参考資料

National Aeronautics and Space Administration

FY 2019
BUDGET ESTIMATES

www.nasa.gov

NASA and American Leadership

The United States shall

"Lead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the solar system and to bring back to Earth new knowledge and opportunities. Beginning with missions beyond low-Earth orbit, the United States will lead the return of humans to the Moon for long-term exploration and utilization, followed by human missions to Mars and other destinations."

- Presidential Space Policy Directive 1

NASA is

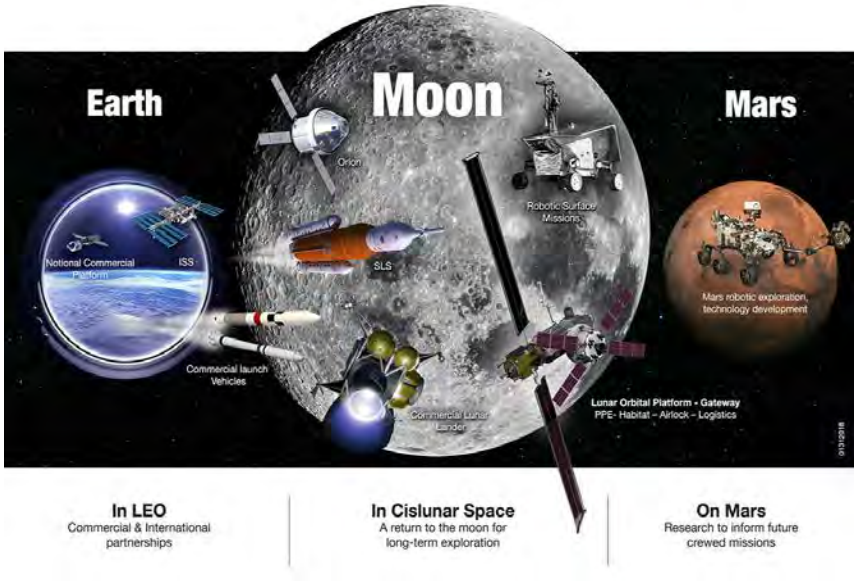
- Enabling U.S. Global Leadership: Our scientific, technological, aeronautics and space exploration efforts are uniquely visible expressions of American leadership
- Extending Human Presence Deeper into Space Starting with the Moon for Long-term Exploration and Utilization
- Expanding Human Knowledge Through New Scientific Discoveries
- Addressing National Challenges that Catalyze Economic Growth
- Improving Capabilities and Operations

2019 Budget Highlights

- Provides $19.9B, including $10.5B to lead an innovative and sustainable campaign of exploration and lead the return of humans to the Moon for long-term exploration and utilization followed by human missions to Mars and other destinations.

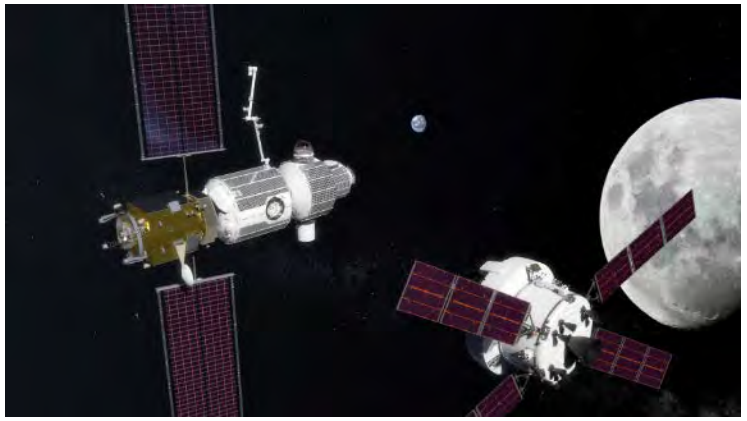
- Refocuses existing NASA activities towards exploration, by redirecting funding to innovative new programs and providing additional funding to support new public-private initiatives.

- Conducts uncrewed SLS/Orion first flight in 2020, leading to Americans around the Moon in 2023. This will be the first human mission to the moon since Apollo 17 in 1972, and will establish U.S. leadership in cislunar space.



