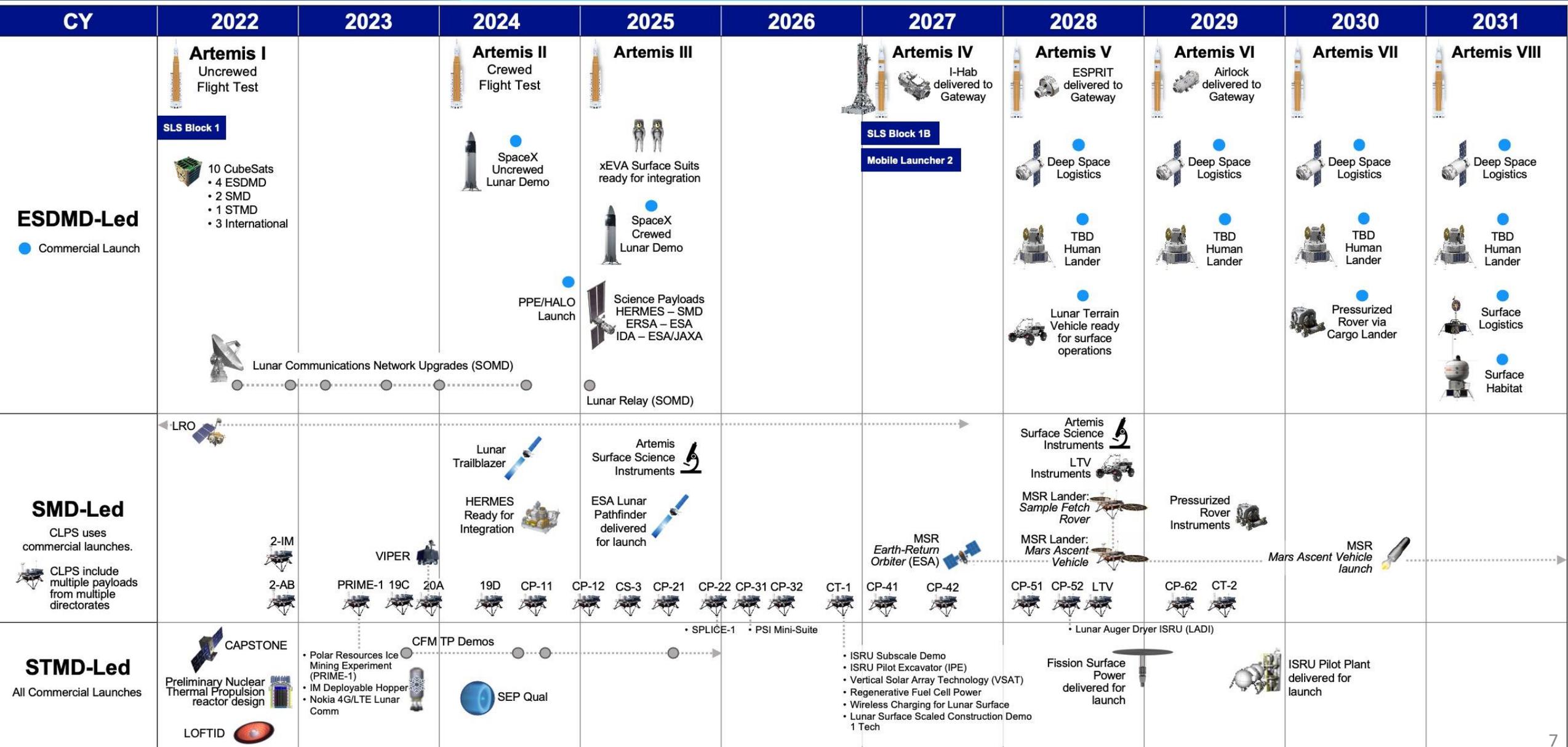
Surface Habitat

CAPABILITIES TO ENABLE SCIENCE-FOCUSED SURFACE EXPLORATION AND MAXIMIZE DEEP SPACE DISCOVERIES

MULTIPLE SCIENCE AND CARGO PAYLOADS | U.S. GOVERNMENT, INDUSTRY, AND INTERNATIONAL PARTNERSHIP OPPORTUNITIES | TECHNOLOGY AND OPERATIONS DEMONSTRATIONS FOR MARS



Moon to Mars Planning Manifest



Imagery is meant to represent the calendar year in which the launch occurs. Does not include impact from FY22 appropriations.

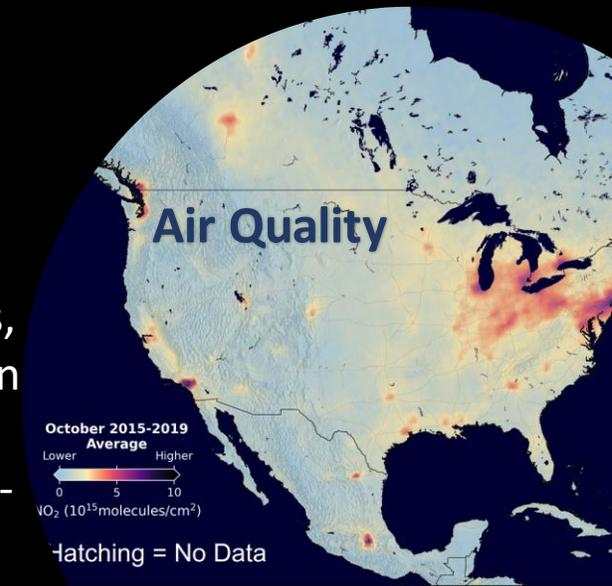
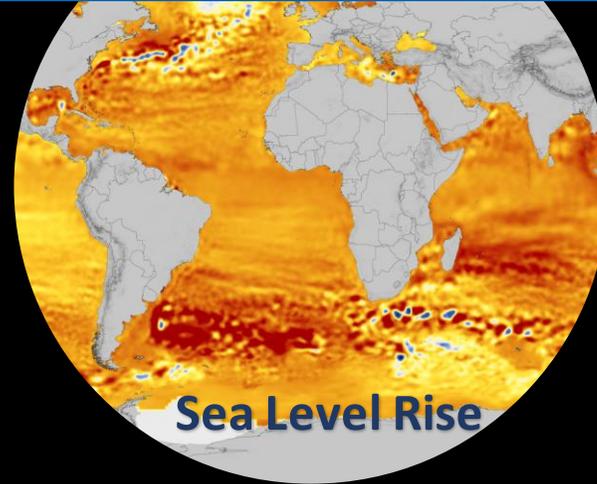
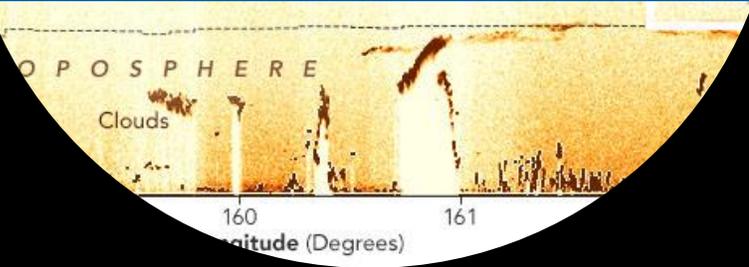
Volcanoes

Volcanic plume

CALIPSO

Greenhouse Gases

Addressing the Climate Crisis at Home and Abroad



- NASA is a global leader in providing trusted climate data
- Initiate the Earth System Observatory and launch other Earth-observing satellites to improve the world's understanding of climate change
- Through NASA's Earth Information Center, in partnership with other agencies, make climate-relevant data more accessible and usable for scientists, decision makers and the public
- Lead green aerospace, including reducing aviation's climate impact with next-generation aircraft



NASA Mission Planning Manifest: FY 2022 – FY 2027



- NASA Mission on US Commercial Launch Vehicle
- Reimbursable Mission for NOAA
- Joint NASA-Int'l Partner Mission
- Int'l Mission with NASA contribution
- Joint NASA/Industry Collaboration
- Artemis Mission
- Commercial Crew Mission to ISS
- Commercial Resupply Services Mission to ISS
- Future Commercial Resupply Mission
- Aeronautics Mission
- Climate and Green Aeronautics Missions
- Moon-Mars Missions

U/R Under Review
 * Cubesat Missions
 *** Instrument only Δ Readiness Date
 **** NASA does not directly manage/control CLPS missions, the HLS Uncrewed Demo mission or the AX missions. LRDs reflected are current estimates
 + Future CRS-2 unknown, will be updated after award of CRS-2 when cargo delivery capabilities are known
 ✓ Mission successfully launched

