

# Validation of the UMASEP Solar Radiation Storm Model in the Space Weather Proving Ground

MORELAND Kimberly  
CU Boulder CIRES/NOAA SWPC

BAIN Hazel (CU Boulder CIRES/NOAA SWPC)

NUNEZ Marlon (University of Malaga)

WHITMAN Kathryn (NASA SRAG)

MAYS Leila (NASA CCMC)

DIDIGU Chinwe (NASA CCMC)

## Abstract

The study of space weather is crucial for ensuring the functionality of satellites and other technologies in space. One aspect of space weather that can cause significant damage is radiation storms, which are bursts of high-energy particles that can disrupt electronics and harm astronauts. Accurate forecasting and modeling of such events is crucial for mitigating their impact. Working in a collaborative space weather proving ground with NASA CCMC, M2M, and SRAG we compare the model's predictions with observational data and against NOAA SWPC's historical event forecasts to assess the models skill metrics and forecast lead times. The evaluation and validation of the UMASEP solar radiation storm model is a critical step in the readiness level process and future operational implementation of the model in the Space Weather Forecast Office.