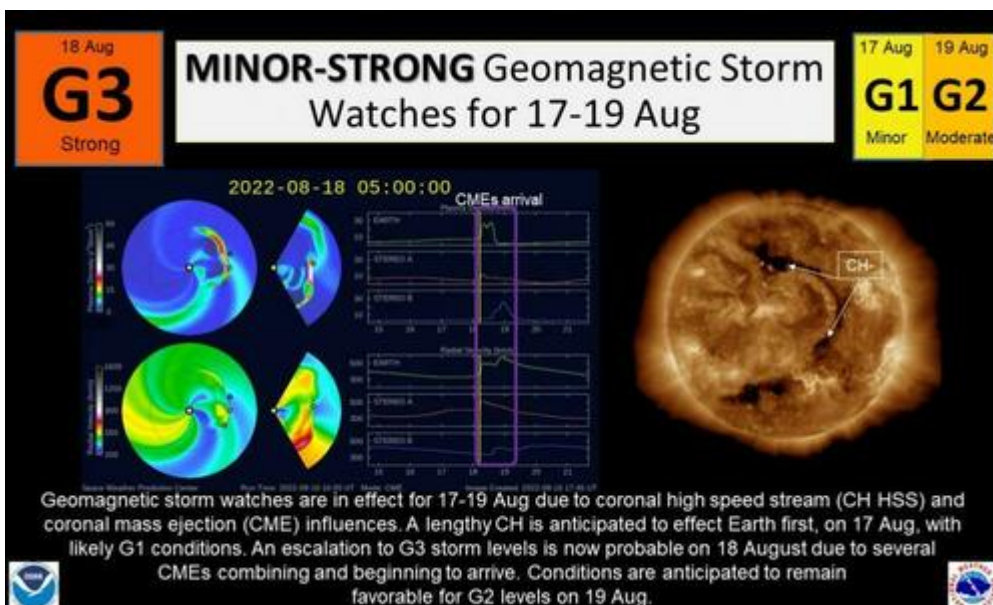


## An Earthbound 'Cannibal Coronal Mass Ejection' Event Could Be Imminent

### Description


A minor earthward-directed Coronal Mass Ejection (CME) already hit Earth's magnetic field on Wednesday. NOAA's [Space Weather Prediction Center](#) (SWPC) expects a more powerful earthbound CME to strike Thursday-Friday.

SWPC has already issued geomagnetic storm watches for a minor geomagnetic storm today, a strong geomagnetic storm on Thursday, and a moderate one on Friday.




The impacts will be insignificant now, but that could change tomorrow as a strong geomagnetic storm can spark power grid fluctuations, create satellite irregularities, and degrade radio and GPS signals. SWPC's storm severity scale is 1-5.

Today's G1 impacts...

	<b>Minor</b>	<p><b>Power systems:</b> Weak power grid fluctuations can occur.</p> <p><b>Spacecraft operations:</b> Minor impact on satellite operations possible.</p> <p><b>Other systems:</b> Migratory animals are affected at this and higher levels; aurora is commonly visible at high latitudes (northern Michigan and Maine).</p>
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G1 Level impacts

Thursday's highest level G3 impacts...

