

NEWS

Solar storm triggers very rare watch from NOAA, northern lights may be seen in far South



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The National Oceanic and Atmospheric Administration's Space Weather Prediction Center issued a very rare severe geomagnetic storm watch on Thursday for a barrage of coronal mass ejections from the sun that could last through the weekend, and possibly into early next week.

Space weather forecasters are concerned enough about impacts to power grids and radio and satellite operations from the volley of explosive solar magnetic fields that they are working with federal emergency officials to mitigate any disruptions.

It is the first severe geomagnetic storm watch issued since January 2005.

While forecasters said in a call Friday morning they are not expecting any "catastrophic collapse of anything" they do want agencies in charge of electricity and communications infrastructure to be aware that efforts to protect sensitive equipment may be necessary as the ejections reach Earth.

"We anticipate that we will get one shock after another," said Brent Gordon, chief of NOAA's Space Weather Services Branch. "We are really buckling down here to see what we get at this point."

NOAA officials said while infrastructure agencies should be prepared for pulses, the general public would likely see only minor effects such as possible temporary loss of GPS or very limited power outages.

At the same time, the northern lights may be visible as far south as Alabama and possibly in cell phone photographs taken in dark sky areas of South Florida.

“We have seen cell phone images from as far as south Texas and even as far as Central America,” Gordon said. “If you have a clear night, aim it at the sky and take a picture, you may be surprised at what you see.”

Shawn Dahl, an NOAA space weather forecaster, said the arrival time of the coronal mass expulsions, or CMEs, is still uncertain. Strong solar flares and CMEs, which are large eruptions of plasma and magnetic field from the sun’s corona, began happening Wednesday. The CMEs carry an embedded magnetic field that, depending on how it interacts with Earth’s magnetic field, can induce an electrical current in things like pipelines and railroad tracks, as well as inject an opposing current into the power grid.

In a social media post, NOAA said only three severe geomagnetic storms have happened since the beginning of the current solar cycle in December 2019. The last severe storm was on March 23. The last extreme storm was in October 2003, resulting in power outages in Sweden and damaged power transformers in South Africa.

The strong flares seen this past week were associated with a large sunspot cluster that is 16 times the diameter of Earth.

Satellites will be able to detect the CME pulses about a million miles from Earth, when forecasters may decide to issue a geomagnetic storm warning. At that point, agencies overseeing vulnerable technologies will have 20 to 45 minutes to protect equipment from the magnetic field.

“The key point here is that critical infrastructure operators have been notified,” Dahl said.

This is a developing story. Please check back to www.PalmBeachPost.com for updates.

Kimberly Miller is a veteran journalist for The Palm Beach Post, part of the USA Today Network of Florida. She covers real estate and how growth affects South Florida's environment. Subscribe to The Dirt for a weekly real estate roundup. If you have news tips, please send them to kmiller@pbpost.com. Help support our local journalism, subscribe today.