With this budget, NASA will support: 19 crewed, 47 Moon-to-Mars, 55 Science, 19 Climate & Green Aeronautics, 13 ISS Crew Rotation, 27 ISS Resupply, & 20 Technology Missions, Launches, Demonstrations, Instruments or Flights among other operations over the next 6 years

FY2022 Notional
 Dates reflect Agency Baseline Commitments or updated Agency schedules and may include schedule margin beyond any manifested launch dates



FY 2023 Budget Request: Agency

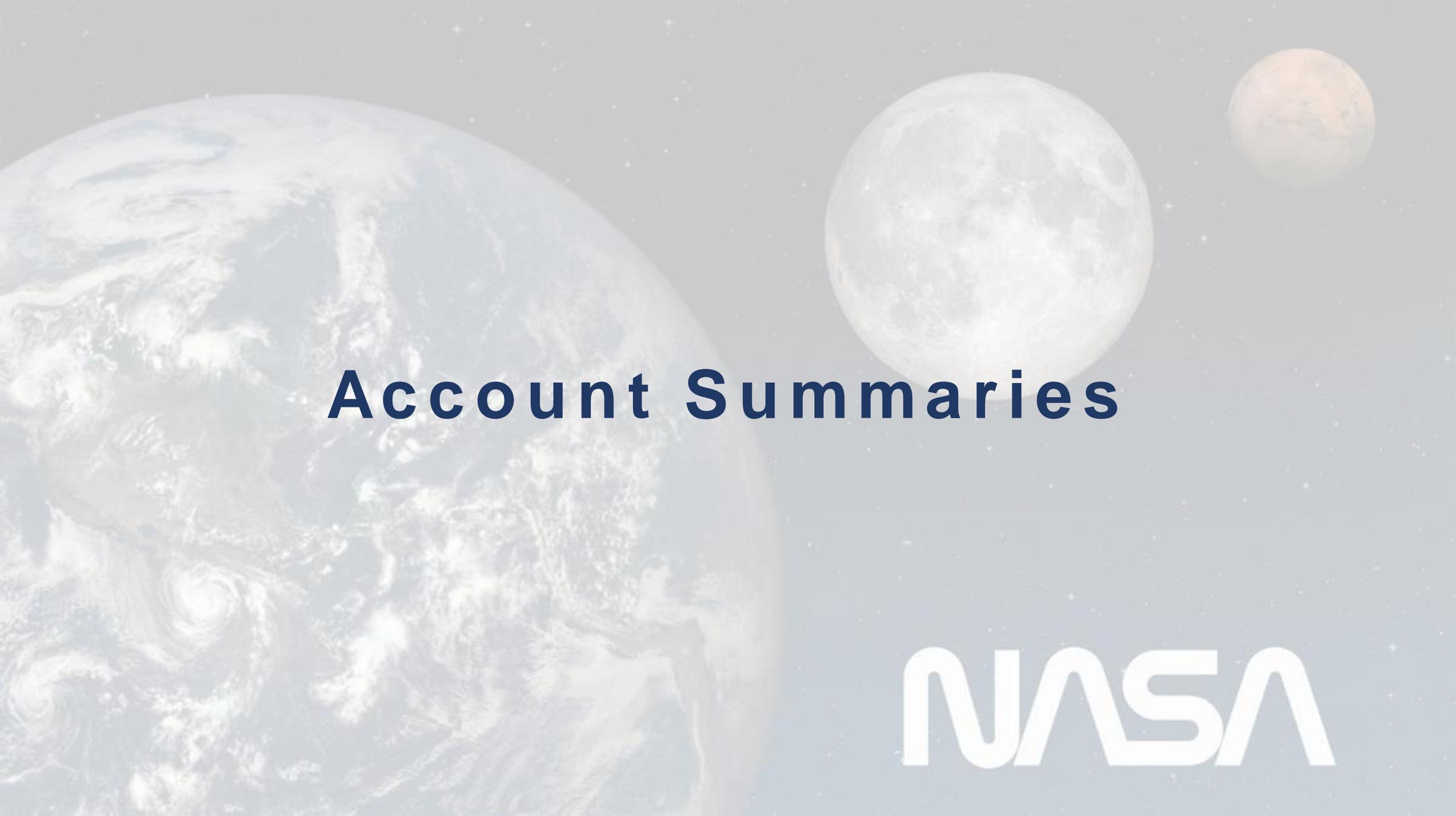
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Deep Space Exploration Systems	6,396.5	6,750.2	6,791.7	7,478.3	6,798.1	6,813.4	6,912.3	7,040.8
Common Exploration Systems Development	4,538.7	4,483.7	-	4,668.4^{4/}	3,613.8	3,111.9	2,845.6	2,376.8
Artemis Campaign Development	1,672.1	2,062.0	-	2,600.3	2,973.8	3,489.3	3,853.9	4,450.7
Human Exp Requirements & Architecture	9.5	9.5	-	48.3	48.9	49.5	50.0	50.5
Mars Campaign Development	176.2	195.0	-	161.3	161.6	162.7	162.7	162.8
Space Operations	4,101.9	4,147.6	4,041.3	4,266.3	5,181.4	5,405.6	5,551.1	5,671.8
International Space Station	1,321.6	1,327.6	-	1,307.5	1,289.9	1,302.1	1,302.5	1,302.9
Space Transportation	1,871.9	1,770.2	-	1,759.5	1,798.8	1,848.7	1,889.2	1,914.8
Space and Flight Support	890.3	947.2	-	975.0	1,031.7	1,053.1	1,020.1	948.6
Commercial LEO Development	18.1	102.6	-	224.3	228.2	229.4	302.1	435.0
Exploration Operations	0.0	0.0	-	TBD^{4/}	832.9	972.3	1,037.2	1,070.5
Space Technology	1,100.0	1,425.0	1,100.0	1,437.9	1,466.7	1,496.0	1,525.9	1,556.4
Science	7,290.7	7,931.4	7,614.4	7,988.3	8,148.1	8,311.1	8,477.3	8,646.8
Earth Science	1,996.5	2,250.0	-	2,411.5	2,460.3	2,589.0	2,722.3	2,782.0
Planetary Science	2,693.2	3,200.0	-	3,160.2	3,186.1	3,197.4	3,176.4	3,299.0
Astrophysics	1,770.9	1,575.2	-	1,556.0	1,597.0	1,578.5	1,620.5	1,625.6
Heliophysics	751.0	797.2	-	760.2	802.6	842.0	851.9	831.9
Biological and Physical Sciences	79.1	109.1	-	100.4	102.1	104.1	106.2	108.4
Aeronautics	828.7	914.8	880.7	971.5	990.9	1,010.7	1,030.9	1,051.5
STEM Engagement	127.0	147.0	137.0	150.1	153.1	156.2	159.3	162.5
Safety, Security, and Mission Services	2,936.5	3,049.2	3,020.6	3,208.7	3,272.9	3,338.4	3,405.2	3,473.3
Mission Services & Capabilities	1,918.3	2,028.8	-	2,154.4	2,197.5	2,241.5	2,286.3	2,332.0
Engineering, Safety, & Operations	1,018.2	1,020.4	-	1,054.3	1,075.4	1,096.9	1,118.9	1,141.3
Construction and Environmental Compliance & Restoration	445.8	390.3	410.3	424.3	432.8	441.5	450.3	459.3
Construction of Facilities	387.7	315.6	-	348.1	353.4	360.5	367.6	376.6
Environmental Compliance and Restoration	58.1	74.7	-	76.2	79.4	81.0	82.7	82.7
Inspector General	44.2	46.0	45.3	48.4	49.4	50.4	51.4	52.4
NASA Total	23,271.3	24,801.5	24,041.3	25,973.8	26,493.4	27,023.3	27,563.7	28,114.8

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A composite image of space featuring Earth on the left, the Moon in the center, and Mars on the right, all set against a starry background. The text "Account Summaries" is overlaid in the center.

Account Summaries

The NASA logo, consisting of the word "NASA" in a stylized, white, sans-serif font.