	<b>Strong</b>	<p><b>Power systems:</b> Voltage corrections may be required, false alarms triggered on some protection devices.</p> <p><b>Spacecraft operations:</b> Surface charging may occur on satellite components, drag may increase on low-Earth-orbit satellites, and corrections may be needed for orientation problems.</p> <p><b>Other systems:</b> Intermittent satellite navigation and low-frequency radio navigation problems may occur, HF radio may be intermittent, and aurora has been seen as low as Illinois and Oregon (typically 50° geomagnetic lat.).</p>
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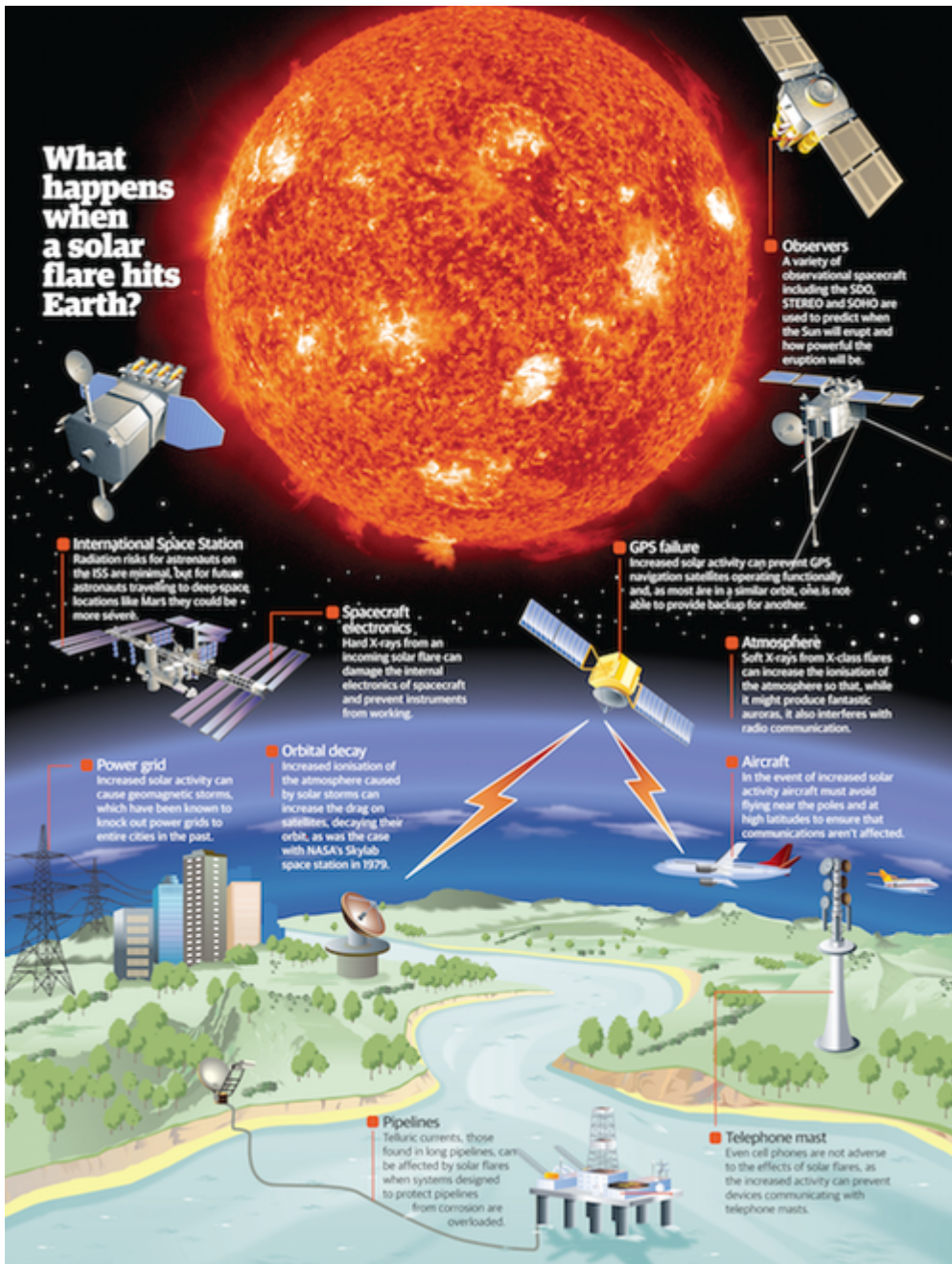
G3 Level impacts

Friday's G2 Impacts...

	<b>Moderate</b>	<p><b>Power systems:</b> High-latitude power systems may experience voltage alarms, long-duration storms may cause transformer damage.</p> <p><b>Spacecraft operations:</b> Corrective actions to orientation may be required by ground control; possible changes in drag affect orbit predictions.</p> <p><b>Other systems:</b> HF radio propagation can fade at higher latitudes, and aurora has been seen as low as New York and Idaho (typically 55° geomagnetic lat.).</p>
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G2 Level impacts

A visual of the CME impacts on modern society.



Here's more from [spaceweather](#):

On Aug. 14th, a [dark plasma eruption](#) hurled one CME toward Earth. On Aug. 15th, an [exploding magnetic filament](#) launched another CME right behind it. The two CMEs will arrive together on Aug. 18th, according to the latest forecast model from NOAA:

This could be a "[Cannibal CME](#)" event. In other words, the second CME might overtake and gobble up the first, creating a mish-mash of the two. Cannibal CMEs contain tangled magnetic fields and compressed plasmas that sometimes spark strong geomagnetic storms.

