

Gateway Induced Environments Overview

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Gateway will be a long duration space station orbiting the Moon in support of NASA's Artemis campaign. Over its lifetime, Gateway will be exposed to a variety of induced environments, including materials outgassing, chemical and electric thruster plumes, vacuum vents, and lunar dust transport (from the Human Lander System, HLS). Induced Environments can impact vehicle performance and mission success. The multidisciplinary Gateway Induced Environments Team has developed requirements and methodologies to address the complex challenge of integrating multiple elements and visiting vehicles while maintaining the Gateway induced environments within prescribed limits. The Gateway Induced Environments requirements are summarized along with the integration / verification process and preliminary system analysis results.