

National Aeronautics and
Space Administration



FY 2020

EXPLORE BUDGET ESTIMATES BRIEFING BOOK

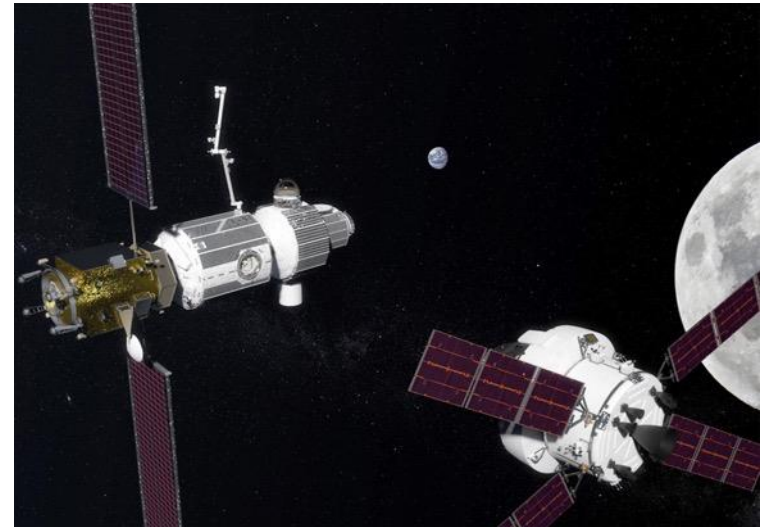
Overall Principles and Direction



Forward to the Moon, on to Mars

President Trump's Fiscal Year 2020 NASA budget is one of the strongest on record for our storied agency.

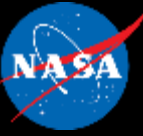
In keeping with Space Policy Directive-1, it provides for the foundation of a national exploration campaign that will use the experience of the NASA workforce, coupled with the agility and innovation of our commercial and international partners, to create an architecture that is open, sustainable and agile. This unified effort will inspire generations and change the course of history as we realize the next great scientific, economic and technical achievements in space.




Space Policy Directive One



NASA 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."



EXPLORATION FIRSTS THROUGH 2024

									
CCP Commercial Crew to ISS	CLPS Small Payload Deliveries to the Moon	EM-1 SLS/Orion Flight	MARS 2020 Mars ISRU Test	EM-2 Crewed Mission	GATEWAY: PPE Gateway Element	ENHANCED SCIENCE AND EXPLORATION CAPABILITY Mobility	GATEWAY: ESPRIT + UTILIZATION MODULE WITH TUG Deep Space Fueling	EM-3 Crewed Mission to Gateway	LUNAR LANDER SYSTEM TEST Lunar Cryo Fluid Management
									

< 2018 Mars InSight Lander

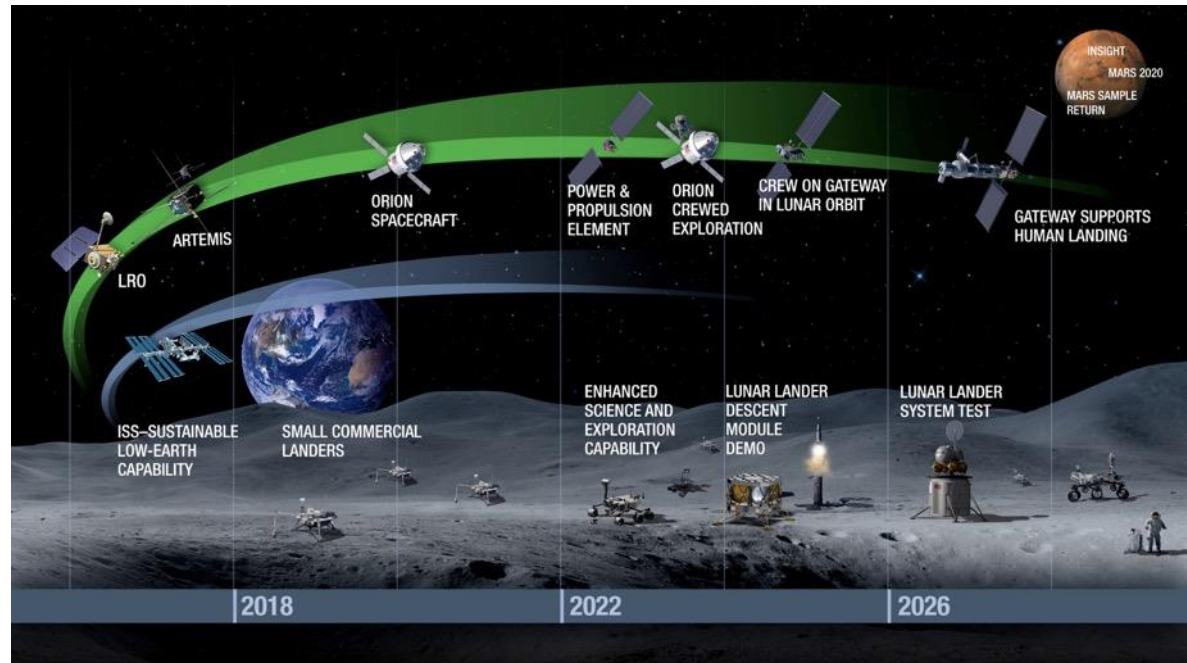
									
--	---	---	---	---	--	---	---	---	---

2020 Budget Highlights



➤ **Provides \$21B, including \$10.7B** to continue building the key components of the Exploration campaign that will send astronauts to the Moon and beyond, including:

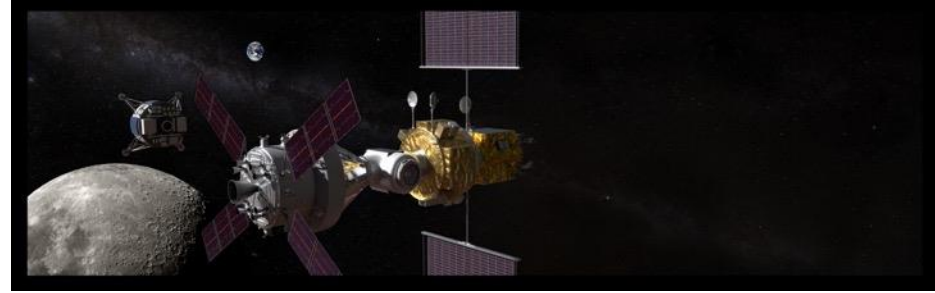
- ✓ The Space Launch System rocket, a heavy-lift expendable launch vehicle, to ensure the rocket is operational in the early 2020s when it will be needed to carry astronauts on board the Orion crew capsule to the vicinity of the Moon.
- ✓ The Lunar Gateway, an outpost orbiting the Moon in the mid-2020s.
- ✓ Commercial launch capabilities to enable regular, low-cost access to the lunar vicinity and surface.
- ✓ Lunar landers to enable cargo delivery and human access to the lunar surface by the late 2020s.
- ✓ Building commercial and international partnerships



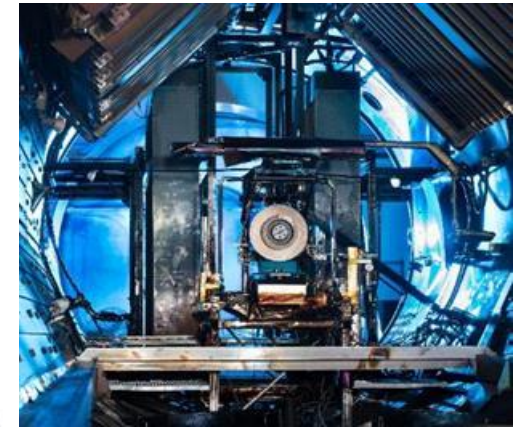
2020 Budget Highlights



- Develops the first elements of Lunar Gateway, the Power and Propulsion Element, ready for launch in 2022, and the Utilization module and ESPRIT enabling crew to stay aboard starting in 2024.



