

NASA FY 2024 BUDGET REQUEST

(\$ in Billions)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
NASA Budget	24.0	25.4	27.2	27.7	28.3	28.8	29.4

FY 2022 reflects funding amounts specified in Public Law 117-103, Consolidated Appropriations Act, 2022, as adjusted by NASA's FY 2022 Operating Plan, August 2022.

FY 2023 reflects funding amounts specified in Public Law 117-328, Consolidated Appropriations Act, 2023.

The FY 2024 Budget request for NASA is \$27.2 billion (7.1% increase over FY 2023 enacted). With this proposed budget, NASA will fund the following efforts:

Agency Highlights

- Building on the success of Artemis I, this request advances Moon to Mars exploration and U.S. leadership in human spaceflight and space science. Specifically, this budget requests \$8.125 billion to return American astronauts to the Moon, including the first woman and first person of color, to establish a sustainable lunar presence and lay the groundwork for humanity's first crewed mission to Mars.
- Support continued human presence in low-Earth orbit (LEO) with operations of the International Space Station (ISS) through 2030. This includes \$228 million to collaborate with U.S. industry on commercial space stations that will become available in the late 2020s, in order to initiate transition from ISS after its retirement; and \$180 million for a U.S. deorbit vehicle that will enable the safe and responsible deorbit of the ISS at the end of this decade.
- Advance robotic exploration of the Moon and Mars with our allies, including \$459 million for lunar science missions, \$949 million for Mars Sample Return, and \$269 million for other Mars exploration.
- Advance space technology research and development with \$1.4 billion. As our seed corn for innovation, this funding will advance mission capabilities and technologies needed to support NASA's integrated Moon to Mars efforts, through targeted investment, strategic partnerships, and leveraging early-stage innovators and the commercial space economy.
- Continues investments in Earth science and green aviation that will protect our home planet. Specifically, this request proposes \$2.5 billion to fund Earth science and observations that enhance our understanding of the Earth system through the Earth System Observatory missions and continue efforts to make detailed climate data freely available to scientists and policymakers. This request also includes over \$500 million in Aeronautics to improve aircraft engine efficiency and reduce the climate impact of aviation.
- Broaden and diversify student participation in Science, Technology, Engineering, and Mathematics (STEM) with \$158 million for the Office of STEM Engagement to inspire and develop the next generation of scientists, engineers, and explorers.
- Invest \$3.8 billion in NASA's workforce and the vital functions that underpin the success of our missions, including NASA's facilities, information technology, core business infrastructure, and other essential systems.

Deep Space Exploration Systems - \$7.971 billion (6.7% increase over FY 2023 enacted)

- \$4.525 billion for Common Exploration Systems Development to support lunar missions, with \$1.225 billion to build the Orion, \$2.506 billion for the Space Launch System, and \$794 million for Exploration Ground Systems to develop the necessary systems required to launch SLS and Orion.
- \$3.235 billion for Artemis Campaign Development to advance lunar exploration capabilities, with \$1.881 billion for the Human Landing System Program to develop and deploy multiple landing systems that will transport the first woman and first person of color to the Moon, \$914 million for the Gateway, \$380 million for space suits and lunar rovers, and \$60 million for Advanced Cislunar and Surface Capabilities for future lunar surface habitats.
- \$162 million for Mars Campaign Development to develop future exploration capabilities.
- \$49 million for Human Exploration Requirements and Architecture to support Moon and Mars strategy and architecture development.

Space Operations - \$4.535 billion (6.7% increase over FY 2023 enacted)

- \$1.957 billion for Space Transportation to continue NASA's partnership with the U.S. commercial space industry to operate safe, reliable, and affordable systems to transport crew and cargo to and from the ISS, which includes \$180 million to partner with industry to develop a U.S. deorbit capability for ISS.
- \$1.303 billion for ISS operations and research to continue leveraging the multi-national space platform to conduct research, identify risks to human health, test exploration technologies, and support the growth of a commercial economy in LEO.

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- \$1.047 billion for Space and Flight Support to enable safe, reliable, and productive human space exploration, including funding to provide mission-critical space communications; provide launch and test services; and conduct astronaut training and research into the health of humans living and working in space.
- \$228 million for Commercial LEO Development to partner with the U.S. commercial space industry on future commercial space stations in LEO.

Space Technology - \$1.392 billion (16% increase over FY 2023 enacted)

- \$551 million for Technology Demonstration for ground and flight testing, including completing On-orbit Servicing, Assembly, and Manufacturing-1 (OSAM-1) hardware build; continuing to collaborate with DARPA and other Government agencies to advance nuclear propulsion technologies; proving Cryogenic Fluid Management technologies with the first flight demonstration; and increasing the pace of space exploration with small spacecraft and responsive launch capabilities.
- \$402 million for Technology Maturation to advance disruptive space technologies, including delivery of Lunar Surface Innovative Initiative payloads (Polar Resources Ice Mining Experiment, Nokia 4G, Hopper, and Cooperative Autonomous Distributed Robotic Exploration) to the lunar surface; begin qualification testing of the High Performance Spaceflight Computing production chip; and demonstrate Deep Space Optical Communications on the Psyche mission.
- \$138 million for Early-Stage Innovation and Partnerships that source ideas from a broad, diverse base of innovators, and transfer space technology into the space economy.
- \$300 million for Small Business Innovation Research and Small Business Technology Transfer to develop new technologies, drive investments in small businesses, and spur economic growth.

