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# The Northern Lights Could Dazzle Mainland U.S. Tonight

By: [Sarah Gleim](#) | Aug 18, 2022



The northern lights are most commonly seen closer to the North Pole, near Alaska and Canada. But residents much farther south may have a chance to get a glimpse of them. LEE WALKER/SHUTTERSTOCK

If seeing the [aurora borealis](#) — aka the northern lights — is on your bucket list, now just might be your chance. That is if you live in certain areas of the United States.

A strong [geomagnetic storm](#) could push the aurora borealis much farther south Aug. 18 and 19 than typical, giving residents as far south as Illinois and Oregon an unexpected

opportunity to view the northern lights. The aurora borealis typically occurs closer to the [North Pole](#), near Alaska and Canada.

## What Happens During a Geomagnetic Storm?

The U.S. National Oceanic and Atmospheric Administration (NOAA) forecasters said a strong [geomagnetic watch is in effect Aug. 18 and 19](#) because recent solar flares on the sun's surface — known as coronal mass ejections (CMEs) — are expected to reach Earth's atmosphere.

Geomagnetic storms are categorized via [NOAA's G-Scale](#), a tool that runs from G1 to G5. This recent geomagnetic storm is rated a G3 [according to NOAA](#), which means conditions are strong for a geomagnetic storm. That also means it could produce spectacular auroras as the charged solar particles mix with molecules in Earth's atmosphere.

## What Is an Aurora?

As we mentioned, when the sun's activity is high, it sends large eruptions called solar flares (coronal mass ejections) hurtling toward Earth. When these high-energy particles hit Earth, they encounter its magnetic field near both geographic poles.

Some of the particles [get deflected around the planet](#), but others interact with the magnetic field, sending the charged particles traveling toward the poles. The particles then collide with ions of oxygen and nitrogen when they reach Earth's upper atmosphere, transferring their energy to the atmosphere. When the excited ions relax, they release their energy in the form of light, which we see as the auroras.

## How Can I View the Northern Lights?

The cool thing about auroras is you don't need anything special to see them. While they are typically most visible at the poles, this particular geomagnetic storm will make the aurora borealis possible to see in areas across the northern section of the United States,

as well as much of Montana, Michigan, New York, Massachusetts, Connecticut and Rhode Island.

Here are some tips for the best viewing:

1. Pick a spot with little to no **light pollution**.
2. Get to the highest elevation possible.
3. Scan the skies; the auroras can emerge from any direction.

## Now That's Cool

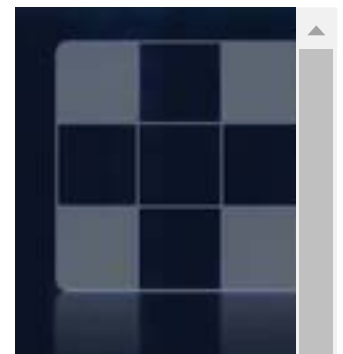
Both the aurora borealis (northern lights) and aurora australis (southern lights) **typically form** 50 to 310 miles (80 to 500 kilometers) above Earth.

### Frequently Answered Questions

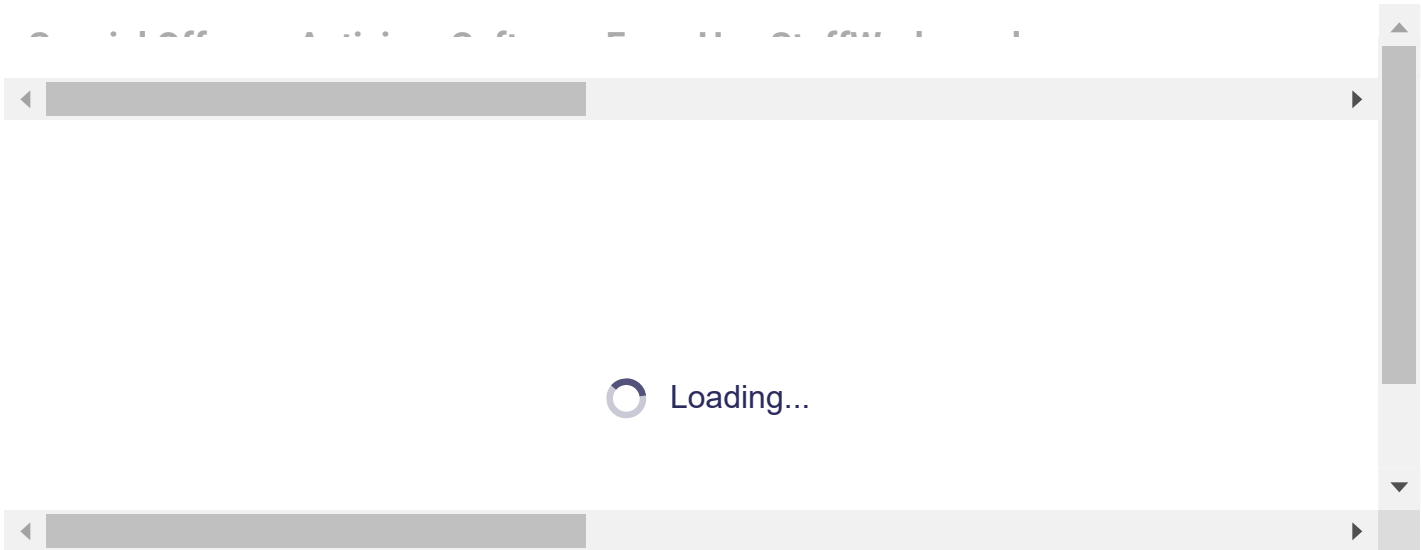
#### Where in the US can you see the Northern Lights?

The Northern Lights are visible in the northernmost parts of the United States, including Alaska.

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