NASA



FY 2023 Budget Request: Exploration

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Environmental Compliance and Restoration	58.1	74.7	-	76.2	79.4	81.0	82.7	82.7	
Inspector General	44.2	46.0	45.3	48.4	49.4	50.4	51.4	52.4	
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Deep Space Exploration Systems: Common Exploration Systems Development

Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023	FY 2023 Request				
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Common Exploration Systems Development	4,538.7	4,483.7	-	4,668.4 ^{4/}	3,613.8	3,111.9	2,845.6	2,376.8	

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- Enables the Artemis goal of landing the first woman and first person of color on the Moon's south pole
- \$2,580M for Space Launch System to focus on successful completion of Artemis II and preparation required for Artemis III and IV, which includes the Block 1B configuration and other upgrades
- \$1,339M for the Orion program to finalize assembling and testing the Artemis II crew vehicle and deliver the system to Exploration Ground Systems at Kennedy Space Center
- \$750M for Exploration Ground Systems to develop the necessary ground systems including the Mobile Launcher 2, required for assembly, test, and launch of SLS and Orion

Strategic Objective(s) Supported: Explore

- 2.1 Explore the surface of the moon and deep space
- 2.3 Develop capabilities and perform research to safeguard explorers
- 2.4 Enhance space access and services



Deep Space Exploration Systems: Artemis Campaign Development



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023 Request				
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Artemis Campaign Development	1,672.1	2,062.0	-	2,600.3	2,973.8	3,489.3	3,853.9	4,450.7

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- \$1,486M for the Human Landing System program to develop and deploy the multiple landing systems that will transport the first woman and first person of color to the Moon
- \$779M for Gateway development to support human lunar landings and surface activities
- \$276M for xEVA and Human Surface Mobility Program to develop the surface suits, rovers, and other systems for lunar exploration
- \$60M for Advanced Cislunar and Surface Capabilities to develop strategies and identify technologies for lunar sustainability and future human missions to the Moon and Mars



Strategic Objective(s) Supported: Explore

- 2.1 Explore the surface of the moon and deep space
- 2.2 Develop a space economy enabled by a commercial market
- 2.3 Develop capabilities and perform research to safeguard explorers
- 2.4 Enhance space access and services

Deep Space Exploration Systems: Human Exploration Requirements & Architecture



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023 Request				
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Human Exp Requirements & Architecture	9.5	9.5	-	48.3	48.9	49.5	50.0	50.5

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- \$38M to support strategy and architecture development for Moon and Mars exploration
- \$10M to support systems engineering and integration efforts in support of Moon and Mars architecture development

Strategic Objective(s) Supported: Explore
 2.3 Develop capabilities and perform research to safeguard explorers



Deep Space Exploration Systems: Mars Campaign Development

Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023	FY 2023 Request			FY 2026	FY 2027
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- \$121M for Habitation Systems to continue developing and testing capabilities required for deep space missions, including Radiation Protection, Spacecraft Fire Safety, and Logistics Reduction with a focus on evolving the next generation of Environmental Control & Life Support Systems (ECLSS) such as the brine and urine processors
- \$27M for Human Support & Enabling Capabilities to develop countermeasures such as exercise equipment to maintain crew fitness on long missions; diagnostic sensors for remote medical care; and models of human physiology to predict crew fatigue and injuries when performing extravehicular activities
- \$8M for AES Foundational Systems to continue building upon the current commercial engagement contracts to advance commercial habitation, avionics, flight software, life support, in-space refueling capabilities, and other commercial space technologies

Strategic Objective(s) Supported: Explore
2.3 Develop capabilities and perform research to safeguard explorers

FY 2023 Budget Request: Space Operations



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Inspector General	44.2	46.0	48.4	49.4	50.4	51.4	52.4
NASA Total	23,271.3	24,801.5	25,973.8	26,493.4	27,023.3	27,563.7	28,114.8

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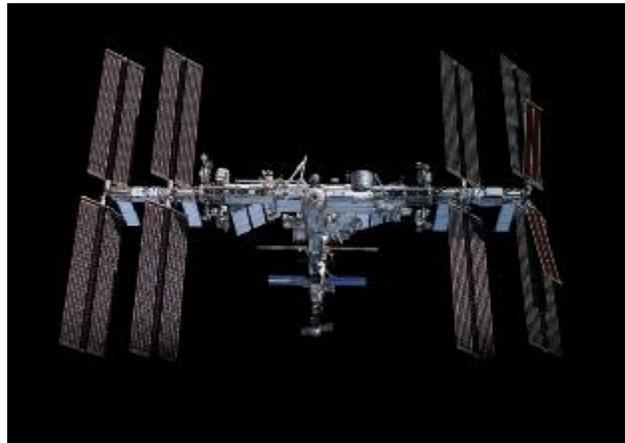
Space Operations: International Space Station



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023	FY 2023 Request			FY 2027
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}		FY 2024	FY 2025	FY 2026	
International Space Station	1,321.6	1,327.6	-	1,307.5	1,289.9	1,302.1	1,302.5	1,302.9

1/ - FY 2021 reflects funding amounts specified in Public Law 116-260, Consolidated Appropriations Act, 2021, as adjusted by NASA's FY 2021 Operating Plan, December 2021.
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 3/ - FY 2022 Enacted reflects amounts specified in H.R. 2471, Consolidated Appropriations Act, 2022 at the Account level. FY 2022 appropriations were not enacted at the time this budget was prepared.

- \$1,042M to provide ISS operations, support extension through 2030, and enable a transition to commercial LEO destinations once available
- \$266M to support long-duration human deep space exploration via research and technology demonstrations
- Hosts technology demonstrations sponsored by NASA Space Technology, human research activities by the NASA Human Research Program, and basic and Earth science research by NASA Science
- Enables development and advancement of a commercial ecosystem in low Earth orbit, including stimulation of non-NASA demand
- Supports above focus areas through use of the National Laboratory by expanding the breadth of researchers and companies using ISS and enabling new public-private partnerships



Strategic Objective(s) Supported: Explore
 2.2 Develop a space economy enabled by a commercial market
 2.3 Develop capabilities and perform research to safeguard explorers
 2.4 Enhance space access and services

Space Operations: Space Transportation



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022		FY 2023 Request				
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	
Space Transportation	1,871.9	1,770.2	-	1,759.5	1,798.8	1,848.7	1,889.2	1,914.8	

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- \$1,642M for the Crew and Cargo Program to provide for a regular cadence of crew rotations and cargo resupply missions to the ISS, contributing to the foundation of a more affordable and sustainable future for American human spaceflight
- \$118M for Commercial Crew Program to continue NASA's collaboration with the U.S. commercial space industry to certify and maintain insight into the vehicles that transport astronauts into space safely, reliably, and affordably from American soil
- The Suborbital Crew activity will develop a system qualification process to enable NASA personnel to leverage suborbital human space transportation capabilities

Strategic Objective(s) Supported: Explore
 2.2 Develop a space economy enabled by a commercial market
 2.4 Enhance space access and services

Space Operations: Space and Flight Support



Budget Authority (\$M)	FY 2021 Enacted ^{1/}	FY 2022 Request ^{2/}	FY 2022 Enacted ^{3/}	FY 2023	FY 2023 Request			
					FY 2024	FY 2025	FY 2026	FY 2027
Space and Flight Support	890.3	947.2	-	975.0	1,031.7	1,053.1	1,020.1	948.6

1/ - FY 2021 reflects funding amounts specified in Public Law 116-260, Consolidated Appropriations Act, 2021, as adjusted by NASA's FY 2021 Operating Plan, December 2021.
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 3/ - FY 2022 Enacted reflects amounts specified in H.R. 2471, Consolidated Appropriations Act, 2022 at the Account level. FY 2022 appropriations were not enacted at the time this budget was prepared.

- \$529M for Space Communications and Navigation to provide services for human exploration, science, and crew and cargo missions
- \$151M for Human Research Program for continued research to mitigate risks to astronaut health during long-duration missions
- \$102M for Human Space Flight Operations to support readiness and crew health for all NASA human space flight endeavors
- \$94M for Launch Services to provide safe, reliable, and cost-effective launch vehicle acquisition and advisory services for over 70 NASA spacecraft missions in various phases of development
- \$52M for Communications Services Program to begin demonstration of commercial communication and data relay services to support future NASA missions
- \$48M for Rocket Propulsion Test to provide NASA's rocket testing capability to meet US rocket testing requirements



Strategic Objective(s) Supported: Explore, Advance
 2.3 Develop capabilities and perform research to safeguard explorers
 4.2 Transform mission support capabilities for the next era of aerospace

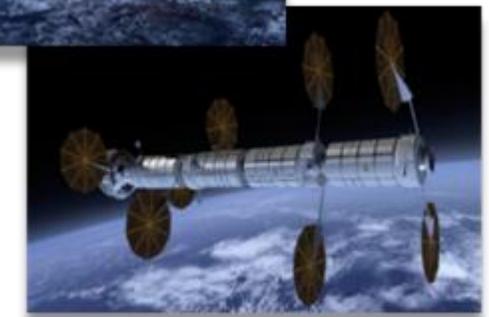
Space Operations: Commercial LEO Development



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023 Request				
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Commercial LEO Development	18.1	102.6	-	224.3	228.2	229.4	302.1	435.0

1/ - FY 2021 reflects funding amounts specified in Public Law 116-260, Consolidated Appropriations Act, 2021, as adjusted by NASA's FY 2021 Operating Plan, December 2021.
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 3/ - FY 2022 Enacted reflects amounts specified in H.R. 2471, Consolidated Appropriations Act, 2022 at the Account level. FY 2022 appropriations were not enacted at the time this budget was prepared.

