



SPACE WEATHER REPORT

SPRINGFIELD-GREENE COUNTY OFFICE OF EMERGENCY MANAGEMENT

Emergency Operations Center Partner Agencies

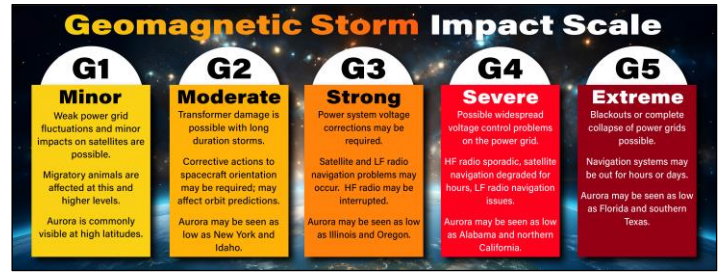
10/9/2024 | 1715 hrs

Hazard Event #: 24-040

Current Watches/Warnings:

Geomagnetic Storm Watch

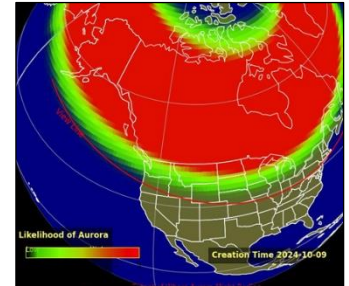
Hazard	Oct 10	Oct 11	Oct 12
Geomagnetic Storm	G4 SEVERE	G4 SEVERE	G1 MINOR
Radio Blackouts	R3 STRONG	R3 STRONG	R2 MODERATE
Solar Radiation Storms	S2 MODERATE	S1 MINOR	S1 MINOR



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

HAZARDS EXPECTED

- Areas Affected:** Area of impact consists of large portions of the sunlit side of Earth, strongest at the sub-solar point.
- Induced Currents:** During a G4 geomagnetic storm, induced currents can surge through power lines and technological infrastructure, posing significant risks to electrical grids and communication networks.
- Spacecraft:** Spacecraft systems may experience surface charging; increased drag on low Earth-orbit satellites and orientation problems may occur.
- Navigation:** A G4 geomagnetic storm poses significant hazards to GPS systems, including potential signal disruptions, timing errors, and accuracy fluctuations, due to disturbances in Earth's ionosphere.
- Radio:** This can cause HF radio signals to become degraded or completely absorbed. This results in a radio blackout – the absence of HF communication, primarily impacting the 3 to 30 MHz band.
- Aurora:** Aurora may be visible as low as Alabama and northern California.



DISCUSSION

Rationale: G1 (Minor) Geomagnetic Storm conditions were already anticipated for 11 Oct due to possible enhancements associated with the filament eruption from 08 Oct. Analysis of the coronal mass ejection (CME) associated with the X1.8 flare suggests further enhancement 10 Oct into 11 Oct, reaching G4 (Severe) levels is likely with G5 (Extreme) levels possible. S1-S2 (Minor-Moderate) solar radiation storm levels are expected to continue through 10 Oct and begin a slow recovery through the rest of the period.

EMERGENCY MANAGEMENT ISSUES

The Office of Emergency Management will continue to monitor this issue. If partner agencies experience problems that could be related to the watch, such as power spikes and communications outages (including loss of GPS signals), please call OEM Operations at (417) 869-6040 as soon as possible.

CITIZEN ACTION STATEMENT

- Emergency kit: Build an emergency kit to include batteries, water, and food.
- Family communications plan: Create a family communications plan with alternate communication methods to include maintaining a landline phone, having emergency radio communication devices, and establishing meeting points.
- Electronics: Keep an eye on solar activity reports, unplug or use surge protectors, store electronics in shielded containers, and back up crucial data.

OEM ONLINE



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Office of Emergency
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