Office of Science and Technology Policy
Executive Office of the President
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SPACE SCIENCE, AERONAUTICS AND EXPLORATION

NASA Research and Development Funding in the President's 2009 Budget

The President's 2009 Budget for NASA is $17.6 billion, a $496 million increase over the FY 2008 enacted, reflecting a strong continuing commitment by the Administration to the quest for new knowledge, discovery and exploration. The 2008 omnibus also included about $90 million in earmarks. The 2009 NASA request supports robust programs in science and aeronautics while also advancing NASA's progress towards the Vision for Space Exploration.

First, an exciting array of science missions is being pursued that will enhance our understanding of the solar system, the Earth's environment and its complex interactions with the Sun, and the origin, structure, evolution and destiny of the universe. Next, NASA has restructured its aeronautics program to focus on long-term research of broad benefit to the Nation, consistent with the new National Aeronautics R&D Policy and its associated R&D Plan. And in the four years since the President outlined a new Vision for the human and robotic exploration of space, NASA has successfully resumed the assembly of the International Space Station (ISS) and made significant progress toward developing the launch and spacecraft architecture necessary to implement that Vision. At the same time, NASA has begun to develop goals and plans for future activities on the lunar surface, supported by an ongoing dialogue with other countries on potential exploration strategies and areas for international cooperation.

- **Advancing Earth and Space Science -** The 2009 NASA budget includes $4.44 billion, almost a third of NASA's total budget after accounting for overhead costs and other recent program composition adjustments, to continue operating the nearly 60 spacecraft of NASA's Science Mission Directorate and to support investments in future Earth and space science missions, vital technologies, and frontier research. NASA will launch seven new Earth observing missions in the next several years, including projects such as the Landsat Data Continuity Mission and the Global Precipitation Measurement mission. In a significant new initiative, NASA also will embark upon a series of high-priority, space-based Earth observing missions, informed by the recommendations of the National Research Council's recent Decadal Survey on earth sciences. At the same time, NASA will continue its roles in the interagency Climate Change Science Program and the international initiative on the Global Earth Observing System of Systems. NASA will expand its program of scientific exploration of the Moon through a new series of low-cost robotic missions that will advance our knowledge of Earth's closest neighbor as we prepare for a human return to the Moon. Following up ongoing missions to Mars, Saturn and Mercury, NASA also will send ever-more-capable spacecraft to Mars and other outer planets. In addition, NASA will continue its vibrant astrophysics and astronomy efforts through programs such as Beyond Einstein and the Great Observatories, and will upgrade the Hubble Space Telescope in late 2008 to provide five more years of productive on-orbit life. NASA also will maintain its important heliophysics research through projects such as the Radiation Belt Storm Probes.

- **New National Aeronautics R&D Plan -** In December 2007, the President approved the nation's first National Plan for Aeronautics R&D and Related Infrastructure. Consistent with this Plan, the 2009 NASA aeronautics budget prioritizes fundamental aeronautics research, the improvement of aviation safety, and research supporting the development of the Next Generation Air Transportation System. In addition, NASA will continue to address infrastructure upgrades and maintenance requirements for aeronautical test facilities across NASA centers that are of vital importance to the Nation. The 2009 budget requests $447 million for NASA aeronautics direct costs.

- **Progress on the Exploration Vision -** NASA requests $3.5 billion in 2009 for new vehicles and technologies to enable sustained and affordable human and advanced robotic exploration. NASA has identified the major design features and requirements for two key architecture elements -- the Orion Crew Exploration Vehicle and the Ares I launch vehicle that will carry astronauts to the Moon – and now has placed all of the major system components for these two vehicles under contract. In addition, NASA plans to launch the Lunar Reconnaissance Orbiter in late 2008 to acquire information to support future human missions and to conduct scientific study of the Moon. NASA also will continue pursuing critical new technologies to support exploration activities.

- **Assembling and Utilizing the International Space Station -** The 2009 NASA budget proposes $3 billion for operating the Space Shuttle and $2.1 for continuing assembly and operations of the Space Station. NASA is assembling the Space Station consistent with the President's exploration vision and the needs of our international partners, while employing the minimum number of Shuttle flights required to complete assembly before Shuttle retirement in 2010. NASA successfully conducted three Space Shuttle flights in 2007, all in support of Space Station assembly. NASA continues to focus U.S. research activities on the Space Station to understand and counter the negative effects of the long duration exposure of humans to the space environment. NASA is working with private industry to develop the capability to support the Space Station in the post-Shuttle era. The 2009 Budget contains $173 million to encourage the development for commercial services to the Space Station, and $2.6 billion over five years to procure those services.