- Develops and grows emerging technology and commercial capabilities to deliver science and technology payloads to the Moon in preparation for exploration and further enhance human lunar lander capabilities.



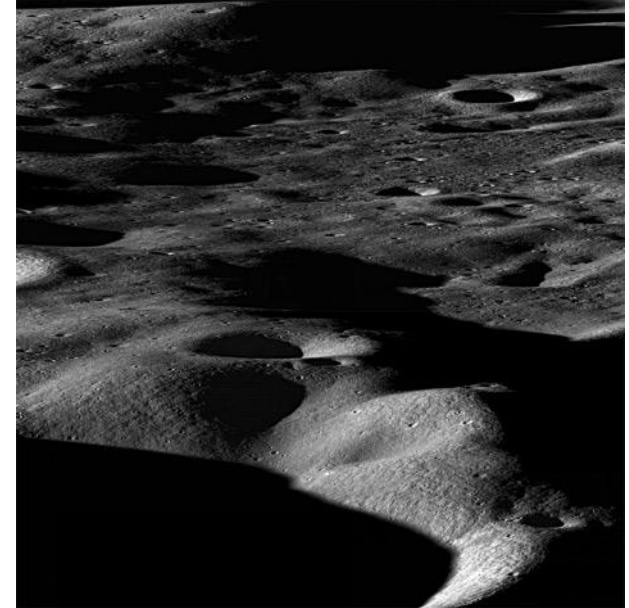
- Focuses the SLS program on the completion of the initial version of SLS and supporting a reliable annual SLS / Orion flight cadence. Defers funding of Block 1B for the SLS.



Highlights *(continued)*



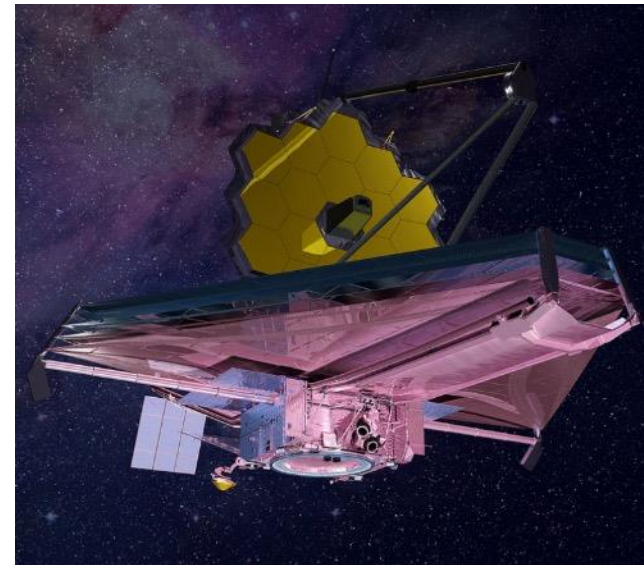
- The Lunar Surface Innovation Initiative (LSII) serves as a catalyst for enabling critical technologies required for humans to successfully operate on the lunar surface. These include surface power and in situ resource utilization.
- Utilizes public-private partnerships to develop a human-class lunar lander system that will, along with other Exploration Campaign activities, re-establish U.S. preeminence to, around, and on the lunar surface leading to a human lunar landing by 2028.
- Develops lunar robotic rover capabilities to support science and resource utilization investigations, and technology.
- Drives toward a vibrant, U.S.-led economy in Earth orbit funding the International Space Station as well as new commercial space capabilities that will facilitate a transition to a more robust and cost-effective approach to human space activities near the Earth.



Highlights *(continued)*



- Continues robotic exploration of the Solar System including funding for the next Mars rover launch in 2020 and a Europa Clipper mission to launch in 2023.
- Initiates a Mars Sample Return Mission to retrieve samples from Mars, and return those samples with the first launch from another planet.
- Continues exploring the universe with launch of James Webb Space Telescope in 2021. Provides no funding for WFIRST space telescope while Webb is still being built.
- Enables our wide-ranging science work on many fronts, which continues to lead the world in its size, scope, and scientific output.
- Consistent with prior budgets, provides no funding for PACE, CLARREO-PF, and the Office of Science, Technology, Engineering, and Mathematics (STEM) Engagement.



Highlights *(continued)*



- Supports transformative aeronautics technology research to boost U.S. technological and economic leadership and support high quality American jobs including continued development of the X-59 QueSST flight demonstrator to help usher in a new era of U.S. led supersonic transportation.
- Maintains robust investment in air traffic management improvements that will safely increase air traffic capacity, reduce flight delays, and enable safe, robust UAS integration.
- Replenishes resources for mission enabling services and operations, including critical investments in maintaining test facilities, advancing cybersecurity protections, and ensuring safe and reliable operations for NASA's objectives in space, science, aeronautics, and technology.



Anticipated Accomplishments in FY 2020



Exploration Research & Development

Gateway will continue building upon the current commercial engagement contracts to advance commercial habitation; AES will continue avionics, flight software, life support, in-space refueling capabilities, and other commercial space industries while conducting flight experiments such as Saffire-IV.



James Webb Space Telescope

Continues testing and integration of OTIS to spacecraft; on schedule for March 2021 launch



Deep Space Exploration Systems

Continues delivery of hardware for integration and testing for the upcoming EM-1 and EM-2 launches

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

Boeing and SpaceX are on course for certification of their transportation systems and to begin regularly flying operational missions to meet ISS crew rotation obligations.



Exploration Technology

Launch and demonstrate 7 critical technologies: laser comm, MOXIE, MEDA, MEDLI2, TRN, Astrobee and Lunar flashlight. Complete SEP CDR and start LSII



Urban Air Mobility

Accelerates research supporting Urban Air Mobility (UAM)

FY 2020 Budget Request (\$M)

