



SPACE WEATHER REPORT

SPRINGFIELD-GREENE COUNTY OFFICE OF EMERGENCY MANAGEMENT

Emergency Operations Center Partner Agencies

5/31/2025 1915 hrs

Hazard Event #: 25-040

Update:

A G4 (Severe) geomagnetic storm watch is now in effect for 1 and 2 June.

Current Watches/Warnings:

G4 (Severe) Geomagnetic Storm Watch for 1 and 2 June 2025.



SCALES

Geomagnetic Storm



Radio Blackouts



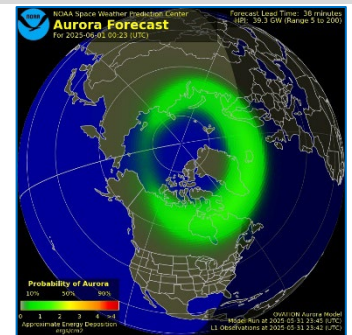
Solar Radiation Storms



NOAA Space Weather Scale descriptions can be found at: <https://www.swpc.noaa.gov/noaa-scales-explanation>

HAZARDS EXPECTED

- Areas Affected:** Area of impact primarily poleward of 45 degrees Geomagnetic Latitude.
- Induced Currents:** Possible widespread voltage control problems and some protective systems may mistakenly trip out key assets from the power grid. Induced pipeline currents intensify.
- Spacecraft:** Systems may experience surface charging; increased drag on low earth orbit satellites and tracking and orientation problems may occur.
- Navigation:** Satellite navigation (GPS) degraded or inoperable for hours.
- Radio:** HF (high frequency) radio propagation sporadic or blacked out.
- Aurora:** Aurora may be seen as low as Alabama and northern California.



DISCUSSION

A powerful coronal mass ejection (CME) erupted from the Sun the evening of 30 May. Confidence in an Earth-directed component is good, but the CME arrival timing is more uncertain due to the current state of the solar wind. It could arrive as early as late morning EDT, to as late as Sunday evening EDT of 1 June. The center of the bulk CME material is anticipated to be just north of Earth, however, Earth will still likely undergo passage of much of the CME material. Arrival will likely lead to immediate geomagnetic disturbances with the potential for G4. Conditions will likely intensify as CME progression continues and G4 levels remain possible on Monday, 2 June. Geomagnetic storm levels will likely begin subsiding by Tuesday, 3 June, with G1-G2 (Minor-Moderate) still possible. These watches represent potential based on the best analyses from the Space Weather Prediction Center. We will not know the true nature of this CME's geomagnetic storm potential until the CME arrives at our solar wind observatories located 1 million miles from Earth. Upon arrival at those spacecraft, we will know the magnetic strength and orientation that are very important to what levels and duration of geomagnetic storm conditions are expected to occur and any appropriate warnings may be issued. Be sure to visit [swpc.noaa.gov](https://www.swpc.noaa.gov) for the most up to date information.

EMERGENCY MANAGEMENT ISSUES

The Office of Emergency Management will continue to monitor this issue. If partner agencies experience issues that could be related to the watch, such as power spikes and communications outages (including loss of GPS signals), please call the OEM Watch Officer at 417.413.1346.

OEM ONLINE



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Springfield – Greene County
Office of Emergency
Management



Reencountered