- Supports early design maturation of multiple commercially-owned and operated LEO destinations (free flyers) from which NASA, along with other customers, can purchase services and stimulate the growth of commercial activities in LEO
- Focuses on maintaining a continuous U.S. human presence in LEO – both with Government astronauts and with private citizens – to meet NASA needs and support the utilization of space by U.S. citizens, companies, academia, and international partners
- Collaborates with ISS Research to develop and mature other potential customers of commercial space stations



Strategic Objective(s) Supported: Explore, Innovate
 2.2 Develop a space economy enabled by a commercial market
 3.1 Innovate and advance transformational space technologies

*LEO Commercialization Study free flyer concept examples

Space Operations: Exploration Operations



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022		FY 2023 Request				
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	
Exploration Operations	0.0	0.0	-	TBD ^{4/}	832.9	972.3	1,037.2	1,070.5	

1/ - FY 2021 reflects funding amounts specified in Public Law 116-260, Consolidated Appropriations Act, 2021, as adjusted by NASA's FY 2021 Operating Plan, December 2021.

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4/ - The FY 2023 President's budget request for NASA includes authority to transfer funds in FY 2023 from Orion Multi-purpose Crew Vehicle to Exploration Operations for Orion Production and Operations, up to \$718 million, contingent on assessments following Artemis I.

- Beginning in FY 2024, the production and operations costs previously accounted for in the “Common Exploration Systems Development” theme within the Deep Space Exploration Systems account, will transition to Space Operations under the new account theme, “Exploration Operations”
- The FY 2023 President’s Budget for NASA requests authority to transfer funds in FY 2023 from Orion Multi-purpose Crew Vehicle to Exploration Operations for Orion Production and Operations, up to \$718 million, contingent on requirements assessments following Artemis I.



Strategic Objective(s) Supported: Explore, Advance

- 2.1 Explore the surface of the moon and deep space
- 2.3 Develop capabilities and perform research to safeguard explorers
- 4.2 Transform mission support capabilities for the next era of aerospace



FY 2023 Budget Request: Space Technology

Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023	FY 2023 Request			
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}		FY 2024	FY 2025	FY 2026	FY 2027
Deep Space Exploration Systems	6,396.5	6,750.2	6,791.7	7,478.3	6,798.1	6,813.4	6,912.3	7,040.8
Common Exploration Systems Development	4,538.7	4,483.7	-	4,668.4^{4/}	3,613.8	3,111.9	2,845.6	2,376.8
Artemis Campaign Development	1,672.1	2,062.0	-	2,600.3	2,973.8	3,489.3	3,853.9	4,450.7
Human Exp Requirements & Architecture	9.5	9.5	-	48.3	48.9	49.5	50.0	50.5
Mars Campaign Development	176.2	195.0	-	161.3	161.6	162.7	162.7	162.8
Space Operations	4,101.9	4,147.6	4,041.3	4,266.3	5,181.4	5,405.6	5,551.1	5,671.8
International Space Station	1,321.6	1,327.6	-	1,307.5	1,289.9	1,302.1	1,302.5	1,302.9
Space Transportation	1,871.9	1,770.2	-	1,759.5	1,798.8	1,848.7	1,889.2	1,914.8
Space and Flight Support	890.3	947.2	-	975.0	1,031.7	1,053.1	1,020.1	948.6
Commercial LEO Development	18.1	102.6	-	224.3	228.2	229.4	302.1	435.0
Exploration Operations	0.0	0.0	-	TBD^{4/}	832.9	972.3	1,037.2	1,070.5
Space Technology	1,100.0	1,425.0	1,100.0	1,437.9	1,466.7	1,496.0	1,525.9	1,556.4
Science	7,290.7	7,931.4	7,614.4	7,988.3	8,148.1	8,311.1	8,477.3	8,646.8
Earth Science	1,996.5	2,250.0	-	2,411.5	2,460.3	2,589.0	2,722.3	2,782.0
Planetary Science	2,693.2	3,200.0	-	3,160.2	3,186.1	3,197.4	3,176.4	3,299.0
Astrophysics	1,770.9	1,575.2	-	1,556.0	1,597.0	1,578.5	1,620.5	1,625.6
Heliophysics	751.0	797.2	-	760.2	802.6	842.0	851.9	831.9
Biological and Physical Sciences	79.1	109.1	-	100.4	102.1	104.1	106.2	108.4
Aeronautics	828.7	914.8	880.7	971.5	990.9	1,010.7	1,030.9	1,051.5
STEM Engagement	127.0	147.0	137.0	150.1	153.1	156.2	159.3	162.5
Safety, Security, and Mission Services	2,936.5	3,049.2	3,020.6	3,208.7	3,272.9	3,338.4	3,405.2	3,473.3
Mission Services & Capabilities	1,918.3	2,028.8	-	2,154.4	2,197.5	2,241.5	2,286.3	2,332.0
Engineering, Safety, & Operations	1,018.2	1,020.4	-	1,054.3	1,075.4	1,096.9	1,118.9	1,141.3
Construction and Environmental Compliance & Restoration	445.8	390.3	410.3	424.3	432.8	441.5	450.3	459.3
Construction of Facilities	387.7	315.6	-	348.1	353.4	360.5	367.6	376.6
Environmental Compliance and Restoration	58.1	74.7	-	76.2	79.4	81.0	82.7	82.7
Inspector General	44.2	46.0	45.3	48.4	49.4	50.4	51.4	52.4
NASA Total	23,271.3	24,801.5	24,041.3	25,973.8	26,493.4	27,023.3	27,563.7	28,114.8

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Space Technology



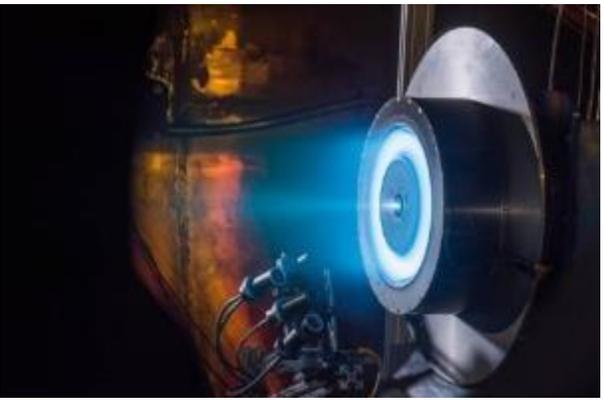
Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023 Request				
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Space Technology	1,100.0	1,425.0	1,100.0	1,437.9	1,466.7	1,496.0	1,525.9	1,556.4

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- Develops technologies to improve the capabilities and reduce the cost of NASA missions, strengthen the U.S. space industry, and enable entirely new space activities.
- \$525M for Technology Demonstration to conduct ground-based testing and space flight technology demonstrations such as: OSAM-1, OSAM-2, Cryogenic Fluid Management, Fission Surface Power, DSOC, LOFTID, Solar Electric Propulsion, and others. Includes Small Spacecraft Technologies and Flight Opportunities ground and flight demonstrations.
- \$472M for Technology Maturation to advance revolutionary disruptive exploration technologies from proof of concept to demonstration, maturing transformational and foundational technologies such as a lunar deployable hopper and 4G/Wireless communications.
- \$156M for Early-Stage Innovation and Partnerships to capitalize on innovation by sourcing ideas from a broad, diverse base of innovators including our brightest minds in academia and transferring space technology into the space economy
- \$285M for Small Business Innovation Research and Technology Transfer to leverage the Nation's innovative small business community to conduct research and development in support of NASA.



Image Credit: Maxar Technologies



Strategic Objective(s) Supported: Innovate, Advance
 3.1 Innovate and advance transformational space technologies
 4.1 Attract and develop a talented and diverse workforce



FY 2023 Budget Request: Science

Budget Authority (\$M)	FY 2021 Enacted ^{1/}	FY 2022 Request ^{2/}	FY 2022 Enacted ^{3/}	FY 2023 Request				
				FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Deep Space Exploration Systems	6,396.5	6,750.2	6,791.7	7,478.3	6,798.1	6,813.4	6,912.3	7,040.8
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Planetary Science	2,693.2	3,200.0	-	3,160.2	3,186.1	3,197.4	3,176.4	3,299.0
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4/ - The FY 2023 President's budget request for NASA includes authority to transfer funds in FY 2023 from Orion Multi-purpose Crew Vehicle to Exploration Operations for Orion Production and Operations, up to \$718 million, contingent on assessments following Artemis I.