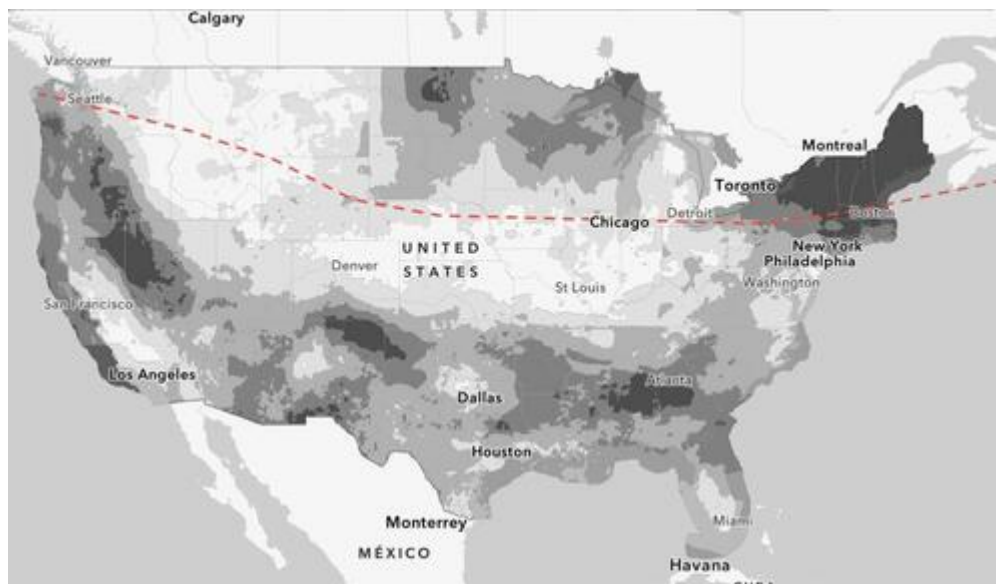
The first in a succession of SIX [#solarstorms](#) is hitting Earth now! NASA/CCMC's Mary Aronne got this run spot on (see graphic). NOAA/SWPC has the other five hitting in machine-gun fashion starting on the 18th. Magnetic field is northward thus far but expect [#aurora](#) to build soon! [pic.twitter.com/Q7i1nyuLY5](https://pic.twitter.com/Q7i1nyuLY5)

— Dr. Tamitha Skov (@TamithaSkov) [August 17, 2022](#)

Our "magneto"sphere is going to take a beating this week! Exciting times for you! Let's get an X-class flare to give the uppercut! [pic.twitter.com/WjvYWJ8Qql](https://pic.twitter.com/WjvYWJ8Qql)

— Dan Skoff (@weatherdan) [August 17, 2022](#)

Geomagnetic Storms will be visible to the naked eye in the US as far as Illinois and Oregon (geomagnetic latitude 50 degrees).

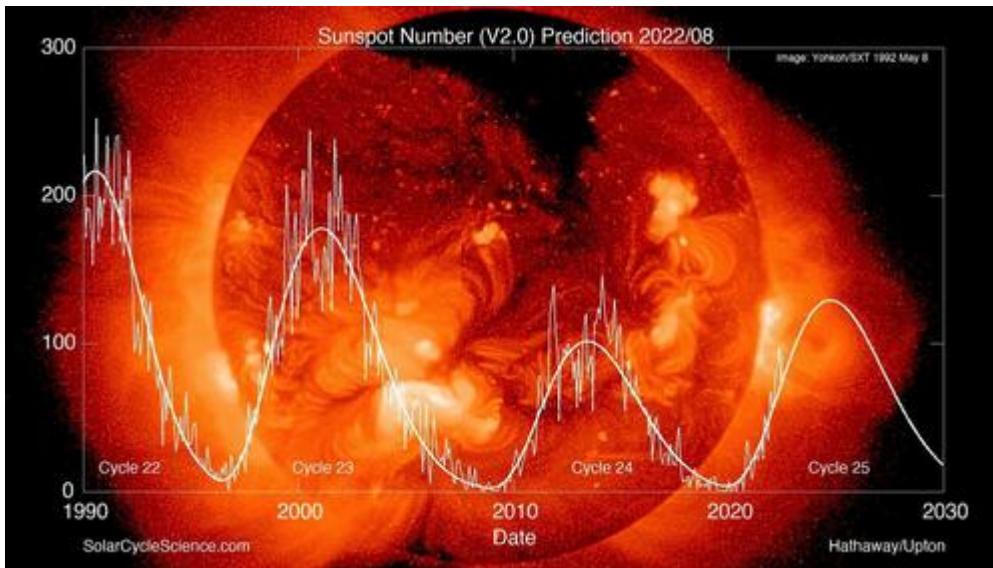


### EXPERIMENTAL AURORA + CLOUD FORECAST

CLOUDS	AURORA	DISCUSSION
0 - 10%	SOUTHERN EXTENT	SEVERAL POTENTIALLY EARTH-DIRECTED CORONAL MASS EJECTIONS LAUNCHED ON AUG 15 MAY ALLOW FOR MODERATE TO STRONG GEOMAGNETIC STORMS.
10 - 30%		
30 - 60%		
60 - 80%		
80 - 100%		
	<b>TIMING</b> EARLY THURSDAY MORNING TO SUNRISE, AUG 18	
		SPACE WEATHER WATCH @SPACEWXWATCH

The sun is in a very active 11-year solar cycle called Solar Cycle 25, which began in December 2019.





The solar cycle peak is expected in 2025, but even before that, its presence will be felt on and around Earth via CMEs disrupting modern life.

by Tyler Durden

### Category

1. ECO-Climate-Environment
2. Main
3. RECOMMENDED

### Date Created

08/18/2022