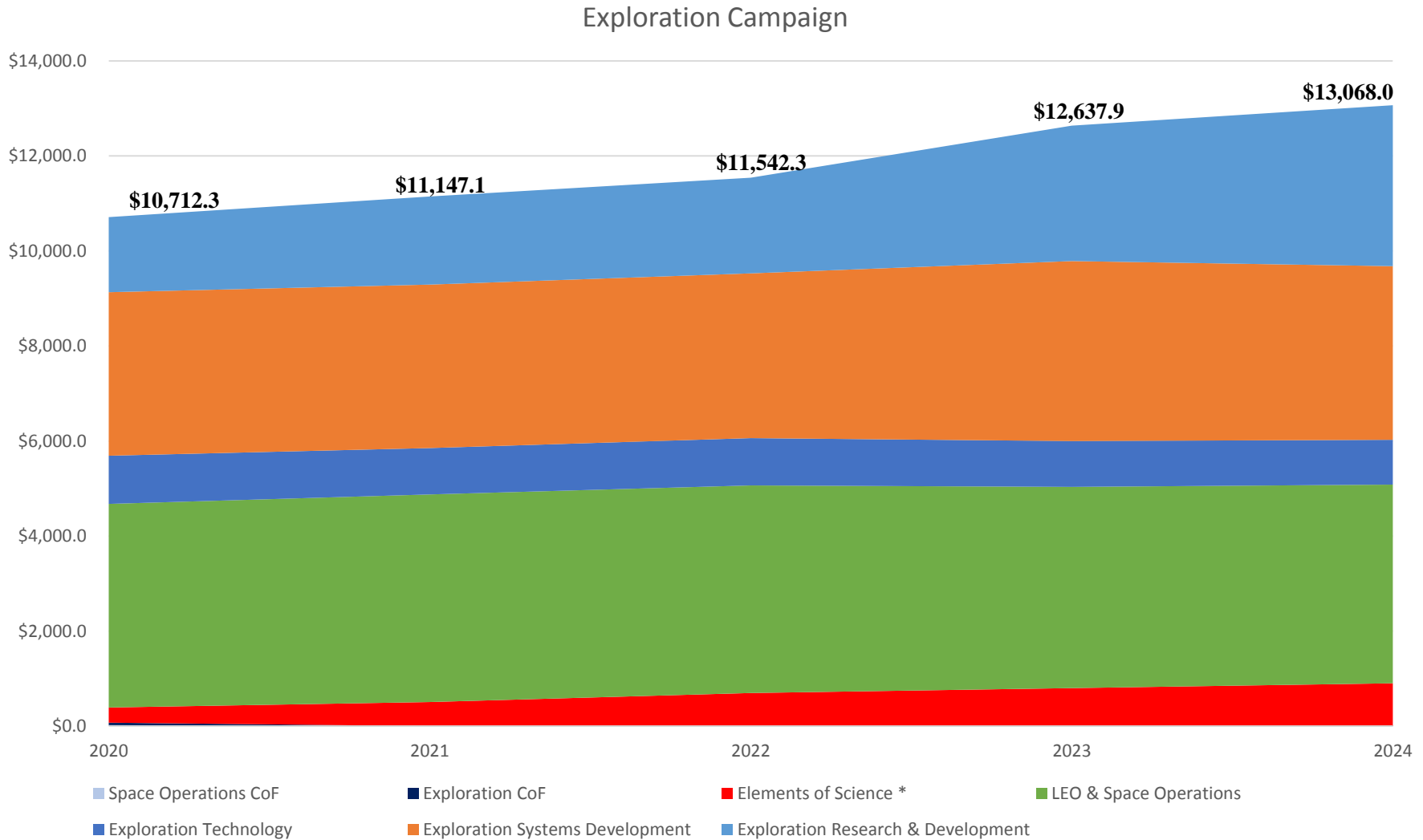


Budget Authority (\$ in Millions)	Fiscal Year						
	2018	2019	2020	2021	2022	2023	2024
Deep Space Exploration Systems	\$4,790.0	\$5,050.8	\$5,021.7	\$5,295.5	\$5,481.4	\$6,639.0	\$7,042.3
Exploration Systems Development	\$4,395.0	\$4,092.8	\$3,441.7	\$3,441.0	\$3,468.4	\$3,788.5	\$3,654.7
Exploration Research & Development	\$395.0	\$958.0	\$1,580.0	\$1,854.5	\$2,013.0	\$2,850.4	\$3,387.6
Exploration Technology	\$760.0	\$926.9	\$1,014.3	\$976.1	\$995.4	\$964.4	\$943.1
LEO and Spaceflight Operations	\$4,749.2	\$4,639.1	\$4,285.7	\$4,369.5	\$4,369.5	\$4,235.5	\$4,182.3
International Space Station	\$1,493.0		\$1,458.2	\$1,448.5	\$1,449.4	\$1,352.6	\$1,315.7
Space Transportation	\$2,345.8		\$1,828.6	\$1,854.1	\$1,814.5	\$1,746.2	\$1,727.2
Space and Flight Support (SFS)	\$910.3		\$848.9	\$891.9	\$905.7	\$911.8	\$914.5
Commercial LEO Development	\$0.0	\$40.0	\$150.0	\$175.0	\$200.0	\$225.0	\$225.0
Science	\$6,211.5	\$6,905.7	\$6,303.7	\$6,319.0	\$6,319.0	\$5,846.5	\$5,815.0
Earth Science	\$1,921.0	\$1,931.0	\$1,779.8	\$1,785.6	\$1,779.7	\$1,666.5	\$1,674.6
Planetary Science	\$2,217.9	\$2,758.5	\$2,622.1	\$2,577.3	\$2,629.4	\$2,402.4	\$2,350.9
Astrophysics	\$850.4	\$1,191.6	\$844.8	\$902.4	\$965.2	\$913.5	\$907.7
Heliophysics	\$688.5	\$720.0	\$704.5	\$638.6	\$769.3	\$692.0	\$709.8
James Webb Space Telescope (JWST)	\$533.7	\$304.6	\$352.6	\$415.1	\$175.4	\$172.0	\$172.0
Aeronautics	\$690.0	\$725.0	\$666.9	\$673.6	\$680.3	\$587.1	\$587.0
STEM Engagement	\$100.0	\$110.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Safety, Security, and Mission Services	\$2,826.9	\$2,755.0	\$3,084.6	\$3,084.6	\$3,084.6	\$2,871.6	\$2,871.6
Center Management and Operations	\$1,983.4		\$2,065.0	\$2,058.4	\$2,052.9	\$1,906.0	\$1,905.8
Agency Management and Operations	\$843.5		\$1,019.6	\$1,026.2	\$1,031.7	\$965.6	\$965.8
Construction & Envrmtl Compl Restoration	\$569.5	\$348.2	\$600.4	\$468.8	\$468.8	\$468.8	\$387.8
Construction of Facilities	\$483.1		\$517.5	\$385.9	\$385.9	\$385.9	\$304.9
Environmental Compliance and Restoration	\$86.4		\$82.9	\$82.9	\$82.9	\$82.9	\$82.9
Inspector General	\$39.0	\$39.3	\$41.7	\$42.1	\$42.5	\$43.0	\$43.4
NASA Total	\$20,736.1	\$21,500.0	\$21,019.0	\$21,229.2	\$21,441.5	\$21,655.9	\$21,872.5

FY 2018 reflects funding amounts specified in Public Law 115-41, Consolidated Appropriations Act, 2018, as adjusted by NASA's FY 2018 Operating Plan. Table does not reflect emergency supplemental funds also appropriated in FY 2018, totaling \$81.3 million.

FY 2019 reflects funding as enacted under Public Law 116-06..