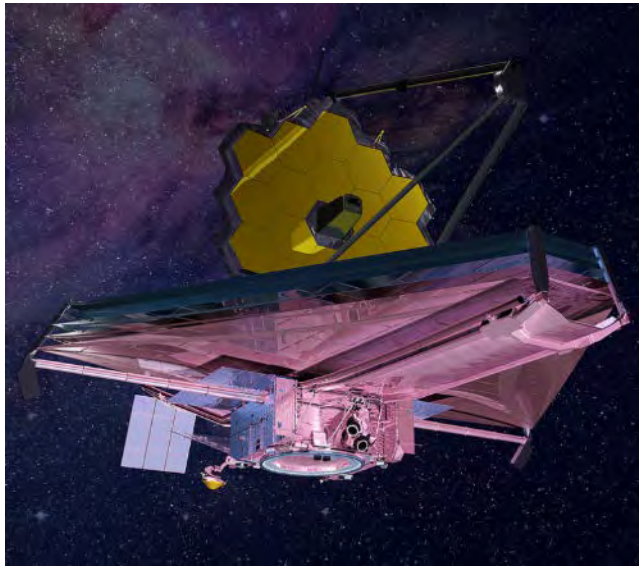
Highlights *(continued)*

- Serves as a catalyst for growth of a vibrant American commercial space industry expanding commercial partnerships to strengthen U.S. leadership in space.
- Achieves early Human Exploration milestone by establishing a Lunar Orbital Platform-Gateway in cislunar space; launching a power and propulsion space tug in 2022.
- Develops a series of progressively more capable robotic lunar missions to the surface of the moon using innovative acquisition approaches while meeting national exploration and scientific objectives.
- Begins transition to commercialization of low Earth orbit and ends direct federal government support of the International Space Station in 2025.
- Begins a new $150M program to encourage development of new commercial Low Earth orbital platforms and capabilities for use by the private



Highlights *(continued)*

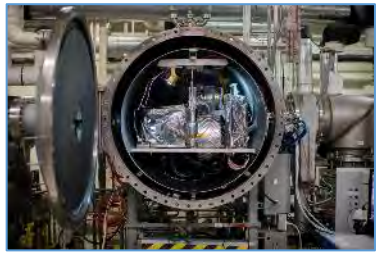
- Continues robotic exploration of the Solar System including funding for the next Mars rover launch in 2020, funding to explore possibilities of returning geological samples from Mars and a Europa Clipper mission to fly repeatedly by Jupiter's icy ocean moon Europa.
- Enables our wide-ranging science work on many fronts, which continues to lead the world in its size, scope, and scientific output.
- Supports a focused Earth science program; no funding for missions proposed for termination in FY18 budget (PACE, OCO-3, CLARREO Pathfinder, DSCOVR, and RBI).
- Continues exploring the universe with launch of James Webb Space Telescope.
- Cancels WFIRST due to its significant cost and higher priorities within NASA. Increases funding for competed astrophysics missions and research.



Highlights *(continued)*

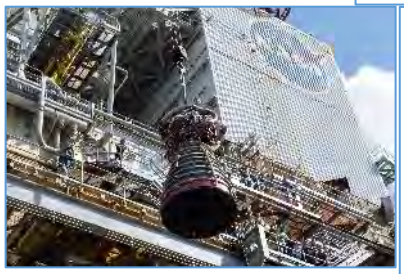
- Focuses and integrates space technology investments to enable new robotic and human exploration capabilities and missions and contribute to economic development and growth by enabling innovative systems and services supporting the emerging space economy.
- Fully funds a supersonic X-plane and increases hypersonics research funding. Maintains robust investment in air traffic management improvements that will safely increase air traffic capacity, reduce flight delays, and enable safe, robust UAS integration.
- Redirects Office of Education funding to new initiatives supporting NASA's core mission of exploration.
- Strengthens cybersecurity capabilities, safeguarding critical systems and data, and continues to support improved overall management of IT.

Anticipated Accomplishments in FY 2019



Advanced Exploration Systems
Power propulsion element requirements studies, acquisition planning, and partnership approaches. Ground testing of full size prototype cislunar habitats.

