Leading the Exploration of the Moon and Mars

A BUDGET FOR AMERICA'S FUTURE

America is leading the world in a new era of space exploration that will send the first woman and the next man to the Moon in 2024 and build a sustainable presence on the lunar surface. Through learning to live and work on the Moon, the United States and our international and commercial partners will develop the experience, technology, and systems that we will need to eventually send humans to Mars. These efforts will continue America's standing as the world leader in space exploration and inspire the next generation of explorers, researchers, scientists, artists, and engineers around the world.

In support of this vision, the FY 2021 Budget is one of the strongest budgets in NASA's history.

Landing on the Moon by 2024, Sustainable Surface Missions, and Preparing for Mars
The Budget provides $25.2 billion for NASA in FY 2021, a 12 percent increase from the 2020 enacted level. Of this amount, $12.3 billion will support the systems, people, and facilities needed to land and operate on the Moon and prepare for a future human landing on Mars. The Budget provides sustained robust funding from FY 2021 to FY 2025 for exploration – through the date of the next lunar landing and beyond.

- **Human Lunar Landers.** The Budget provides more than $3.3 billion in FY 2021 to support the development of human lunar lander systems that will take astronauts from orbit around the Moon down to the surface. The strategy for developing these landers relies on competition, industry innovation, and robust Government oversight with the goal of delivering safe, reliable landing systems that can enable affordable and sustainable exploration.
- **Transportation Systems.** The Budget continues development of the Space Launch System rocket, Orion crew capsule, and their ground systems, which together will take astronauts from Earth to the orbit around the Moon, where they will rendezvous with lunar landers. With the $4 billion provided in the Budget, NASA will work to complete these systems and start to establish a regular flight cadence.
- **Surface Capabilities.** Once astronauts set foot on the Moon, they will need a range of capabilities for a sustainable long-term presence and in preparation for Mars exploration. The Budget funds surface spacesuits ($175 million) and initial work on a surface habitat and rovers ($212 million). The Budget also provides $254 million for commercial landing services that will deliver science, technology, and exploration-focused instruments to the lunar surface.
- **Technology Development**. The Budget funds more than $430 million for a Lunar Surface Innovation Initiative that will enable human and robotic exploration on the Moon and future operations on Mars. The Initiative includes support for technology development and demonstrations for utilizing the Moon's resources, generating the power needed for habitation and exploration, and navigating in extreme surface and subsurface environments. The Budget provides $20 million for research grants and competitions to initiate work on the most challenging parts of a human mission to Mars as well as $44 million for new technology development to address opportunities specific to Mars, such as the ability to use carbon dioxide in its atmosphere to generate oxygen for life support systems and rocket fuel.
- **Robotic Exploration of Mars.** The Budget provides $529 million for the robotic exploration of Mars to pave the way for future human exploration, including a mission that will return samples of Martian soil and rocks to the Earth for the first time and a new mission to map the near-surface water ice that future explorers will use.