Exploration Campaign Funding



* Includes Lunar Discovery and Exploration Program and Mars Sample Return

NASA Mission Launches (Fiscal Years 2019 – 2024)



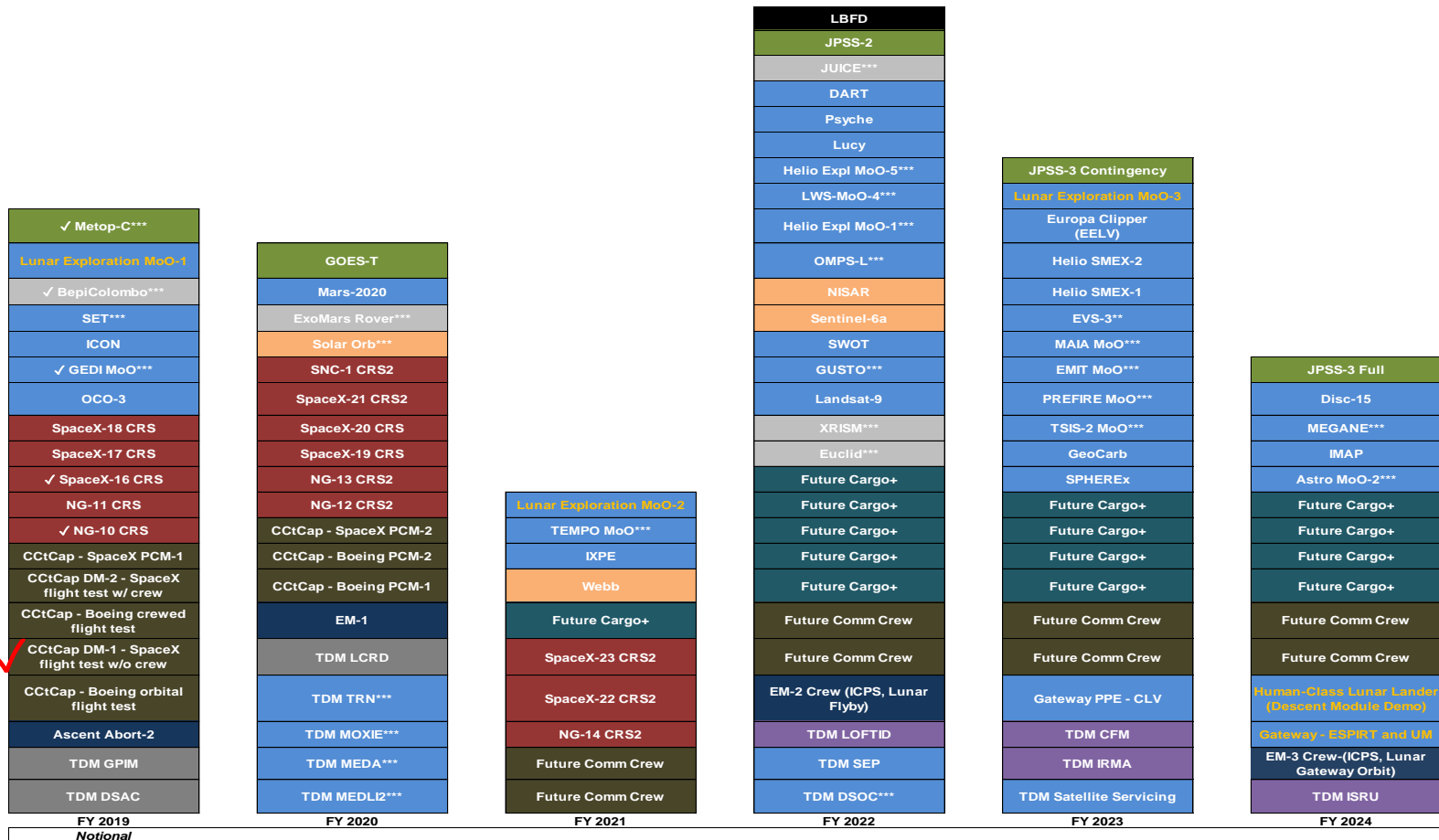
- NASA Mission on US ELV
- Reimbursable Mission for NOAA
**** NASA does not directly manage/control
- Joint NASA-Int'l Partner Mission
- Int'l Mission with NASA contribution
- Joint NASA-USAF Mission
- Joint NASA-Public/Private Partnership

- Exploration Systems Development Mission
- Commercial Crew Mission
- Commercial Resupply Services Mission
- Future Commercial Resupply Mission
- Aeronautics Mission

New lunar missions in orange text

- ✓ Mission successfully launched
- X Mission unsuccessful

** Ground-based elements (includes suborbital) block of 5 missions
 *** Instrument only
 + Future CRS Capabilities unknown, will be updated after award of CRS-2 when cargo delivery capabilities are known



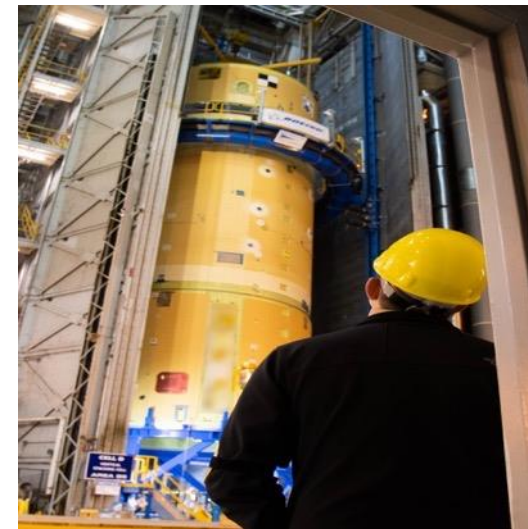
Dates reflect Agency Baseline

Deep Space Exploration Systems: *Exploration Systems Development*



(\$M)	2020	2021	2022	2023	2024
ESD	\$3,441.7	\$3,441.0	\$3,468.4	\$3,788.5	\$3,654.7

- Fully funds SLS, Orion and EGS to prepare for Exploration Mission (EM-1), (EM-2), and future missions at the earliest technically achievable dates.
- Provides for mating of Orion's major components (Launch Abort System, Orion Crew Module, and Service Module) and delivering to Ground Operations for final preparation and stacking at KSC.
- Continues final assembly of the components for EM-1 by integrating the Interim Cryogenic Propulsion Stage (ICPS), Launch Vehicle Stage Adapter (LVSA) and Boosters including the Solid Rocket Motor Segments.
- Validates all EGS software and hardware.
- Enables humans back to the vicinity of the Moon in 2023.