James Webb Space Telescope
Completes assembly and testing, ships to French Guiana, and launches between March and June of 2019.



Exploration Systems
Continues systems integration in preparation for Ascent Abort test in April 2019 and EM-1 launch.

Other Science
Use of emerging commercial lunar lander capabilities to deliver payloads to surface of the Moon. Selects next New Frontiers mission, Heliophysics Small Explorer, Astrophysics Medium Explorer and suite of Earth Venture Suborbital-3 investigations.

Commercial Crew
Completes developmental milestones and plans for post certification missions to begin in 2019.

Exploration R&T
Launches 3 payloads demonstrating laser comm, green propellant, and precision navigation. Delivers MOXIE, MEDA, MEDLI2, and TRN to Mars 2020 mission.

Supersonic X-Plane
Completes a critical design review for the Low Boom Flight Demonstrator

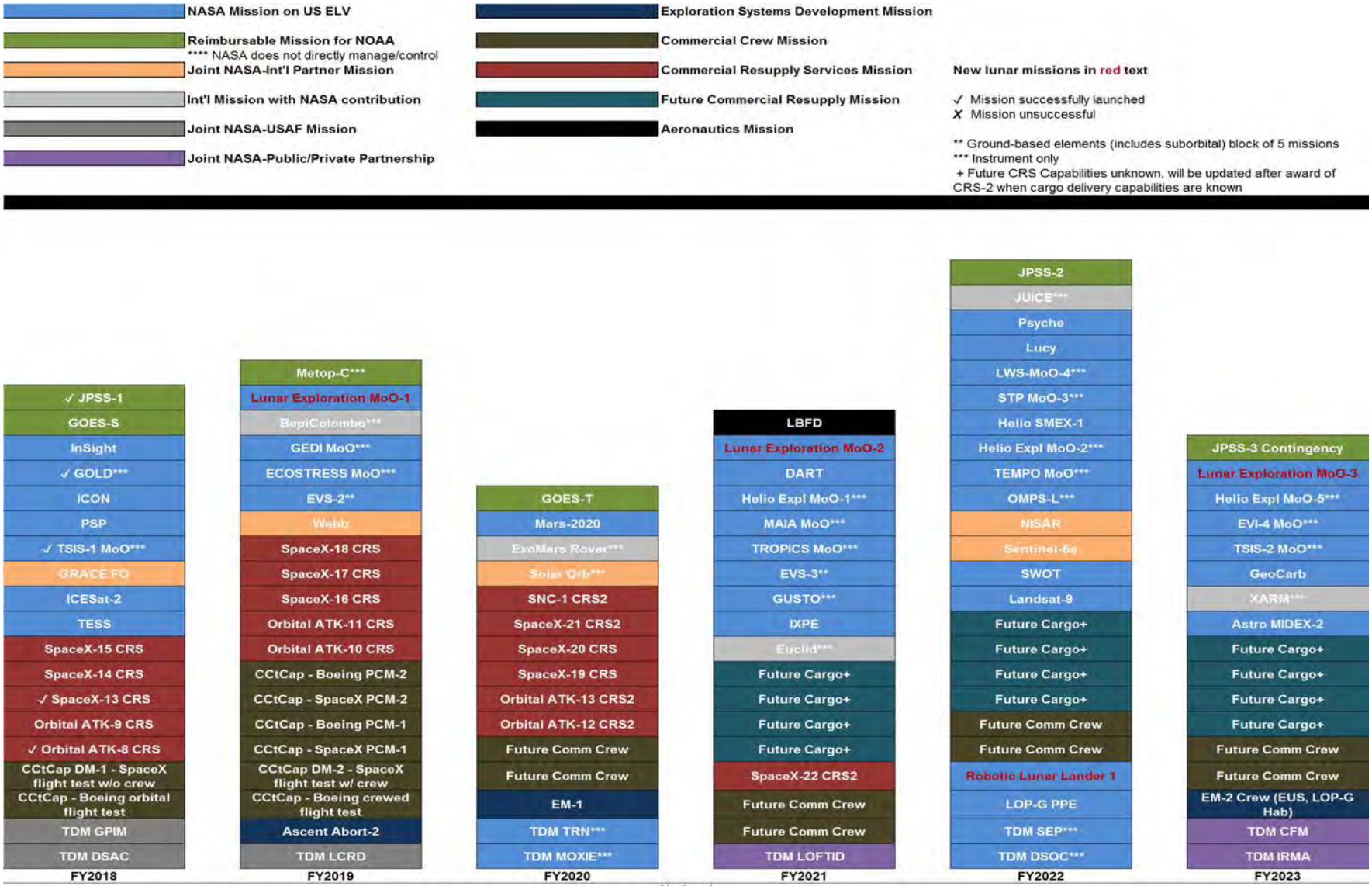
FY 2019 Budget Request ($M)

