

Robert

Leamon

UMBC/ NASA GSFC Code 672

Scott McIntosh, NCAR

Poster

We discuss How Solar Cycle 25 is going, and implications for both crewed and uncrewed spacecraft operations for the rest of the cycle.

The Leamon-McIntosh Terminator-based unit cycle prediction for the _amplitude_ of Solar Cycle 25 is looking pretty good as of the time of writing, and certainly tracking better than the NOAA/NASA consensus panel forecast, with a peak which is both significantly lower and significantly later...

This is not meant to gloat, but rather to address a recurring theme of criticism against not just our model, but **any** cycle forecast, namely "they just got lucky this time," or "that's just one cycle; wait 11 years or so to be sure they're right."

Here, in an attempt to help shift that narrative, we argue that a fixation on solar max is a distraction. It is also a science communication issue, with many millions of dollars at stake for spacecraft operations, and lives on the line as the Artemis program returns to the moon **after** the peak of Cycle 25.

We also discuss how the Leamon-McIntosh Terminator-based prediction for the _shape_ of Solar Cycle 25 is as least as important as the amplitude. There are real-world (economic) consequences for F10.7 (under)-prediction. In addition to landmark levels of activity, we attempt to show the quasi-annual surges of activity driven by Rossby-type waves in the solar interior may be predicted on the downslope of Solar Cycle 25.

Poster category:

Poster category

Solar and Interplanetary Research and Applications

Poster session day

Tuesday, April 16, 2024

Poster location

9

Meeting homepage

[Space Weather Workshop 2024](#)

[Download to PDF](#)