Science: Earth Science



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023 Request				
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Earth Science	1,996.5	2,250.0	-	2,411.5	2,460.3	2,589.0	2,722.3	2,782.0

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- Promotes US leadership in Earth system science and climate change research
- Over \$400M for climate and applications research to advance our scientific understanding of Earth as a system and its response to natural and human-induced changes and to improve our ability to predict climate impacts, weather, and natural hazards
- \$212M supports formulation of the Earth System Observatory missions, to enhance understanding of Earth systems and to observe the effects of climate change
- Includes funding for greenhouse gas monitoring, and wildfires technology and applications tools development in collaboration with other agencies.
- Continues the competitive Earth System Explorers Program and Earth Venture Class missions
- \$290M continues development of high priority missions such as GeoCarb, PACE, CLARREO Pathfinder, NISAR and SWOT
- Collaboration with commercial SmallSat constellations to acquire Earth Science observation data to augment or complement observations acquired by NASA



Strategic Objective(s) Supported: Discover, Advance

- 1.1 Understand the Earth system and its climate
- 1.2 Understand the sun, solar system, and universe
- 1.3 Ensure NASA's science data are accessible to all and produce practical benefits to society
- 4.3 Build the next generation of explorers

Science: Planetary Science



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023 Request				
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Planetary Science	2,693.2	3,200.0	-	3,160.2	3,186.1	3,197.4	3,176.4	3,299.0

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- \$822M to support continued development of the Mars Sample Return mission, the first mission to return samples from Mars to Earth
- \$486M for the Lunar Discovery and Exploration program which partners with industry to deliver to the Moon instruments and other payloads, including the VIPER mission, a lunar rover to investigate volatiles on the South Pole of the Moon
- \$230M for investments in a competitive Discovery program, including newly selected missions to Venus, DAVINCI and VERITAS
- Continues funding for solar system exploration missions including Europa Clipper, Psyche, and Dragonfly
- \$88M to maintain support for the Planetary Defense Program to study Near-Earth objects, detection and mitigation, including the Near-Earth Object Surveyor Mission for launch NET 2028. Delay is due to budget pressure caused by various missions that are costing more than expected, due to Covid and other causes



Strategic Objective(s) Supported: Discover, Advance

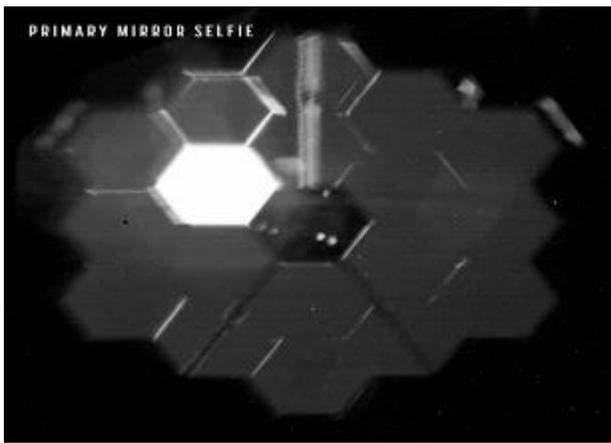
- 1.1 Understand the Earth system and its climate
- 1.2 Understand the sun, solar system, and universe
- 1.3 Ensure NASA's science data are accessible to all and produce practical benefits to society
- 4.3 Build the next generation of explorers

Science: Astrophysics



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022		FY 2023 Request			
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Astrophysics	1,770.9	1,575.2	-	1,556.0	1,597.0	1,578.5	1,620.5	1,625.6

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- Operates Great Observatories, such as the James Webb Space Telescope, the Hubble Space Telescope and the Chandra X-ray Observatory
- \$482M for continued development of the Nancy Grace Roman Space telescope for launch in 2027, a mission designed to unravel the secrets of dark energy and dark matter, search for and image exoplanets, and explore many topics in infrared astrophysics
- \$246M supports a competitive Explorer program, including SPHEREx and the newly selected COSI mission, with new selections approximately every three years
- Proposes funding for orderly shutdown of SOFIA. Termination of SOFIA operations is consistent with Decadal Survey 2020 recommendations
- Invests in 2020 Decadal Survey recommended precursor science and technology, and initiates the first Astrophysics Probe-class mission

Strategic Objective(s) Supported: Discover, Advance

- 1.2 Understand the sun, solar system, and universe
- 1.3 Ensure NASA's science data are accessible to all and produce practical benefits to society
- 4.3 Build the next generation of explorers

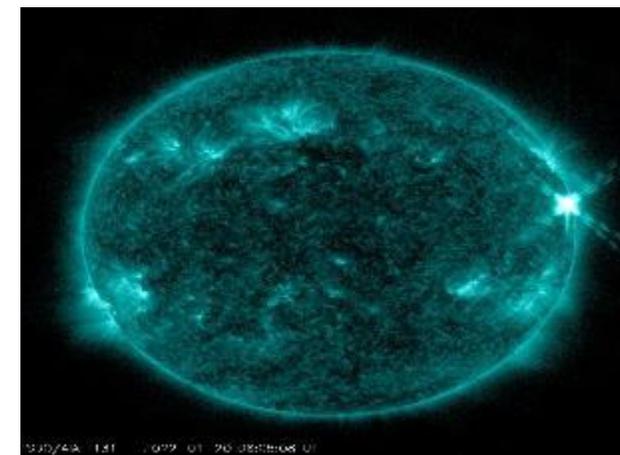
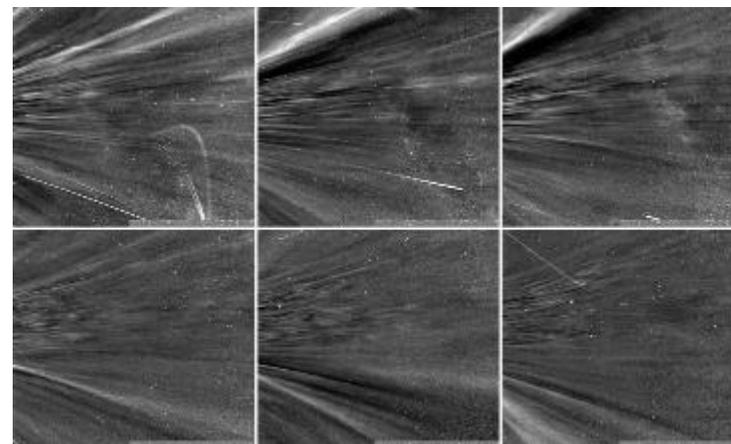
Science: Heliophysics



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023	FY 2023 Request			FY 2027
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}		FY 2024	FY 2025	FY 2026	
Heliophysics	751.0	797.2	-	760.2	802.6	842.0	851.9	831.9

1/ - FY 2021 reflects funding amounts specified in Public Law 116-260, Consolidated Appropriations Act, 2021, as adjusted by NASA's FY 2021 Operating Plan, December 2021.
 2/ - Full-year appropriations for FY 2022 were not enacted at the time this budget was prepared. Therefore, the FY 2022 column reflects the FY 2022 President's Budget Request.
 3/ - FY 2022 Enacted reflects amounts specified in H.R. 2471, Consolidated Appropriations Act, 2022 at the Account level. FY 2022 appropriations were not enacted at the time this budget was prepared.

- \$184M supports continued development of the Interstellar Mapping and Acceleration Probe (IMAP) and a delayed Geospace Dynamics Constellation mission
- A new Space Weather program to advance space weather science and applications, support interagency research efforts and develop future space weather instruments such as HERMES
- \$158M to support a competitive Explorer program including two newly selected missions MUSE and HelioSwarm
- The Budget includes funding for DRIVE science centers and new orbital debris investments to enable characterization of the populations of small debris and dust in space to protect space-based critical infrastructure and humans working in space



Strategic Objective(s) Supported: Discover

1.2 Understand the sun, solar system, and universe

1.3 Ensure NASA's science data are accessible to all and produce practical benefits to society

Science: Biological and Physical Sciences



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023 Request				
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Biological and Physical Sciences	79.1	109.1	-	100.4	102.1	104.1	106.2	108.4

1/ - FY 2021 reflects funding amounts specified in Public Law 116-260, Consolidated Appropriations Act, 2021, as adjusted by NASA's FY 2021 Operating Plan, December 2021.
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- Supports compelling science investigations to obtain critical insights into how biological and physical systems function in ways not possible on Earth
- Continued annual solicitations of Space Biology and Physical Sciences research, including emphasis areas in Quantum Science and Thriving in Deep Space
- Planning for a broad range of research platforms from ground to spaceflight with emphasis on ISS to drive advances in science, technology, and space exploration
- Commissioned NASEM to conduct the second Decadal Survey for biological and physical sciences for 2023-2032