	Fiscal Year						
				Notional			
Budget Authority ($ in millions)	2017	2018	2019	2020	2021	2022	2023
NASA TOTAL	$19,653.3	$19,519.8	$19,892.2	$19,592.2	$19,592.2	$19,592.2	$19,592.2
Deep Space Exploration Systems	$4,184.0	$4,222.6	$4,558.8	$4,859.1	$4,764.5	$4,752.5	$4,769.8
Exploration Systems Development	$3,929.0		$3,669.8	$3,790.5	$3,820.2	$3,707.5	$3,845.6
Advanced Exploration Systems	$97.8		$889.0	$1,068.6	$944.3	$1,045.0	$924.1
Exploration Research and Development	$157.2		$0.0	$0.0	$0.0	$0.0	$0.0
Exploration Research and Technology	$826.5	$820.8	$1,002.7	$912.7	$912.7	$912.7	$912.7
LEO and Spaceflight Operations	$4,942.5	$4,850.1	$4,624.6	$4,273.7	$4,393.3	$4,430.3	$4,438.0
International Space Station	$1,450.9		$1,462.2	$1,453.2	$1,471.2	$1,466.2	$1,451.2
Space Transportation	$2,589.0		$2,108.7	$1,829.1	$1,858.9	$1,829.2	$1,807.3
Space and Flight Support (SFS)	$902.6		$903.7	$841.4	$888.2	$934.9	$954.6
Commercial LEO Development	$0.0		$150.0	$150.0	$175.0	$200.0	$225.0
Science	$5,762.2	$5,725.8	$5,895.0	$5,859.9	$5,841.1	$5,822.4	$5,803.6
Earth Science	$1,907.7		$1,784.2	$1,784.2	$1,784.2	$1,784.2	$1,784.2
Planetary Science	$1,827.5		$2,234.7	$2,199.6	$2,180.8	$2,162.1	$2,143.3
Astrophysics	$1,352.3		$1,185.4	$1,185.4	$1,185.4	$1,185.4	$1,185.4
Heliophysics	$674.7		$690.7	$690.7	$690.7	$690.7	$690.7
Aeronautics	$656.0	$655.5	$633.9	$608.9	$608.9	$608.9	$608.9
Education	$100.0	$99.3	$0.0	$0.0	$0.0	$0.0	$0.0
Safety, Security, and Mission Services	$2,768.6	$2,749.8	$2,749.7	$2,744.8	$2,738.6	$2,732.3	$2,726.1
Center Management and Operations	$1,986.5		$1,949.6	$1,945.4	$1,939.8	$1,934.1	$1,928.5
Agency Management and Operations	$782.1		$800.1	$799.4	$798.8	$798.2	$797.6
Construction & Envrmtl Compl Restoration	$375.6	$358.3	$388.2	$293.8	$293.8	$293.8	$293.8
Construction of Facilities	$305.4		$305.3	$210.9	$210.9	$210.9	$210.9
Environmental Compliance and Restoration	$70.2		$82.9	$82.9	$82.9	$82.9	$82.9
Inspector General	$37.9	$37.6	$39.3	$39.3	$39.3	$39.3	$39.3
NASA TOTAL	$19,653.3	$19,519.8	$19,892.2	$19,592.2	$19,592.2	$19,592.2	$19,592.2

FY 2017 reflects funding amounts specified in Public Law 115-31, Consolidated Appropriations Act, 2017. Table does not reflect emergency supplemental funds also appropriated in FY 2017, totaling $184 million.

