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SPACE OPERATIONS MISSION DIRECTORATE PROGRESS AND ROLE IN ENABLING EXPLORATION IN AND BEYOND LOW EARTH ORBIT ABSTRACT

Abstract

NASA's Space Operations Mission Directorate performs essential operations, enables research, and develops the human spaceflight capabilities, as well as the commercial and international partnerships needed to help the agency explore the unknown in space. The directorate supports humanity's more than 25 years of operations aboard the International Space Station, advancing scientific knowledge in Earth, space, physical, and biological sciences for the benefit of people living on our home planet. The space station is a test bed of innovation, technology demonstrations, and a destination for NASA to better understand how astronauts can learn how to live and work in space. The directorate shapes public-private partnerships with American industry driving innovation and reduces costs to the government, so the nation can take human exploration to the Moon, Mars, and beyond. Through commercial partnerships, NASA shares its technical knowledge and experience to bolster industry, and purchase services for cargo and crew flights, and science logistics for space research and manufacturing. In the future, NASA aims to purchase services on commercially owned and operation destination in low Earth orbit and services for space communications and navigations allowing for new economic opportunities and new discoveries in our solar system. The directorate also supports the launch of science missions exploring Earth from space and visiting a broad list of deep space destinations.

The paper will provide updates and highlight progress across each program to showcase Space Operation's essential role in enabling space exploration and operations in and beyond low Earth orbit.