

# Solar storm puts on brilliant light show across the globe, but no serious problems reported

May 11 2024, by TOM KRISHER, JOSH FUNK and MARCIA DUNN

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Aurora Borealis or the Northern Lights are seen in Fredericton, Saturday, May. 11, 2024. Credit: Hina Alam /The Canadian Press via AP

A powerful solar storm put on an amazing skyward light show across the globe overnight but has caused what appeared to be only minor disruptions to the electric power grid, communications and satellite positioning systems.

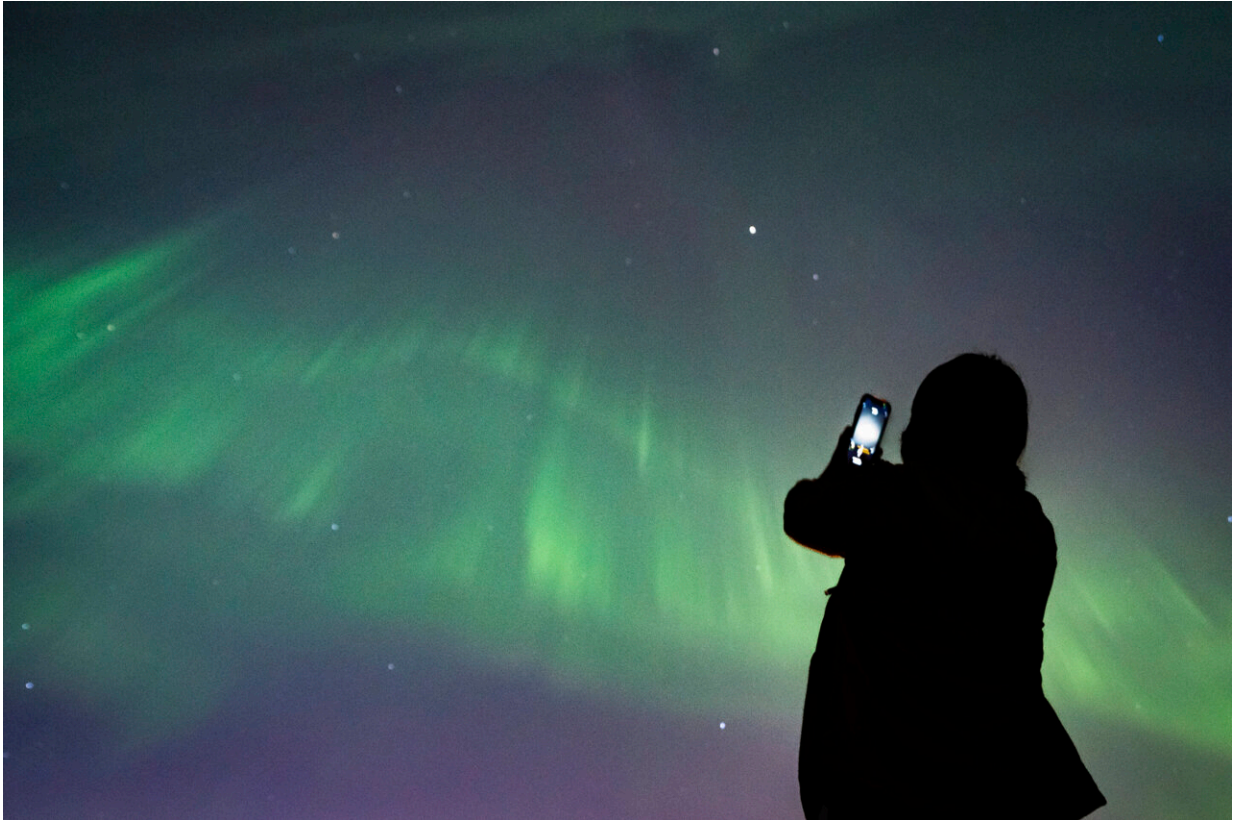
The U.S. National Oceanic and Atmospheric Administration said extreme geomagnetic storm conditions continued Saturday, and there were preliminary reports of power grid irregularities, degradation of high-frequency communications and global positioning systems.

But the Federal Emergency Management Agency said that, so far, no FEMA region had reported any significant impact from the storms. The U.S. Department of Energy said Saturday it is not aware of any impact from the storms on electric customers.

