

Solar Storm Brings Widespread Auroras

By Don Sutherland

A series of powerful coronal mass ejections (CMEs) began reaching the Earth on Friday, May 10th producing a powerful geomagnetic storm. The geomagnetic storm peaked at G5/Kp 9, the highest rating possible. The geomagnetic storm was the strongest since One of the strongest geomagnetic storms since October 29, 2003 or perhaps March 13, 1989. The 1989 event knocked out power to Canada's Quebec Province. The blackout lasted nine hours.

Based on auroral displays reaching as far south as Mexico, it is probably more likely than not that the 2024 event was the strongest since 1989. The intensity will be verified once the final data is available.

Final data will be posted at:

[Top 50 Geomagnetic Storms of 2024](#)

[Top 50 Geomagnetic Storms](#)

The all-time list dates back to 1932. However, the 1859 [Carrington Event](#) dwarfed any of the events in the above record. Then, the Earth was battered by a geomagnetic storm that set telegraph wires on fire, produced aurora that left Northern latitudes as bright as day, and generated powerful electric shocks for people touching doorknobs and other metallic objects.

Earlier this year, a Kp 8+ event occurred on March 24. That event created auroral displays that reached deep into the continental United States and Europe. The current event has produced far more impressive displays.

The displays were sufficiently bright that they could be observed by the naked eye in the New York City suburbs. A series of photographs taken at Wampus Pond Park in Armonk, New York at approximately 3 am are shown below. The red-purple hue is unusual except at far northern latitudes. It was generated by the high speed at which the charged solar particles were moving through the magnetosphere

Earlier in the night, there had been light rain and thick clouds. The clouds began breaking near 2 am. By 3 am, there was a large patch of clear sky with the temperature falling into the lower 40s. At that time, the auroral display was quite impressive. After about 3:30 am, thickening fog that had cloaked the Pond overspread the rest of the area.

Auroral displays were also present Saturday night into Sunday morning albeit at weaker hues as the geomagnetic storm continued to weaken.