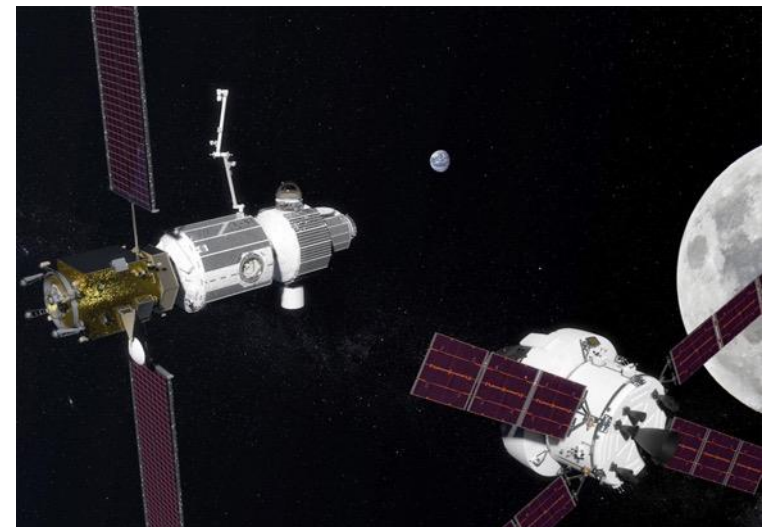
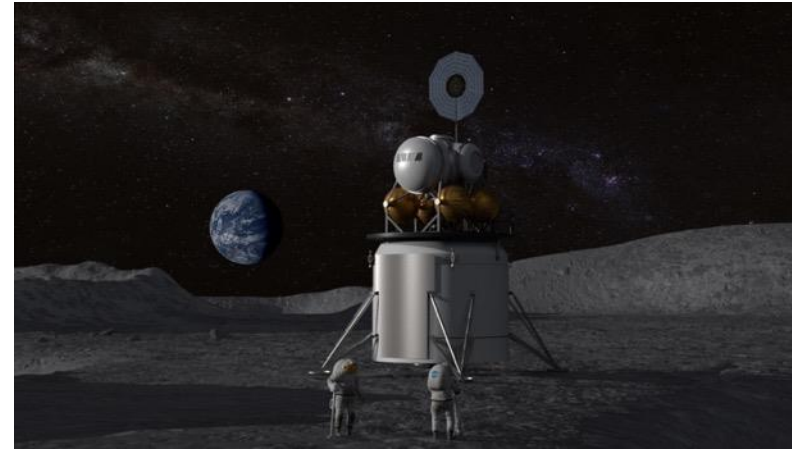


Deep Space Exploration Systems: *Exploration Research and Development*



(\$M)	2020	2021	2022	2023	2024
ER&D	\$1,580.0	\$1,854.5	\$2,013.0	\$2,850.4	\$3,387.6

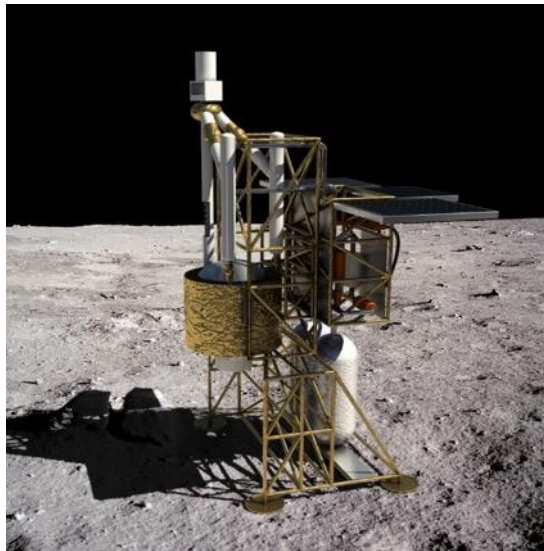
- Advanced Cislunar and Surface Capabilities leads the Exploration Campaign with developing a reusable human lunar landing architecture utilizing innovative public-private partnerships.
- Also advances partnerships through first elements of Gateway; the Power and Propulsion Element, ready for launch in 2022, and the Utilization module and ESPRIT enabling crew to stay aboard starting in 2024.
- AES pioneers human spaceflight systems development, including habitation capabilities and systems, crew mobility systems, vehicle systems, autonomous systems, and robotic precursors for future human missions beyond low Earth orbit.
- Human Research Program mitigates the highest risks to astronaut health and performance to ensure crews remain healthy and productive during long-duration missions beyond Earth orbit.



Exploration Technology



(\$M)	2020	2021	2022	2023	2024
Exploration Technology	\$1,014.3	\$976.1	\$995.4	\$964.4	\$943.1



- Serves as a catalyst for new technology required to “lead the return of humans to the Moon for long-term exploration and utilization (Space Policy Directive-1).”
 - Funds the Lunar Surface Innovation Initiative, consisting of new and ongoing lunar surface technology research and development activities to enable and enhance lunar exploration, and continuing to support Mars “tall pole” technology needs.
 - Technology research and development spanning the Technology Readiness Level (TRL) spectrum; advancing early-stage concepts, maturing key technologies and systems that enable demonstrations in relevant environments.
-
- Readies Laser Communications Relay Demonstration for 2020 launch to enable optical communications for both near-Earth and deep space missions; and three small spacecraft for flight.
 - Develops Solar Electric Propulsion for Lunar Gateway, and continues public-private partnerships to flight demonstrate robotic in-space manufacturing and assembly technologies to build large structures in a space environment.
 - Encourages innovation and commercial participation, bringing together stakeholders from academia, industry, small businesses, and NASA workforce.

LEO and Spaceflight Operations: *International Space Station*



(\$M)	2020	2021	2022	2023	2024
ISS	\$1,458.2	\$1,448.5	\$1,449.4	\$1,352.6	\$1,315.7

- Provides funding for the International Space Station which will be used to facilitate a transition to a more robust and cost-effective commercial approach to human space activities near the Earth.
- Continues ISS Focus Areas:
 - Enable long-duration human deep space exploration via research and technology demonstrations.
 - Enable development and advancement of a commercial marketplace in low Earth orbit.
 - Return benefits to humanity on Earth through space-based research and technology development.
 - Maintain U.S. global leadership of space exploration.
- Through use of the National Laboratory, supports above focus areas, expands the number of researchers and companies using ISS, and enables new public-private partnerships.



LEO and Spaceflight Operations: *Space Transportation*



(\$M)	2020	2021	2022	2023	2024
Space Transportation	\$1,828.6	\$1,854.1	\$1,814.5	\$1,746.2	\$1,727.2

- Continues NASA's partnership with the U.S. commercial space industry to send astronauts into space safely, reliably, and affordably from American soil.
- Assures U.S. crew and cargo transportation to the ISS, bolsters American leadership, and reduces our dependence on Russian spaceflight capabilities for crew transportation.
- Enables continued research and technology development on ISS by providing stable crew and cargo flight plan.
- Stimulates growth of the space transportation industry available to all potential customers, strengthening America's space industrial base.



LEO and Spaceflight Operations: *Space and Flight Support*



(\$M)	2020	2021	2022	2023	2024
SFS	\$848.9	\$891.9	\$905.7	\$911.8	\$914.5

- Continues mission critical space communications and navigation services to customer missions, including human, science, and commercial crew and cargo missions.
- Initiates the Communications Services Program to begin purchasing commercially provided satellite-based data relaying services to more efficiently meet future needs
- Supports readiness and crew health for all NASA human space flight endeavors.
- Provides safe, reliable, and cost-effective launch services for NASA payloads and launch vehicle acquisition and advisory services to over 50 NASA scientific spacecraft missions in various phases of development.
- Continues certification of new commercial launch vehicles.
- Provides NASA's rocket testing capability to meet US rocket testing requirements and provides valuable propulsion data for EM-1 and EM-2.



LEO and Spaceflight Operations: *Commercial LEO Development*



(\$M)	2020	2021	2022	2023	2024
CLD	\$150.0	\$175.0	\$200.0	\$225.0	\$225.0

- Assists commercial space industry to develop a sustained commercial low earth orbit presence.
- Continues transition of low Earth orbit human space flight operations to commercial partners.
- Encourages commercial development of platforms and capabilities for use by the private sector and NASA to enable a seamless transition from ISS.
- Increases efforts to develop a commercial space economy in LEO.



