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Poster
NASA's Artemis program represents the next giant leap in crewed deep space exploration, establishing a sustained human presence on and around the Moon. This ambitious architecture includes the Orion spacecraft, Lunar Gateway, Human Landing Systems, and Commercial Lunar Payload Services (CLPS), all of which will present crew and hardware to environments beyond the low-earth orbit we have been exploring for decades. Such a program demands the rigorous integration of space weather science to ensure operational safety and advance fundamental heliophysics. Beyond Earth's protective magnetosphere, characterizing the dynamic space environment is critical for mitigating radiation risks from Solar Energetic Particles (SEPs) and Galactic Cosmic Rays (GCRs) to both crew and avionics. Artemis also offers unprecedented vantage points for space weather observation. Platforms like the Lunar Gateway, which will host instrument suites such as HERMES, and surface landers provide crucial nodes to study solar wind interactions, Earth's magnetotail dynamics, and the deep space radiation environment. This presentation will provide an overview of the Artemis science structure, detailing how heliophysics and space weather objectives are integrated into cross-divisional mission planning. We will highlight active and upcoming pathways for the space weather community to participate, including future payload calls, research solicitations, predictive modeling efforts, and collaborative data analysis. By bridging human exploration needs with fundamental space weather research, we aim to spark dialogue and encourage the scientific community to leverage Artemis infrastructure to advance the next generation of deep space heliophysics.
Poster session day
Thursday, April 30, 2026
Poster location
26
Meeting homepage
2026 Space Weather Workshop
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