Strategic Objective(s) Supported: Discover, Explore, Advance

1.3 Ensure NASA's science data are accessible to all and produce practical benefits to society

2.3 Develop capabilities and perform research to safeguard explorers

4.1 Attract and develop a talented and diverse workforce



FY 2023 Budget Request: Aeronautics

Budget Authority (\$M)	FY 2021 Enacted ^{1/}	FY 2022 Request ^{2/}	FY 2022 Enacted ^{3/}	FY 2023 Request				
				FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Deep Space Exploration Systems	6,396.5	6,750.2	6,791.7	7,478.3	6,798.1	6,813.4	6,912.3	7,040.8
Common Exploration Systems Development	4,538.7	4,483.7	-	4,668.4 ^{4/}	3,613.8	3,111.9	2,845.6	2,376.8
Artemis Campaign Development	1,672.1	2,062.0	-	2,600.3	2,973.8	3,489.3	3,853.9	4,450.7
Human Exp Requirements & Architecture	9.5	9.5	-	48.3	48.9	49.5	50.0	50.5
Mars Campaign Development	176.2	195.0	-	161.3	161.6	162.7	162.7	162.8
Space Operations	4,101.9	4,147.6	4,041.3	4,266.3	5,181.4	5,405.6	5,551.1	5,671.8
International Space Station	1,321.6	1,327.6	-	1,307.5	1,289.9	1,302.1	1,302.5	1,302.9
Space Transportation	1,871.9	1,770.2	-	1,759.5	1,798.8	1,848.7	1,889.2	1,914.8
Space and Flight Support	890.3	947.2	-	975.0	1,031.7	1,053.1	1,020.1	948.6
Commercial LEO Development	18.1	102.6	-	224.3	228.2	229.4	302.1	435.0
Exploration Operations	0.0	0.0	-	TBD ^{4/}	832.9	972.3	1,037.2	1,070.5
Space Technology	1,100.0	1,425.0	1,100.0	1,437.9	1,466.7	1,496.0	1,525.9	1,556.4
Science	7,290.7	7,931.4	7,614.4	7,988.3	8,148.1	8,311.1	8,477.3	8,646.8
Earth Science	1,996.5	2,250.0	-	2,411.5	2,460.3	2,589.0	2,722.3	2,782.0
Planetary Science	2,693.2	3,200.0	-	3,160.2	3,186.1	3,197.4	3,176.4	3,299.0
Astrophysics	1,770.9	1,575.2	-	1,556.0	1,597.0	1,578.5	1,620.5	1,625.6
Heliophysics	751.0	797.2	-	760.2	802.6	842.0	851.9	831.9
Biological and Physical Sciences	79.1	109.1	-	100.4	102.1	104.1	106.2	108.4
Aeronautics	828.7	914.8	880.7	971.5	990.9	1,010.7	1,030.9	1,051.5
STEM Engagement	127.0	147.0	137.0	150.1	153.1	156.2	159.3	162.5
Safety, Security, and Mission Services	2,936.5	3,049.2	3,020.6	3,208.7	3,272.9	3,338.4	3,405.2	3,473.3
Mission Services & Capabilities	1,918.3	2,028.8	-	2,154.4	2,197.5	2,241.5	2,286.3	2,332.0
Engineering, Safety, & Operations	1,018.2	1,020.4	-	1,054.3	1,075.4	1,096.9	1,118.9	1,141.3
Construction and Environmental Compliance & Restoration	445.8	390.3	410.3	424.3	432.8	441.5	450.3	459.3
Construction of Facilities	387.7	315.6	-	348.1	353.4	360.5	367.6	376.6
Environmental Compliance and Restoration	58.1	74.7	-	76.2	79.4	81.0	82.7	82.7
Inspector General	44.2	46.0	45.3	48.4	49.4	50.4	51.4	52.4
NASA Total	23,271.3	24,801.5	24,041.3	25,973.8	26,493.4	27,023.3	27,563.7	28,114.8

1/ - FY 2021 reflects funding amounts specified in Public Law 116-260, Consolidated Appropriations Act, 2021, as adjusted by NASA's FY 2021 Operating Plan, December 2021.

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4/ - The FY 2023 President's budget request for NASA includes authority to transfer funds in FY 2023 from Orion Multi-purpose Crew Vehicle to Exploration Operations for Orion Production and Operations, up to \$718 million, contingent on assessments following Artemis I.

Aeronautics



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023	FY 2023 Request			FY 2027
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}		FY 2024	FY 2025	FY 2026	
Aeronautics	828.7	914.8	880.7	971.5	990.9	1,010.7	1,030.9	1,051.5

1/ - FY 2021 reflects funding amounts specified in Public Law 116-260, Consolidated Appropriations Act, 2021, as adjusted by NASA's FY 2021 Operating Plan, December 2021.
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- \$289M for Integrated Aviation Systems to support the X-59 Low Boom Flight Demonstrator, X-57 Maxwell all-electric aircraft, and early designs of a Sustainable Flight Demonstrator
- \$253M for Advanced Air Vehicles to conduct research to meet the nation's growing long-term civil aviation needs such as more efficient aircraft and propulsion technologies to reduce carbon emissions from aviation
- \$156M for Transformative Aero Concepts to support revolutionary aviation concepts, including research on zero-emissions aviation
- \$156M for Airspace Operations and Safety to work with the Federal Aviation Administration to modernize and transform the national air traffic management system
- \$117M for Aerosciences Evaluation and Test Capabilities, to support critical national ground test infrastructure



X-59 Low Boom Flight Demonstrator



Trussed-Braced Wing

Strategic Objective(s) Supported: Innovate, Advance

3.2 Drive efficient and sustainable aviation

4.2 Transform mission support capabilities for the next era of aerospace



FY 2023 Budget Request: STEM Engagement

Budget Authority (\$M)	FY 2021 Enacted ^{1/}	FY 2022 Request ^{2/}	FY 2022 Enacted ^{3/}	FY 2023 Request				
				FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Deep Space Exploration Systems	6,396.5	6,750.2	6,791.7	7,478.3	6,798.1	6,813.4	6,912.3	7,040.8
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Human Exp Requirements & Architecture	9.5	9.5	-	48.3	48.9	49.5	50.0	50.5
Mars Campaign Development	176.2	195.0	-	161.3	161.6	162.7	162.7	162.8
Space Operations	4,101.9	4,147.6	4,041.3	4,266.3	5,181.4	5,405.6	5,551.1	5,671.8
International Space Station	1,321.6	1,327.6	-	1,307.5	1,289.9	1,302.1	1,302.5	1,302.9
Space Transportation	1,871.9	1,770.2	-	1,759.5	1,798.8	1,848.7	1,889.2	1,914.8
Space and Flight Support	890.3	947.2	-	975.0	1,031.7	1,053.1	1,020.1	948.6
Commercial LEO Development	18.1	102.6	-	224.3	228.2	229.4	302.1	435.0
Exploration Operations	0.0	0.0	-	TBD ^{4/}	832.9	972.3	1,037.2	1,070.5
Space Technology	1,100.0	1,425.0	1,100.0	1,437.9	1,466.7	1,496.0	1,525.9	1,556.4
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Planetary Science	2,693.2	3,200.0	-	3,160.2	3,186.1	3,197.4	3,176.4	3,299.0
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STEM Engagement	127.0	147.0	137.0	150.1	153.1	156.2	159.3	162.5
Safety, Security, and Mission Services	2,936.5	3,049.2	3,020.6	3,208.7	3,272.9	3,338.4	3,405.2	3,473.3
Mission Services & Capabilities	1,918.3	2,028.8	-	2,154.4	2,197.5	2,241.5	2,286.3	2,332.0
Engineering, Safety, & Operations	1,018.2	1,020.4	-	1,054.3	1,075.4	1,096.9	1,118.9	1,141.3
Construction and Environmental Compliance & Restoration	445.8	390.3	410.3	424.3	432.8	441.5	450.3	459.3
Construction of Facilities	387.7	315.6	-	348.1	353.4	360.5	367.6	376.6
Environmental Compliance and Restoration	58.1	74.7	-	76.2	79.4	81.0	82.7	82.7
Inspector General	44.2	46.0	45.3	48.4	49.4	50.4	51.4	52.4
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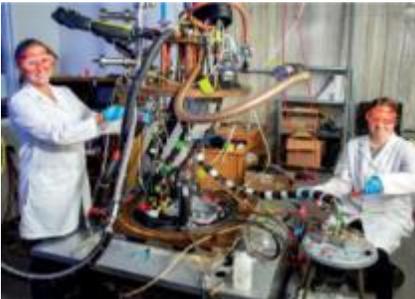
4/ - The FY 2023 President's budget request for NASA includes authority to transfer funds in FY 2023 from Orion Multi-purpose Crew Vehicle to Exploration Operations for Orion Production and Operations, up to \$718 million, contingent on assessments following Artemis I.

