GEOMAGNETIC STORM STRIKES

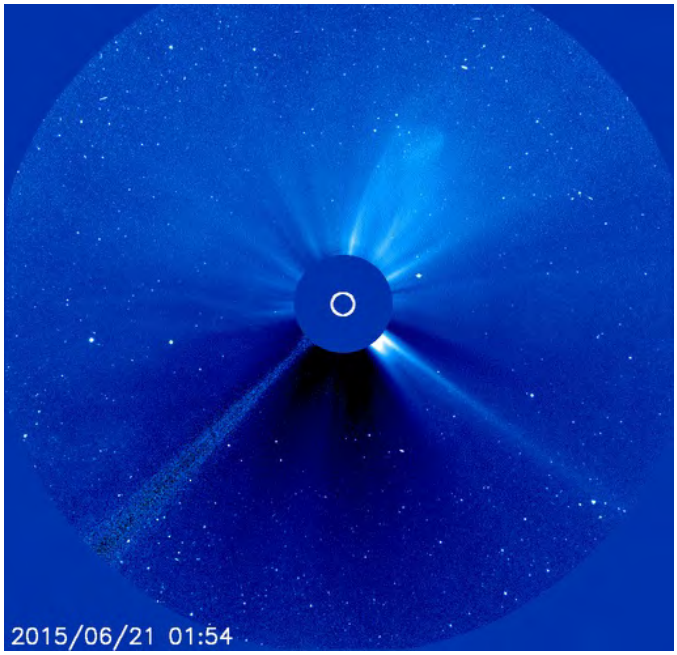
Awesome auroras!

Storms on the sun send giant plasma clouds across space, which interact with Earth's magnetic field.

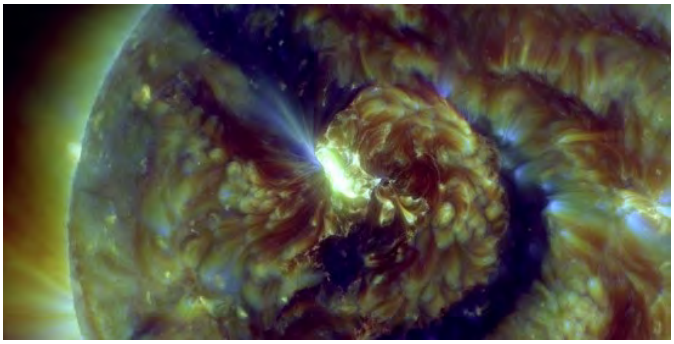
A geomagnetic storm classified G4 – a very strong storm – took place Tuesday June 23, 2015, sparking displays of auroras, or northern lights. The last on this scale happened in March, when auroras were seen as far south as New Mexico. The display might last into the night of June 24. Your best chance to catch auroras is to find a country location, far from city lights.

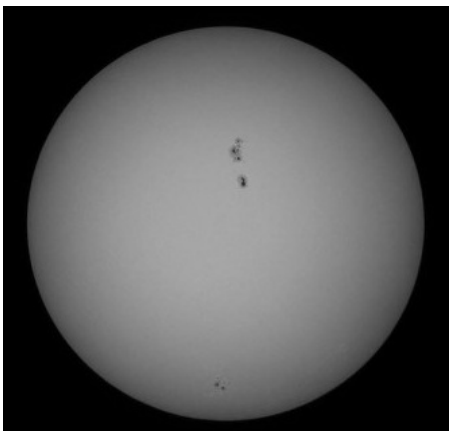
A coronal mass ejection (CME) left the sun early Sunday morning and is joining forces with two earlier CMEs that left the sun a few days ago. All are now heading directly for Earth, with a strong potential to spark auroral displays. It doesn't mean we're due for a major space weather event. That depends on how the magnetic field of the CME connects to Earth's magnetic field when the CMEs arrive. However, space weather forecasters at NOAA are estimating a 90% chance of polar geomagnetic storms when they do arrive. NOAA forecasters wrote that Sunday's CME, a much faster CME than the earlier ones, is expected to catch up with the two observed on June 18 and 19, bringing them all to Earth in close succession by the UTC day of June 22, 2015.

The CME was associated with an R1-Minor flare event observed at 0142 UTC (9:21 pm ET) from Sunspot Region 12371 located near centre disk. A G3-Strong Geomagnetic Storm Watch has been issued for June 22, as well as a G2-Moderate Watch for June 23 as the CMEs make their way past Earth.

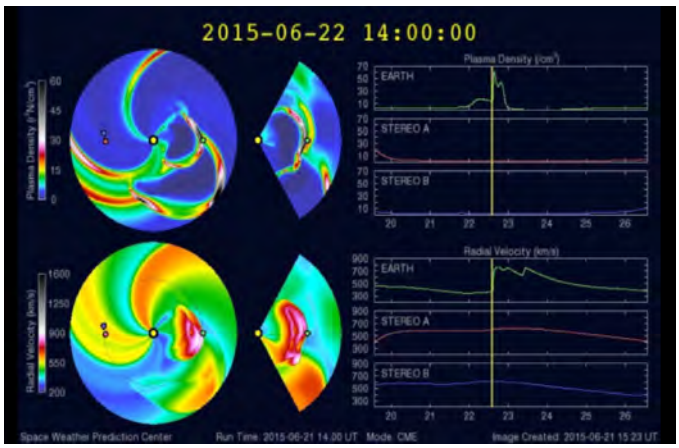


A full-halo coronal mass ejection, or CME, from the sun causes an expanding cloud of electrified gas from the sun.





Since the radiation from coronal mass ejections, or CMEs, can disrupt Earth's communications, airlines, power grids, and satellites, more accurate forecasting of CMEs has the potential to provide greater warning to operators of these services. NASA's STEREO mission does that by using two spacecraft placed on opposite sides of the Sun, which allows detection of the sunspots and CMEs also on the far side of the Sun. Since the Sun rotates every 25 days, detail on the far side was previously invisible to Earth for days at a time. The period that the Sun's far side was previously invisible was a principal reason for the STEREO mission.



STEREO (Solar Terrestrial Relations Observatory) is a solar observation mission. Two nearly identical spacecraft were launched in 2006 into orbits around the Sun that enable stereoscopic imaging of the Sun and solar phenomena to be taken, such as coronal mass ejections.