Science: *Earth Science*



(\$M)	2020	2021	2022	2023	2024
Earth Science	\$1,779.8	\$1,785.6	\$1,779.7	\$1,666.5	\$1,674.6

- Initiates the Decadal Incubation project to address needs for two targeted observable areas: Planetary Boundary Layer and Surface Topography and Vegetation.
- Begins new Earth Venture Continuity element to focus on specific instruments for continuity of measurements per 2017 Decadal Survey recommendations.
- Proposes to terminate PACE and CLARREO Pathfinder but restores funding for OCO-3 and DSCOVR.
- Supports formulation and development of Landsat-9, NISAR, SWOT, TEMPO, Sentinel-6, and TSIS-2.
- Supports over 30 missions in all stages of development and operation in addition to Airborne Science.
- Invests in CubeSats/SmallSats that can achieve entirely new science at lower cost.

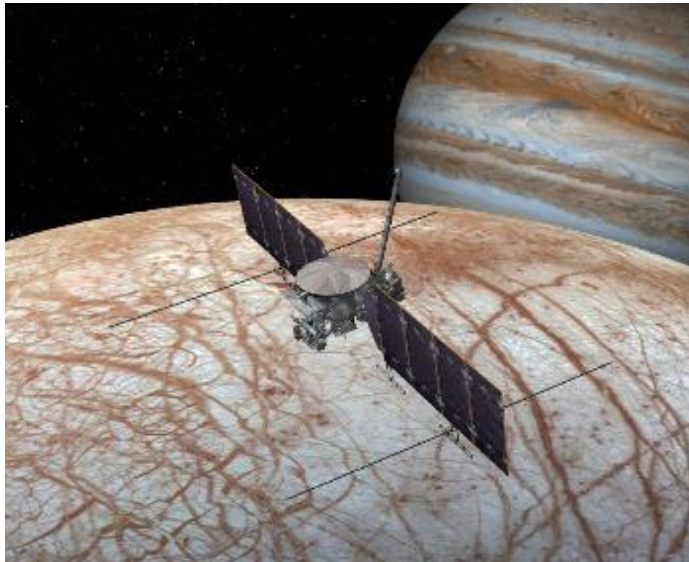


Science: *Planetary Science*



(\$M)	2020	2021	2022	2023	2024
Planetary Science	\$2,622.1	\$2,577.3	\$2,629.4	\$2,402.4	\$2,350.9

- Continues Lunar Discovery and Exploration program in partnership with industry to develop instruments and other payloads for missions to the lunar surface.
 - Program will address exploration, science, and technology demonstration objectives as NASA prepares for a sustained program of lunar exploration.
- Continues development of Mars 2020 and Europa Clipper; for planned launches on commercial launch vehicles in 2020 and 2023 respectively.
- Initiates a Mars Sample Return mission, incorporating commercial and international partnerships.
 - Continues the Planetary Defense program, including Double Asteroid Redirection Test (DART) and Near-Earth Object Observations.
 - Continues development of Lucy and Psyche missions.
 - Supports ongoing New Frontiers missions, as well as for a new selection in FY 2019.
 - Invests in CubeSats/SmallSats that help achieve entirely new science at lower cost.
 - Supports operations on 13 Planetary missions.



Science: *Astrophysics*



(\$M)	2020	2021	2022	2023	2024
Astrophysics	\$844.8	\$902.4	\$965.2	\$913.5	\$907.7

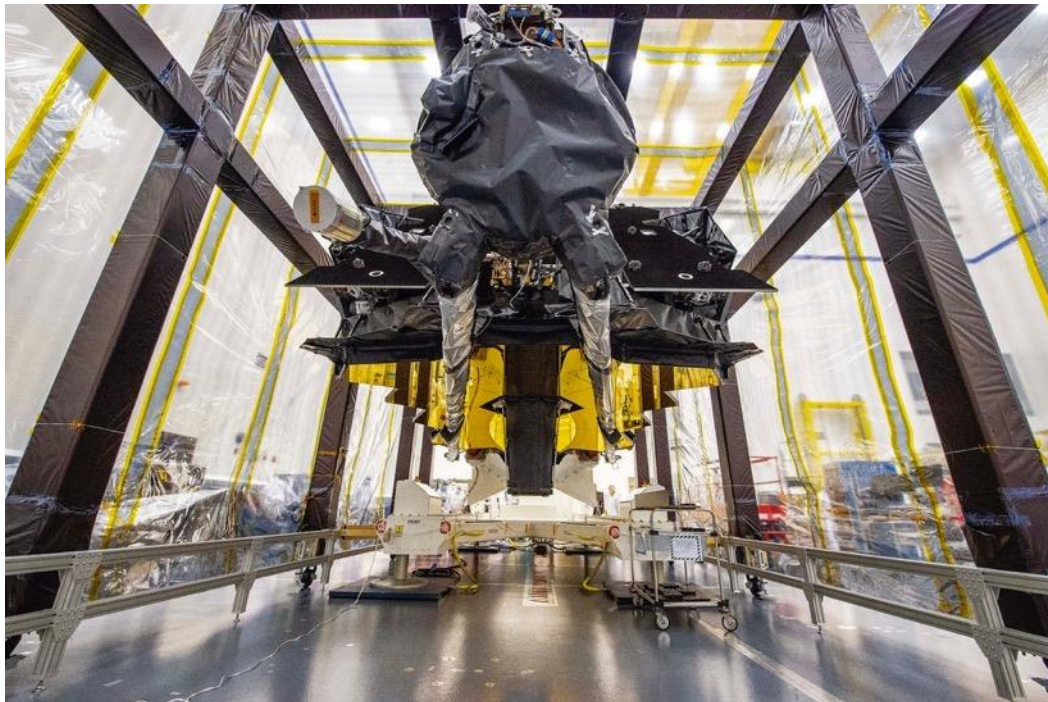


- Formulates or develops, IXPE, GUSTO, XRISM, Euclid, and SPHEREx a new MIDEX mission selected in February.
- Operates 10 missions, and the balloon program.
 - Supports the TESS exoplanet mission launched on April 18, 2018.
 - Continues operations of the Hubble Space Telescope; now in its 28th year
- Consistent with the FY 2019 request this budget proposes termination of the WFIRST mission in FY 2020 due to its significant cost and higher priorities within NASA, including the need to complete the James Webb Space Telescope.
- Continues support of CubeSats/SmallSats, taking advantage of the technological progress in the public and private sector toward meeting high-priority science goals.