STEM Engagement



Budget Authority (\$M)	FY 2021 Enacted ^{1/}	FY 2022 Request ^{2/}	FY 2022 Enacted ^{3/}	FY 2023	FY 2023 Request			FY 2026	FY 2027
STEM Engagement	127.0	147.0	137.0	150.1	FY 2024	FY 2025	FY 2026	FY 2027	
					153.1	156.2	159.3	162.5	

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- Invests in the Nation's next generation of scientists, engineers, technologists, mathematicians and explorers
- Creates unique opportunities for a diverse set of students, and engages students in unique, authentic learning experiences that contribute to building a diverse future STEM workforce
- Continues to enhance the NASA internships program, incorporating strategies to contribute to the Agency's diversity, equity and inclusion, and accessibility priority
- Expands initiatives to attract and retain underserved and underrepresented students in STEM fields

Strategic Objective(s) Supported: Discover, Explore, Advance

- | | |
|--|--|
| 1.3 Ensure NASA's science data are accessible to all and produce practical benefits to society | 4.1 Attract and develop a talented and diverse workforce |
| 2.1 Explore the surface of the moon and deep space | 4.2 Transform mission support capabilities for the next era of aerospace |
| 2.2 Develop a space economy enabled by a commercial market | 4.3 Build the next generation of explorers |
| 3.1 Innovate and advance transformational space technologies | |

FY 2023 Budget Request: SSMS and CE CR



Budget Authority (\$M)	FY 2021 Enacted ^{1/}	FY 2022 Request ^{2/}	FY 2022 Enacted ^{3/}	FY 2023	FY 2023 Request			
					FY 2024	FY 2025	FY 2026	FY 2027
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Aeronautics	828.7	914.8	880.7	971.5	990.9	1,010.7	1,030.9	1,051.5
STEM Engagement	127.0	147.0	137.0	150.1	153.1	156.2	159.3	162.5
Safety, Security, and Mission Services	2,936.5	3,049.2	3,020.6	3,208.7	3,272.9	3,338.4	3,405.2	3,473.3
Mission Services & Capabilities	1,918.3	2,028.8	-	2,154.4	2,197.5	2,241.5	2,286.3	2,332.0
Engineering, Safety, & Operations	1,018.2	1,020.4	-	1,054.3	1,075.4	1,096.9	1,118.9	1,141.3
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4/ - The FY 2023 President's budget request for NASA includes authority to transfer funds in FY 2023 from Orion Multi-purpose Crew Vehicle to Exploration Operations for Orion Production and Operations, up to \$718 million, contingent on assessments following Artemis I.

Safety, Security, and Mission Services



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023 Request				
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Safety, Security, and Mission Services	2,936.5	3,049.2	3,020.6	3,208.7	3,272.9	3,338.4	3,405.2	3,473.3
Mission Services & Capabilities	1,918.3	2,028.8	-	2,154.4	2,197.5	2,241.5	2,286.3	2,332.0
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- SSMS provides the critical business, infrastructure, and technical capabilities required to enable mission success across all NASA programs and projects
- \$859M for Engineering, Safety, and Operations for all NASA Centers
- \$761M for Mission Enabling Services which provides an enterprise approach to managing NASA's business operations and mission support activities
 - \$22M for the Office of Diversity and Equal Opportunity, which includes NASA's diversity and equal opportunity enterprise efforts to prioritize advancing equity, civil rights, racial justice, and equal opportunity in accordance with NASA's Equity and DEIA Strategic Plan
- \$726M for Infrastructure and Technical Capabilities across the Nation
- \$667M for the Information Technology Program to modernize IT capabilities and provide strategic cybersecurity risk management
- \$195M for Agency Technical Authority to ensure safety and mission success

Strategic Objective(s) Supported: Advance

- 2.2 Develop a space economy enabled by a commercial market
- 4.1 Attract and develop a talented and diverse workforce
- 4.2 Transform mission support capabilities for the next era of aerospace

Construction & Environmental Compliance & Restoration



Budget Authority (\$M)	FY 2021	FY 2022	FY 2022	FY 2023 Request				
	Enacted ^{1/}	Request ^{2/}	Enacted ^{3/}	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Construction of Facilities	387.7	315.6	-	348.1	353.4	360.5	367.6	376.6
Environmental Compliance and Restoration	58.1	74.7	-	76.2	79.4	81.0	82.7	82.7

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- \$241M to construct, repair, or revitalize institutional infrastructure that support capabilities across all centers
- \$86M to support Exploration mission work, including the Space Launch System (SLS), Orion, and Exploration Ground Systems (EGS) programs.
- \$21M to support Space Operations mission work, including Space Communications and Navigation (SCaN), the International Space Station (ISS) program, and the Launch Services Program (LSP).
- \$76M to maintain NASA's strategy commitment to environmental stewardship responsibilities
- NASA uses a risk management approach to balance maintenance, repair, and construction activities in context of a growing backlog of deferred maintenance
- CECR construction and repair activities are balanced with SSMS maintenance activities to ensure mission readiness.

Category Definition Example

Repair

Fix something broken or degraded to restore function.



Modernization

Revitalize existing and outdated infrastructure with upgrades/updates that improve outcomes and reduce risks.



Recapitalization

Replace degraded facilities and consolidate to new facilities, leading to demolition and footprint reduction.



New Capability

Construct new capabilities that enable next-generation discoveries and advances.



Strategic Objective(s) Supported: Advance

4.2 Transform mission support capabilities for the next era of aerospace

NASA FY 2023 Request Directly Supports Administration Priorities



Sustaining America's Global Innovation Leadership

- Enables NASA to shape innovation on an international scale by providing the vision and necessary funding to lead in exploration, science, technology and discovery.
- \$7.6 billion will enable missions on and around the Moon through Artemis while testing technologies to prepare for Mars exploration. Space science activities enable new progress in astrophysics, heliophysics, and planetary science.
- NASA will create new possibilities for innovation through international partnerships on endeavors such as the James Webb Space Telescope, Mars Sample Return mission, and Artemis Accords.
- Supports the International Space Station.
- \$30 million investment in debris research and mitigation activity to address this growing hazard.

Addressing the Climate Crisis at Home and Abroad

- NASA has studied our climate for decades, collecting data and making it available, enabling humanity to address this pressing challenge.
- \$2.4 billion for Earth-observing satellites and related research will enable NASA to improve the world's understanding of climate change.
- NASA is planning an Earth Information Center with an initial focus on prototyping capabilities for a greenhouse gas monitoring and information system.
- \$500 million to reduce aviation's climate impact includes a Sustainable Flight National Partnership to develop a next-generation aircraft.

Driving Economic Growth

- NASA stimulates the U.S. economy in all 50 states through funded research, contracts, industry collaborations and the creation of jobs. This budget will benefit people in the U.S. and around the world.
- This budget enables further development of industry collaborations to support the continued growth of a robust space economy in low-Earth orbit anchored by the ISS, and further expansion at the Moon.
- \$1.4 billion for Space Technology research and development will help NASA support commercial space expansion.
- \$970 million for Aeronautics research that will help maintain U.S. leadership in aircraft development and improve aviation.
- \$285 million in direct investment for small business innovative research and technology transfer will bring the benefits of NASA research to more businesses and people.
- \$223 million for development of future commercial space stations, paving the way for greater human presence in orbit.

Promoting diversity, equity, inclusion, and accessibility

- NASA promotes diversity, equity, inclusion, and accessibility in all aspects of its operations, including its workforce, support for early career staff, research grants, and contracts and awards.
- Funding in this budget will allow NASA to support equity goals for staff and study barriers to equal employment opportunities.
- Through Artemis, NASA will land the first woman and first person of color on the Moon.



