Boeing Unveils Deep Space Concepts for Moon and Mars Exploration

Deep space gateway, transport critical to future human space activities

COLORADO SPRINGS, Colo., Apr. 3, 2017– Boeing [NYSE: BA] today unveiled concepts for the deep space gateway and transport systems that could help achieve NASA's goal of having robust human space exploration from the Moon to Mars.

NASA's Space Launch System, which Boeing is helping develop, would deliver the habitat to cislunar space near the Moon. Known as the Deep Space Gateway, the habitat could support critical research and help open opportunities for global government or commercial partnerships in deep space, including lunar missions. It would be powered by a Solar Electric Propulsion (SEP) system.

"The ability to simultaneously launch humans and cargo on SLS would allow us to assemble the gateway in four launches in the early 2020s," said Pete McGrath, director of global sales and marketing for Boeing's space exploration division.

The Deep Space Gateway could be the waypoint for Mars missions. Utilizing a docking system akin to what the International Space Station uses for commercial operations, it could host the Deep Space Transport vehicle, which would take humans to Mars. Once near Mars, crews could deploy a lander for surface missions or conduct other scientific and robotic missions in orbit.

The transport vehicle would be equipped with a habitat specifically designed to protect passengers from deep space's harsh environment and its own robust SEP bus.

In fact, both of Boeing's concepts leverage proven solar electric propulsion technology and hardware design from the 702 satellite family.

The gateway and transport systems are partially being developed as part of NASA's Next Space Technologies for Exploration Technologies (Next Step) program and an ongoing High Power SEP technology development effort within the NASA Space Technology Mission Directorate (STMD).

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