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Recent Applications of Space Weather Research to NASA Space Missions

Emily M. Willis[1],James W. Howard Jr.[2], J. Scott Miller[3], Joseph I. Minow[1], L. Neergaard Parker[2], and Robert M. Suggs[1]

[1]*NASA, Marshall Space Flight Center, Huntsville, AL*
[2]*Jacobs Technology, ESSSA Group, MSFC, Huntsville, AL*
[3]*Qualis Corp., ESSSA Group, Huntsville, AL*

Marshall Space Flight Center's Space Environments Team is committed to applying the latest research in space weather to NASA programs. We analyze data from an extensive set of space weather satellites in order to define the space environments for some of NASA's highest profile programs. Our goal is to ensure that spacecraft are designed to be successful in all environments encountered during their missions. We also collaborate with universities, industry, and other federal agencies to provide analysis of anomalies and operational impacts to current missions. This presentation is a summary of some of our most recent applications of space weather data, including the definition of the space environments for the initial phases of the Space Launch System (SLS), acquisition of International Space Station (ISS) frame potential variations during geomagnetic storms, and Nascap-2K charging analyses.