Science: *James Webb Space Telescope*



(\$M)	2020	2021	2022	2023	2024
Webb	\$352.6	\$415.1	\$175.4	\$172.0	\$172.0



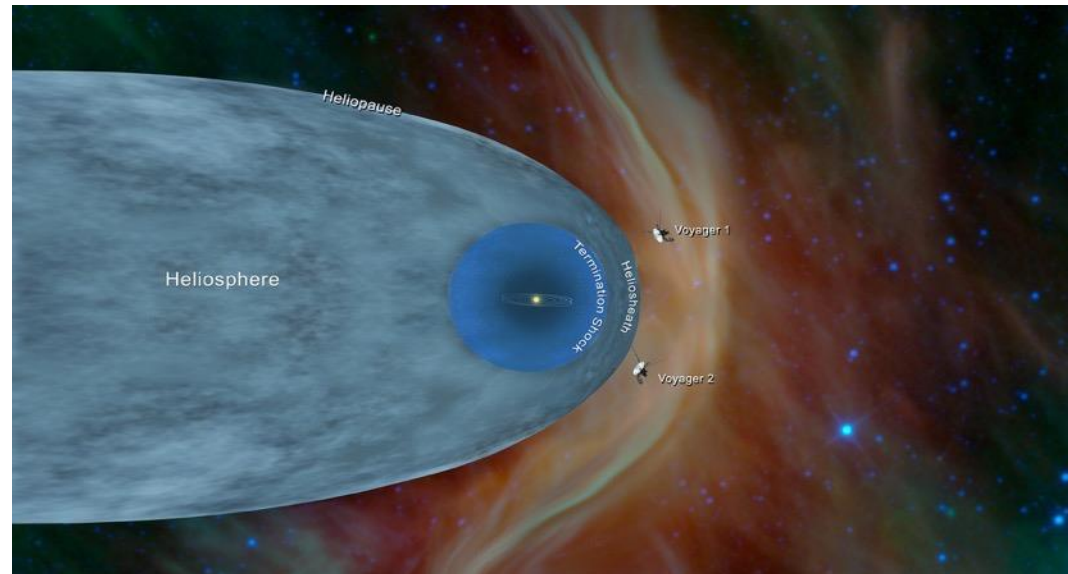
- Budget shifts Webb funding from Astrophysics to its own theme line as shown in table above.
- Supports the new launch date of March 2021.
- Applying Independent Review Board and Standing Review Board recommendations.
- Completes Integration of OTIS to the spacecraft element.
- Conduct testing of the Webb flight operations system and science processing system.
- Transport Webb to the launch site in Kourou, French Guiana.

Science: *Heliophysics*



(\$M)	2020	2021	2022	2023	2024
Heliophysics	\$704.5	\$638.6	\$769.3	\$692.0	\$709.8

- Formulates the Interstellar Mapping and Acceleration Probe (IMAP) -- which will help researchers better understand the heliosphere, a magnetic bubble surrounding and protecting our solar system.
 - NASA plans to provide a ride to NOAA's Space Weather Follow On with the IMAP launch.



- Develops Solar Orbiter Collaboration (SOC) partnership with the European Space Agency (ESA), readying for launch in 2020 and Ionospheric Connection Explorer (ICON), readying for launch in 2019
- Continues support for CubeSats/SmallSats, Sounding Rockets, and Space Weather Science Applications.
- Supports operation of 16 additional missions including Parker Solar Probe, which launched last year.

Aeronautics



(\$M)	2020	2021	2022	2023	2024
Aeronautics	\$666.9	\$673.6	\$680.3	\$587.1	\$587.0

- Completes final assembly of the X-59 aircraft for the Low Boom Flight Demonstration mission and lays the groundwork for delivery of scientifically acquired data of community response to low sonic boom to regulatory organizations (e.g., ICAO, FAA) to usher in a new era of supersonic flight for flying public.
- Advances technology for the next generation of subsonic transport including electric aircraft propulsion with a focus on maturing and demonstrating a practical 1MW+ electric propulsion system in flight.
- Accelerates research in urban air mobility to support industry readiness to perform advanced safety and operations testing for emerging global urban and inter-urban air mobility markets.
- Completes a series of air traffic management demonstrations with the FAA, airlines, and airports that validate new capabilities that improve airport operating efficiency. Also, completes demonstrations of technologies to integrate larger UAS into the NAS as well as manage smaller UAS at lower altitudes.
- Transfers Aerospace Evaluation and Test Capabilities Project from Aeronautics to SSMS.



STEM Engagement



- Proposes termination of funding for NASA's Office of STEM Engagement, including its portfolio of grants and cooperative agreements and redirects funds to NASA's core mission of exploration.
 - NASA headquarters will continue to be accountable for strategic direction and coordination of the agency's STEM engagement efforts.
- Continues internships, fellowships, and student STEM engagement activities and learning opportunities funded by NASA mission directorates.
- SMD's Science Activation program will continue to focus on delivering SMD content to learners of all ages through cooperative agreement awards.

Safety, Security, and Mission Services



(\$M)	2020	2021	2022	2023	2024
SSMS	\$3,084.6	\$3,084.6	\$3,084.6	\$2,871.6	\$2,871.6

- Funds ongoing operations across NASA Centers and major component facilities to accomplish national space policy priorities of scientific discovery, exploring and expanding the boundaries of human presence in space, and developing the technologies of tomorrow.
- Provides independent technical and safety oversight of NASA missions and operations.
- Increases facilities maintenance to reduce deferred maintenance backlog and system degradation in mission critical test facilities.
- Provides core services to support mission roles and responsibilities by optimizing acquisition, human capital management, budget management, and facilities management to maintain the required set of capabilities.
- Provides strategic information technology (IT) investments to improve security, reduce costs, and increase efficiency by modernizing systems, increasing automation, and delivering affordable enterprise-wide solution.
- Strengthens cybersecurity capabilities by safeguarding critical systems and data plus continues to support improved overall management of IT.



Construction of Facilities and Environmental Compliance and Restoration



(\$M)	2020	2021	2022	2023	2024
Construction & ECR	\$600.4	\$468.8	\$468.8	\$468.8	\$387.8

- Funds repair, revitalization, demolition, and recapitalization projects that reduce the Agency's footprint and provide efficient, modernized facilities.
- Invests in energy savings projects to reduce utility usage and costs.
- Constructs new or modified facilities to conduct NASA's program missions, including new research facilities at LaRC and JPL.
- Manages NASA's environmental clean-up responsibilities.
- FY20 budget enables a stronger revitalization strategy to replace older and costly facilities, beyond their design life, with more modern and less costly capabilities supporting agency mission objectives