NOAA predicted that strong flares will continue through at least Sunday, and a spokeswoman said via email that the agency's Space Weather Prediction Center had prepared well for the storm.

On Saturday morning, SpaceX's Starlink satellite internet service said on its website that service had been degraded and its team was investigating. CEO Elon Musk wrote on the social platform X overnight that its satellites were "under a lot of pressure, but holding up so far."

Brilliant purple, green, yellow and pink hues of the Northern Lights were reported worldwide, with sightings in Germany, Switzerland, China, England, Spain and elsewhere.



A person takes a photo of Aurora Borealis or the Northern Lights in Vancouver, B.C., Saturday, May. 11, 2024. Credit: Ethan Cairns /The Canadian Press via AP

In the U.S., Friday's solar storm pushed the lights much farther south than normal. The Miami office of the National Weather Service confirmed sightings in the areas of Fort Lauderdale and Fort Myers, Florida. Meteorologist Nick Carr said another forecaster who lives near Fort Lauderdale photographed the lights and was familiar with them because he previously lived in Alaska.

People in Kansas, Nebraska, Iowa, Michigan, Minnesota and other Midwestern states were able to capture photos of bright colors along the horizon.

With the solar storm persisting through the weekend, Saturday night offered another chance for many to see the spectacle.

NOAA issued a rare severe geomagnetic storm warning when a solar outburst reached Earth on Friday afternoon, hours sooner than anticipated.

The agency alerted operators of power plants and orbiting spacecraft, as well as FEMA, to take precautions.



People view the northern lights, or aurora borealis, as they glow over Lake Washington, in Renton, Wash., on Friday evening, May 10, 2024. Credit: AP Photo/Lindsey Wasson

"For most people here on planet Earth, they won't have to do anything," said Rob Steenburgh, a scientist with NOAA's Space Weather Prediction Center.

"That's really the gift from space weather: the aurora," Steenburgh said. He and his colleagues said the best views may come from phone cameras, which are better at capturing light than the naked eye.

Snap a picture of the sky, and "there might be actually a nice little treat there for you," said Mike Bettwy, operations chief for the prediction center.

The most intense solar storm in recorded history, in 1859, prompted auroras in central America and possibly even Hawaii.

This storm poses a risk for high-voltage transmission lines for power grids, not the electrical lines ordinarily found in people's homes, NOAA space weather forecaster Shawn Dahl told reporters. Satellites also could be affected, which in turn could disrupt navigation and communication services here on Earth.



The Aurora Borealis, also known as the Northern Lights, is visible over Homestead, Iowa, early Saturday, May, 11, 2024. Credit: Nick Rohlman/The Gazette via AP



The Northern Lights, or Aurora Borealis, illuminate the night sky over the Lake Balaton, near Fonyod, Hungary, late Friday, May 10, 2024. Credit: Gyorgy Varga//MTI via AP

