



Johnson Space Center

Vision for Space Exploration

Turning vision into reality



This is an artist's concept depicting a possible scene of astronauts walking on Mars during a dust storm.

outer reaches of the solar system and beyond. On the human spaceflight side, NASA has rocketed humans to the moon, developed a reusable vehicle and established a permanent base in low-Earth orbit.

Now, a new era is arriving at NASA Johnson Space Center with the Vision for Space Exploration, which will increase robotic missions in the solar system and return humans to the moon before sending them to Mars.

The early stages of the Vision for Space Exploration call for the continuation and completion of two current NASA programs for which Johnson Space Center is the lead center. First, NASA will return the space shuttle to flight and retire it by the end of this decade. This would occur

Returning the space shuttle to flight and completing the International Space Station are the first steps in the Vision for Space Exploration, a stepping-stone strategy toward new exploration goals. Using the station to study human endurance in space and to test new technologies and techniques, NASA will prepare for the longer journeys to the moon, Mars and beyond.

For more than four decades, NASA Johnson Space Center has pushed the envelope in space exploration. We have sent robotic missions to the

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following the completion of the shuttle's role in the construction of the space station. Second, the Vision calls for the complete assembly of the station and the refocusing of science efforts to research exploration factors affecting astronaut health and acquire crew and cargo systems, as necessary, during and after availability of shuttle.

At the same time, NASA will develop a new-generation spacecraft, the Crew Exploration Vehicle, that will take astronauts to the moon. The first test flight is targeted to take place by the end of this decade and to provide an operational capability to support human exploration missions no later than 2014.

NASA will resume its robotic missions to the lunar surface by 2008, setting the stage for human missions in 2015.

Then, the Red Planet becomes a prime destination as NASA conducts robotic exploration of Mars to search for evidence of life, to understand the history of the solar system and to prepare for future human exploration. The timing of human missions to Mars will be based on available budgetary resources, experience and knowledge gained from lunar exploration, discoveries by robotic spacecraft at Mars and other solar system locations, and development of required technologies and know-how.

The Vision for Space Exploration also includes robotic exploration missions across the solar system to support human exploration and further scientific discoveries. There will be an emphasis on exploration of Jupiter's moons, asteroids and other bodies to search for evidence of life, understand the history of the solar system and search for resources.

However, the boundaries of the solar system will not confine NASA's efforts. The agency will conduct advanced telescope searches for Earth-like planets and habitable environments around other stars.

To reach the objectives outlined in the Vision for Space Exploration, NASA will develop and demonstrate power generation, propulsion, life support and other key capabilities required to support more distant, more capable and/or longer-duration human and robotic exploration of Mars and other destinations.

For more information about the Vision for Space Exploration, visit us on the Web at www.nasa.gov/missions/solarsystem/explore_main.html and

www.nasa.gov