Science - \$8.261 billion (3.4% increase over FY 2023 President's request and 6% increase over FY 2023 enacted)

- \$3.383 billion for Planetary Science, including the Mars Sample Return mission; expanded funding for U.S. contributions to the European Space Agency's Rosalind Franklin Mars rover, which will search for signs of ancient life; funding for missions such as Europa Clipper, Psyche, Deep Atmosphere Venus Investigation of Noble gases, Chemistry, and Imaging (DAVINCI), and Dragonfly to explore new destinations in the solar system; funding for Lunar Discovery and Exploration Program in support of NASA's Artemis Program; and funding for Volatiles Investigating Polar Exploration Rover (VIPER) lunar mission planned for FY 2025. Mars Sample Return costs may increase beyond the outyear profile shown in the Budget, which would require either reduced funding for other Science activities or descopeing of this mission.
- \$2.473 billion for Earth Science to enhance understanding of the Earth system through continued investment in the Earth System Observatory missions (Atmosphere Observing System- Storm, Atmosphere Observing System – Sky, Surface Biology and Geology and Mass Change); initiate the first Earth System Explorers mission; support the ongoing development of the Plankton, Aerosol, Clouds, ocean Ecosystem (PACE), Climate Absolute Radiance and Refractivity Observatory (CLARREO) Pathfinder, and NASA-ISRO Synthetic Aperture Radar (NISAR) missions; continue funding for an Earth Information Center; and enhance data and applications to support decision-making related to wildfires, agriculture, and greenhouse gas mitigation.
- \$1.557 billion for Astrophysics to support operation of the James Webb Space Telescope and the Hubble Space Telescope, as well as the development of the Nancy Grace Roman Space Telescope, planned for launch in 2027; funding for the Spectro-Photometer for the History of the Universe and Ices Explorer (SPHEREx); support for initial selections of the first Astrophysics Probe mission; and support of precursor science and technology efforts in planning and preparing for the Great Observatories Mission and Technology Maturation Program (GOMAP) recommendation contained in the Astro2020 Decadal Survey.
- \$751 million for Heliophysics to study the Sun and its influence throughout the solar system, including the Interstellar Mapping and Acceleration Probe (IMAP) and the Carruthers Geocorona Observatory; continue the Space Weather Program focused on applied research and applications to enable the Nation to better protect our technology and astronauts from space weather and funding for the Diversify, Realize, Integrate, Venture, Educate (DRIVE) initiative; and fund orbital debris investments to enable characterization of the population of small debris in space and protect space-based critical infrastructure and humans working in space. This budget pauses further development of the Geospace Dynamics Constellation to accommodate other priorities in the Science portfolio.
- \$97 million for Biological and Physical Sciences to better understand how biological and physical systems work from the unique vantage point of space, including support for the new Commercially Enabled Rapid Space Science initiative, which seeks to develop research capabilities to dramatically increase the pace of research in low-Earth orbit.
- The overall Science request supports over 120 science space science missions, including 56 currently preparing for launch and approximately 70 in operation; and 10,000 U.S. scientists in universities, industry, and Government labs through more than 4,000 openly competed research awards.

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Aeronautics Research - \$996 million (6.5% increase over FY 2023 enacted)

- \$295 million for Advanced Air Vehicles to develop technologies and concepts that enable new generations of civil aircraft that are safer, faster, more energy-efficient, and have a smaller environmental footprint; demonstrate integrated small core aircraft engine technologies; and develop techniques for high-rate manufacturing of composite structures.
- \$265 million for Integrated Aviation Systems to explore, assess, and demonstrate the benefits of the most promising technologies at an integrated system level, including in flight; develop Electrified Powertrain Flight Demonstrations and a Sustainable Flight Demonstrator that will pave the way to reducing aviation emissions; and support test flights of the X-59 Low-Boom Flight Demonstrator exploring quiet supersonic flight.
- \$159 million for Airspace Operations and Safety to modernize and transform the national air traffic management system, in partnership with the Federal Aviation Administration (FAA) and the aviation community; develop and explore advanced technologies for more efficient flight trajectories; lead research on autonomous aviation; provide tools to support in-time system-wide safety assurance; and develop a concept of operations to improve aerial wildfire responses.
- \$160 million for Transformative Aero Concepts to support revolutionary aviation concepts development with opportunities focused on zero-emissions aviation, new computational tools, and experimental capability advancement.
- \$117 million for Aerosciences Evaluation and Test Capabilities, supporting NASA's large wind tunnel test infrastructure.

STEM Engagement - \$158 million (10% increase over FY 2023 enacted)

- NASA's STEM engagement efforts will focus on broadening student participation, expanding K-12 student engagement in STEM pathways, and building partnerships and networks to magnify reach and impact. Projects include: Space Grant, Established Program to Stimulate Competitive Research (EPSCoR), Minority University Research and Education Project (MUREP), and Next Gen STEM.

Safety, Security and Mission Services (SSMS) and Construction and Environmental Compliance Restoration (CECR) - \$3.823 billion (7.9% increase over FY 2023 enacted)

- \$3.369 billion for SSMS to fund Agency-wide business capabilities, technical oversight, and infrastructure maintenance that are essential to enable NASA's ambitious portfolio of missions and help maintain U.S. leadership in space, aviation, science, and technology.
- \$454 million for CECR to ensure the Agency's infrastructure, laboratories, and critical facilities are safe, secure, environmentally sound, appropriately sized, efficiently operated, and mission ready.