

# **NASA SPACE FLIGHT HUMAN-SYSTEM STANDARD: ENABLING HUMAN SPACE FLIGHT MISSIONS BY SUPPORTING ASTRONAUT HEALTH, SAFETY, AND PERFORMANCE**

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## **ABSTRACT**

The purpose of this presentation is to describe NASA's approach to establishing and maintaining a set of Agency-level Space Flight Human System Standards managed by the Office of the Chief Health and Medical Officer (OCHMO) at NASA that enables space flight missions by minimizing health risks to astronauts, providing vehicle design parameters, and supporting the performance of both flight and ground crews. NASA standards capture and provide knowledge, guidelines, thresholds and limits for the successful design and operation of spacecrafts and missions. The NASA Space Flight Human-System Standard (NASA-STD-3001) consists of two separate volumes of technical requirements: NASA-STD-3001 Volume 1: Crew Health addresses the requirements needed to support astronaut health and provide medical care; NASA-STD-3001 Volume 2: Human Factors, Habitability, and Environmental Health addresses human-integrated vehicle system design and operational requirements that will maintain astronaut safety and promote human performance. These standards are managed by an OCHMO team who continuously works with subject matter experts and with each space flight program to provide the best technical requirements and implementation documentation to support the development of new programs. Through ongoing work with groups such as the Human Research Program (HRP), the NASA and the National Academies of Sciences, Engineering, and Medicine, academia, and national experts, the team continuously updates existing technical requirements and establishes new technical requirements based on space flight operational experience, research findings, and expert recommendations. These technical standards provide requirements based on acceptable agency risk, with the intent of being tailored to each individual programs' needs. Through partnerships across the space flight industry, these technical requirements are constantly evolving to enable safe and successful implementation of NASA programs and the commercialization of human space flight.