Appendix

NASA

FY 2022-2023 Agency Priority Goals (APGs)



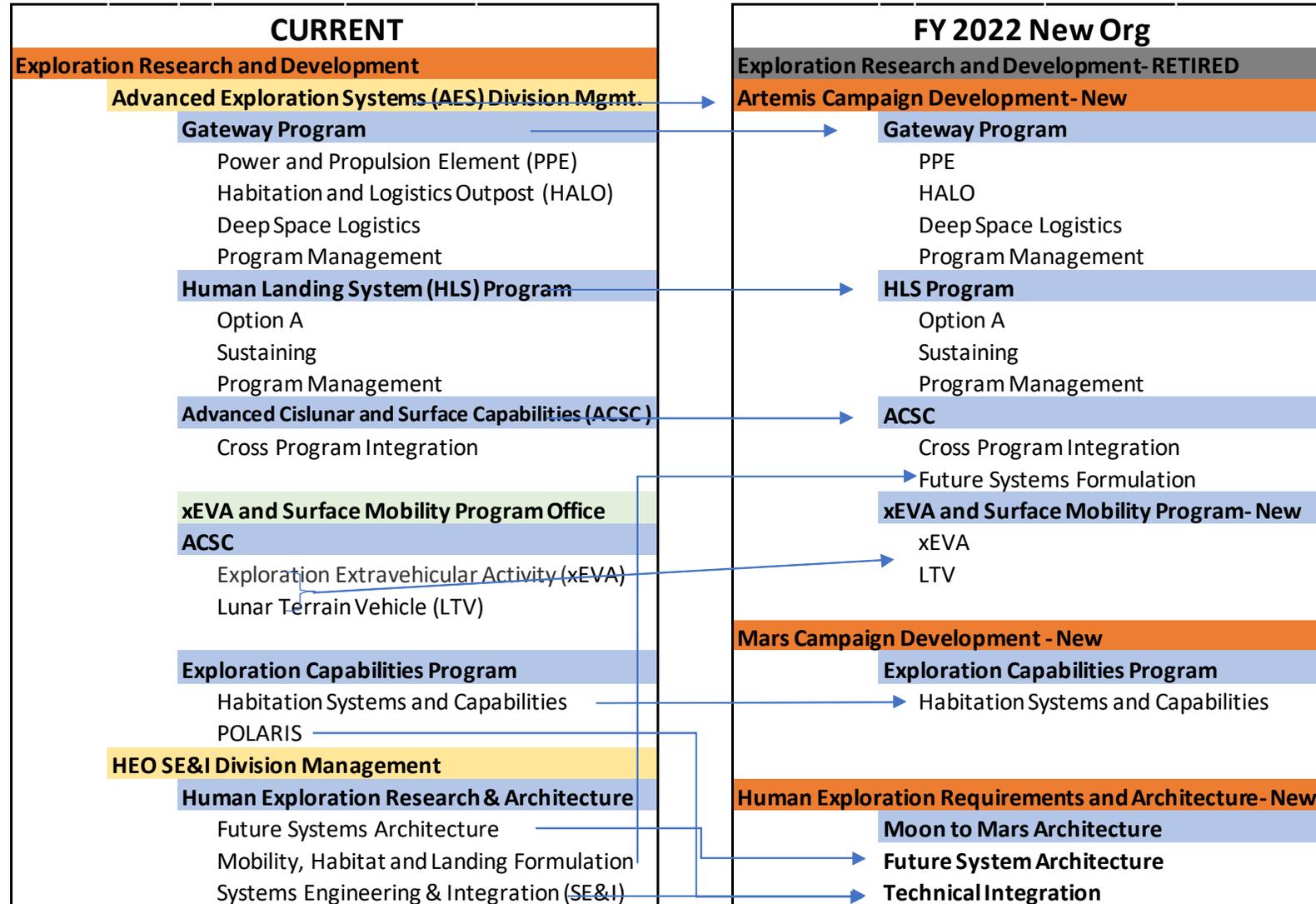
- Included in *2022 Strategic Plan*, Appendix D
- Measured quarterly using milestones published on [Performance.gov](https://www.performance.gov) beginning on April 28, 2022

Title	APG Statement
Climate Change Research	Use the global vantage point of space to advance our understanding of the Earth system, its processes, and changing climate. <i>By September 2023, NASA will advance climate change research by delivering two new observing systems and an upgrade to NASA's primary global Earth systems model.</i>
James Webb Space Telescope	After launch, deployment, and start of science operations, the James Webb Space Telescope will study every phase in the history of our universe, ranging from the first luminous glows after the Big Bang, to the formation of other stellar systems capable of supporting life on planets like Earth, to the evolution of our own solar system. <i>By September 30, 2023, NASA will complete commissioning of the James Webb Space Telescope, the most powerful and complex space telescope ever built, and begin Webb's Cycle 2 observations.</i>
Artemis	Advance America's goal to land the first woman and the first person of color on the Moon and pursue a sustainable program of exploration by demonstrating capabilities that advance lunar exploration. <i>By September 30, 2023, NASA will launch Artemis I, deliver the Core Stage for Artemis II to Kennedy Space Center for processing, and have multiple companies under contract to develop systems for sustainable human lunar exploration.</i>
Space Technology Leadership	Ensure American global leadership in space technology innovations through increased partnering with industry and demonstrating key lunar surface and deep space technologies. <i>By September 30, 2023: NASA will demonstrate leadership in space technology by:</i> <ul style="list-style-type: none"> • <i>Enhancing partnerships with industry through delivery or completion of milestones for at least 4 Tipping Point opportunities, and at least 3 critical small business technology transitions to develop capabilities that support NASA and commercial needs;</i> • <i>Testing and delivering at least 3 new technologies that will be demonstrated on the lunar surface or in lunar orbit; and</i> • <i>Completing at least 2 major milestones for projects that increase the Nation's capabilities in deep space.</i>

FY 2022 Structure Crosswalk to ESDMD



Theme
Program
New Organization- Reporting Only
Management - Reporting Only



Acronyms (1 of 3)



- AAVP – Advanced Air Vehicles Program
- ACD – Artemis Campaign Development
- ACSC – Advanced Cislunar Capabilities
- AETC – Aerosciences Evaluation and Test Capabilities Portfolio
- ARC – Ames Research Center
- CALIPSO – Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observations
- CECR – Construction and Environmental Compliance and Restoration
- CESD – Common Exploration Systems Development
- CLARREO PF - Climate Absolute Radiance and Refractivity Observatory Pathfinder
- CLPS – Commercial Lunar Payload Services
- DART – Double Asteroid Redirect Test
- DAVINCI – Deep Atmospheric Venus Investigation of Noble gases, Chemistry, and Imaging
- DEIA – Diversity, Equity, Inclusion, and Accessibility
- DRIVE – Diversify, Realize, Integrate, Venture, Educate
- DSOC – Deep Space Optical Communications
- ECLSS – Environmental Control & Life Support Systems
- EGS – Exploration Ground Systems
- EOS – Earth Observation Systems
- EPSCoR – Established Program to Stimulate Competitive Research
- ESDMD – Exploration Systems Development Mission Directorate
- ESM – Earth Systematic Missions
- GDC – Geospace Dynamics Constellation
- GeoCarb - Geostationary Carbon Observatory
- GLOBE – Global Learning and Observations to Benefit the Environment
- GRC – Glenn Research Center
- HALO – Habitation and Logistics Outpost
- HBCU – Historically Black Colleges and Universities
- HERA – Human Exploration Requirements & Architecture

Acronyms (1 of 3)



- HLS – Human Landing System
- HPSC – High Performance Spaceflight Computing
- IASP – Integrated Aviation Systems Program
- IMAP – Interstellar Mapping and Accelerator Probe
- ISRU – In-Situ Resource Utilization
- ISS – International Space Station
- IT – Information Technology
- LaRC – Langley Research Center
- LEO – Low-Earth Orbit
- LOFTID – Low-Earth Orbit Flight Test of Inflatable Decelerator
- LSP – Launch Services Program
- LTV – Lunar Terrain Vehicle
- M&MA – Moon & Mars Architecture
- MCD – Mars Campaign Development
- MSD – Mission Support Directorate
- MSI – Minority-Serving Institution
- MUREP – Minority University Research and Education Project
- NET – No Earlier Than
- NISAR – NASA-ISRO Synthetic Aperture Radar
- ODEO – Office of Diversity and Equal Opportunity
- OSAM – On-Orbit Servicing, Assembly, and Manufacturing
- PACE – Plankton, Aerosol, Cloud, ocean Ecosystem
- PPE – Power and Propulsion Element
- PRIME – Polar Resources Ice Mining Experiment
- SBIR – Small Business Innovation Research
- SCaN – Space Communications and Navigation
- SFS – Space and Flight Support
- SLS – Space Launch System
- SMD – Science Mission Directorate
- SOFIA – Stratospheric Observatory for Infrared Astronomy
- SPHEREx – Spectro-Photometer for the History of the Universe, Epoch of Reionization and Ices Explorer

Acronyms (1 of 3)



- SSMS – Safety, Security, and Mission Services
- STEM – Science, Technology, Engineering, Mathematics
- STMD – Space Technology Mission Directorate
- STTR – Small Business Technology Transfer
- SWOT – Surface Water and Ocean Topography
- TACP – Transformative Aeronautics Concepts Program
- VERITAS – Venus Emissivity, Radio science, InSAR, Topography, and Spectroscopy
- VIPER – Volatiles Investigating Polar Exploration Rover
- xEVA – Exploration Extravehicular Activity