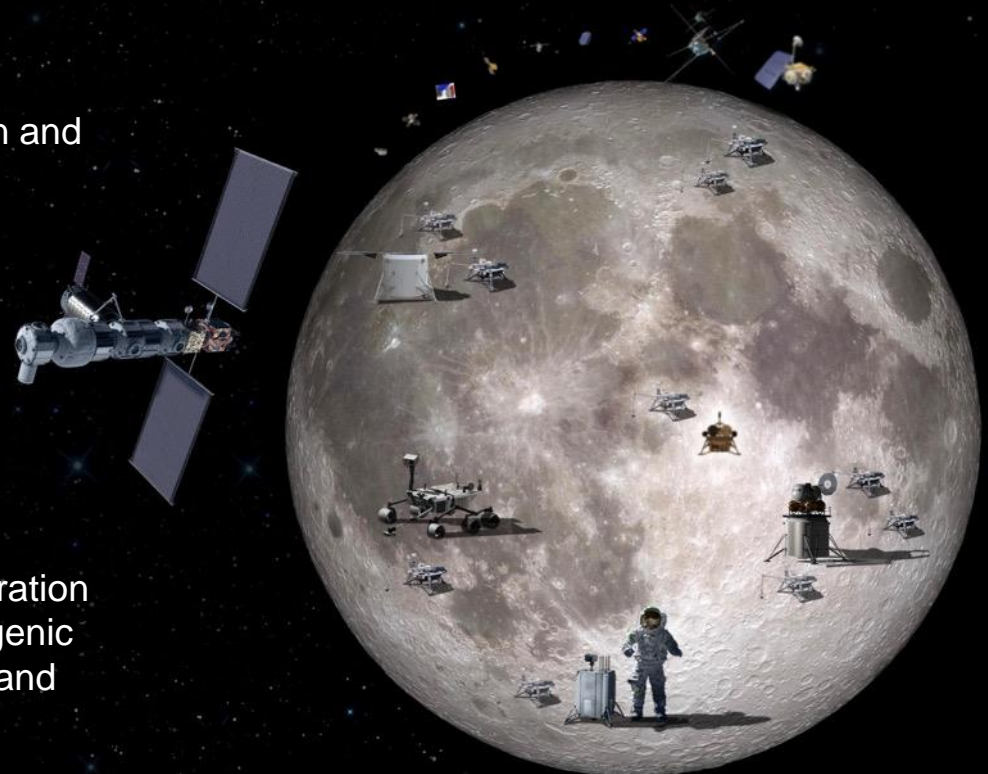
Long-Term Exploration and Utilization of the Moon

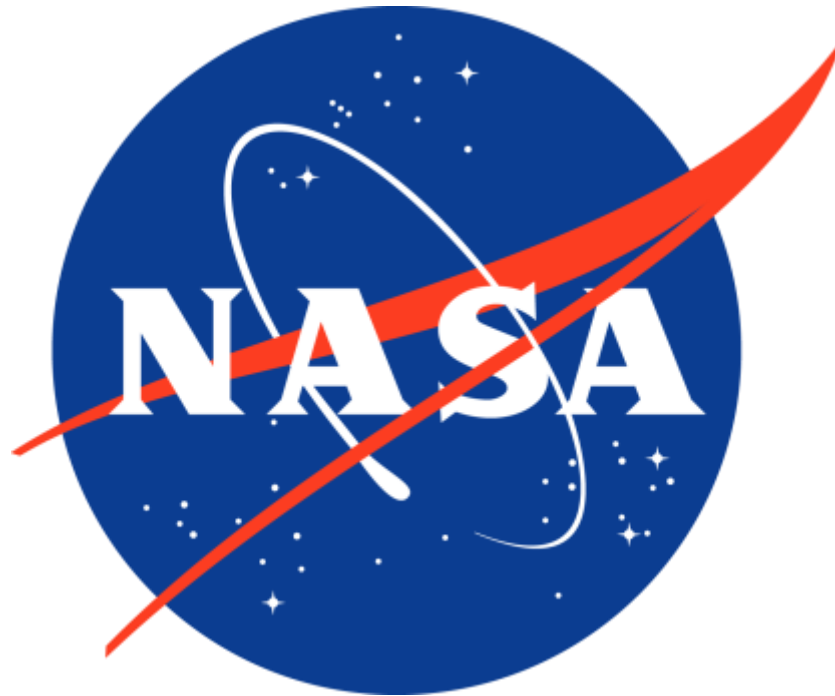
(current plan)



With this Budget, by 2028 NASA will have:

- Provided opportunities for at least 13 deep space CubeSat missions, including 7 to the Moon (on EM-1)
- Completed 2 Exploration Mission test flights with SLS and Orion
- Completed 5 additional EMs on SLS and Orion and 14 commercial flights
- Flown up to 10 CLPS opportunities, enabling new science and demonstrating new technologies supporting human return to the lunar surface
- Delivered a rover to investigate volatiles
- Demonstrated, for the first time, a reusable lunar ascent vehicle
- Used, for the first time on the Moon, key exploration technologies including precision landing, cryogenic fluid management, in-situ resource utilization, and surface nuclear power
- Returned humans to the lunar surface
- Demonstrated key technologies and operations needed to enable the first human missions to Mars





Acronyms



- AES: Advanced Exploration Systems
- CLARREO: Climate Absolute Radiance and Refractivity Observatory
- CCP: Commercial Crew Program
- CLPS: Commercial Lunar Payload Services
- CSP: Communications Services Program
- DART: Double Asteroid Redirection Test
- DSCOVR: The Deep Space Climate Observatory
- ECOSTRESS: Ecosystem Spaceborne Thermal Radiometer Experiment on Space Station
- EGS: Exploration Ground Systems
- EM: Exploration Mission
- EEVM: Earth Venture Mission
- EVS: Earth Venture Sub-Orbital Solicitation
- FAA: Federal Aviation Administration
- GUSTO: Galactic/extragalactic ULDB Spectroscopic Terahertz Observatory
- ICON: Ionospheric Connection Explorer
- ICPS: Interim Cryogenic Propulsion Stage
- ISS: International Space Station
- IXPE: Imaging X-ray Polarimetry Explorer
- JPSS: Joint Polar Satellite System
- LBFD: Low-Boom Flight Demonstration
- LCRD: Laser Communications Relay Demonstration
- LDEP: Lunar Discovery and Exploration Program
- LEO: Low Earth Orbit
- LSII: Lunar Surface Innovative Initiative
- LVSA: Launch Vehicle Stage Adapter
- MEDA: Mars Environmental Dynamics Analyzer
- MEDLI2: Mars Entry, Descent, and Landing Instrumentation 2
- MIDEX: Medium-Class Explorers
- MOXIE: Mars Oxygen In-Situ Resource Utilization Experiment
- MSR: Mars Sample Return
- NextSTEP: Next Space Technologies for Exploration Partnership
- NISAR: NASA-ISRO Synthetic Aperture Radar
- OCO-3: The Orbiting Carbon Observatory 3
- OSIRIS-Rex: Origins, Spectral Interpretation, Resource Identification, Security, Regolith Explorer
- OTIS: Optimal Trajectories by Implicit Simulation
- PACE: Plankton, Aerosol, Cloud, ocean Ecosystem
- PPE: Power Propulsion Element
- PSP: Parker Solar Probe
- QueSST: Quiet Supersonic Technology X-Plane
- SBIR: Small Business Innovation Research
- SLS: Space Launch System
- SMD: Science Mission Directorate
- SMEX: Small Explorer class
- SOC: Solar Orbiter Collaboration
- STEM: Science, Technology, Engineering and Mathematics
- STTR: Small business Technology Transfer
- SWOT: Surface Water and Ocean Topography
- TDM: Technology Demonstration Mission
- TEMPO: Tropospheric Emissions Monitoring of Pollution
- TESS: Transiting Exoplanet Survey Satellite
- TRL: Technology Readiness Level
- TRN: Terrain Relative Navigation
- TROPICS: Time-Resolved Observations of Precipitation structure and storm Intensity with a Constellation of Smallsats
- TSIS: Total and Spectral Solar Irradiance Sensor
- UAM: Urban Air Mobility
- UAS: Unmanned Aircraft Systems
- XRISM: X-ray Imaging and Spectroscopy Mission
- Webb: James Webb Space Telescope
- WFIRST: Wide Field Infra Red Survey telescope (AFTA: Astrophysics Focused Telescope Assets)