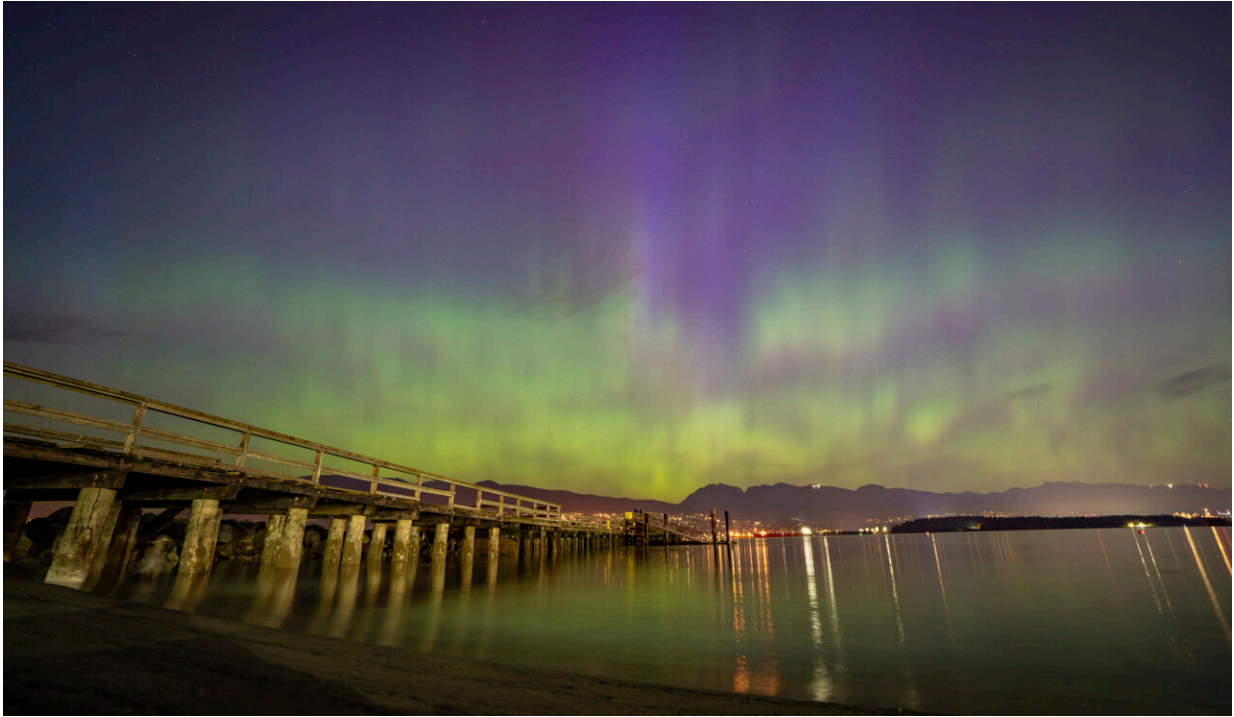


In this photo released by Xinhua News Agency, the Northern Lights, or Aurora Borealis, are seen near Nanshan scenic spot in Urumqi in northwestern China's Xinjiang Uyghur Autonomous Region, Saturday, May 11, 2024. An unusually strong solar storm hitting Earth produced stunning displays of color in the skies across the Northern Hemisphere early Saturday, with no immediate reports of disruptions to power and communications. Credit: Chen Shuo/Xinhua via AP





The Northern lights fill the sky at the Bogus Basin ski resort on Saturday, May 11, 2024 in Boise, Idaho. Credit: Kyle Green (AP Photo/Kyle Green)



Aurora Borealis or the Northern Lights are seen in Vancouver, B.C., Saturday, May. 11, 2024. Credit: Ethan Cairns /The Canadian Press via AP



In this image taken with a long exposure, people look at the night sky towards the northern lights, or Aurora Borealis, on Friday, May 10, 2024, in Estacada, Ore. The National Oceanic and Atmospheric Administration issued a rare severe geomagnetic storm warning when a solar outburst reached Earth on Friday afternoon, hours sooner than anticipated. The effects were due to last through the weekend and possibly into next week. Credit: AP Photo/Jenny Kane



The Aurora Borealis, also known as the Northern Lights, is visible over Ann Arbor, Mich., early Saturday, May, 11, 2024. Credit: AP Photo/Dee-Ann Durbin



In this image taken with a long exposure, cars pass by as people look at the night sky towards the northern lights, or Aurora Borealis, on Friday, May 10, 2024, in Estacada, Ore. The National Oceanic and Atmospheric Administration issued a rare severe geomagnetic storm warning when a solar outburst reached Earth on Friday afternoon, hours sooner than anticipated. The effects were due to last through the weekend and possibly into next week. Credit: AP Photo/Jenny Kane



In this photo released by Xinhua News Agency, the Northern Lights, or Aurora Borealis, are seen near Nanshan scenic spot in Urumqi in northwestern China's Xinjiang Uyghur Autonomous Region, Saturday, May 11, 2024. An unusually strong solar storm hitting Earth produced stunning displays of color in the skies across the Northern Hemisphere early Saturday, with no immediate reports of disruptions to power and communications. Credit: Chen Shuo/Xinhua via AP

An extreme geomagnetic storm in 2003, for example, took out power in Sweden and damaged power transformers in South Africa.

Even when the storm is over, signals between GPS satellites and ground receivers could be scrambled or lost, according to NOAA. But there are so many navigation satellites that any outages should not last long, Steenburgh noted.

The sun has produced strong solar flares since Wednesday, resulting in at least seven outbursts of plasma. Each eruption, known as a coronal mass ejection, can contain billions of tons of plasma and magnetic field from the sun's outer atmosphere, or corona.

The flares seem to be associated with a sunspot that is 16 times the diameter of Earth, NOAA said. It is all part of the solar activity ramping up as the sun approaches the peak of its 11-year cycle.

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