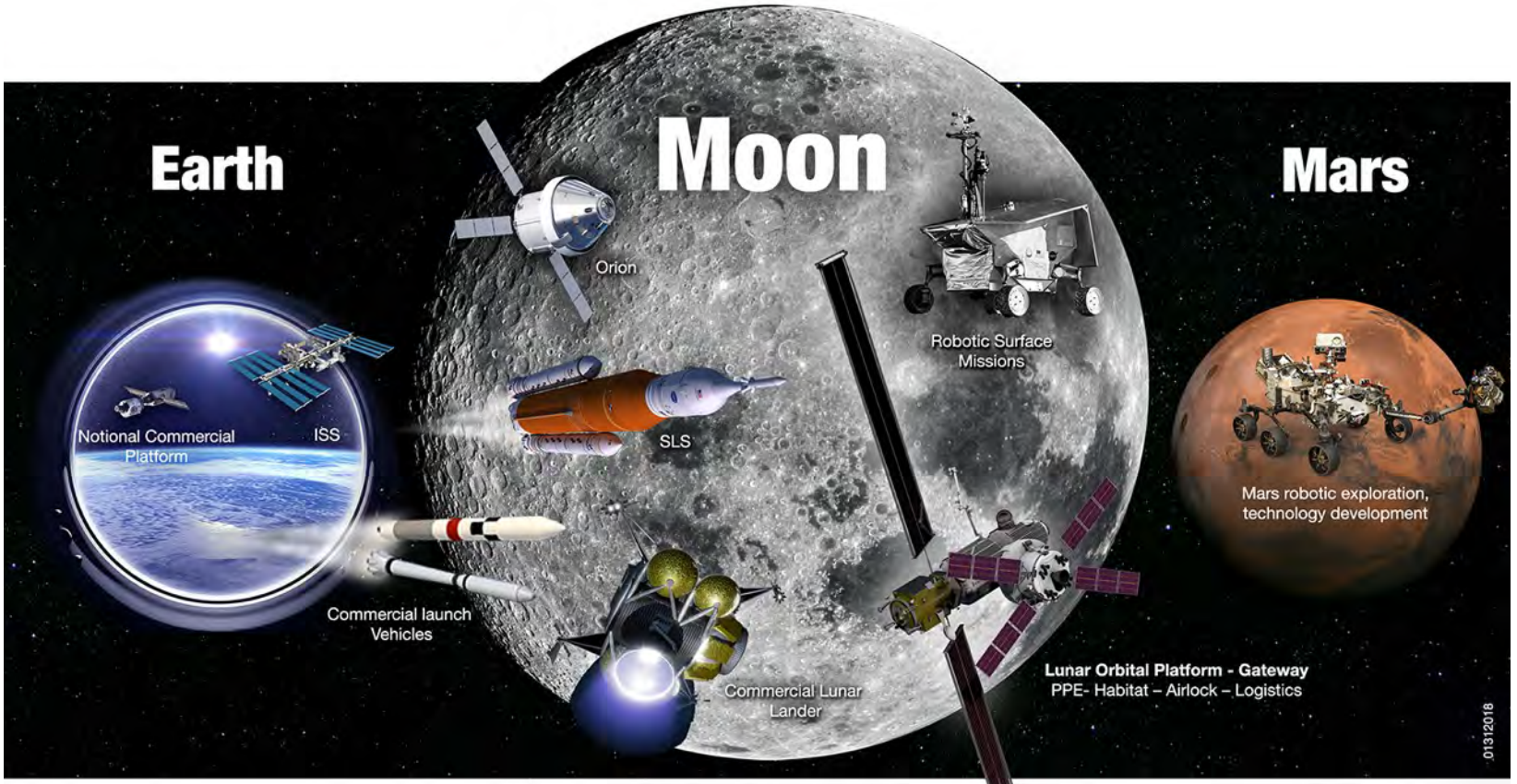
FY 2018 reflects Continuing Resolution funding as enacted under Public Law 115-56, as amended..

NASA Mission Launches (Fiscal Years 2018 – 2023)



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

The Lunar Exploration Campaign



In LEO
Commercial & International partnerships

In Cislunar Space
A return to the moon for long-term exploration

On Mars
Research to inform future crewed missions