Sun Fires X-Ray Shot at Earth

Friday, 13 July 2012

Continuing its increasingly active trend, the sun erupted with another X-class solar flare on Thursday. Only last week, another active region (AR1515) delivered an impressive parting shot -- an X1.1 flare -- as it rotated toward the solar limb. Today's more energetic X1.4 flare, however, was directed right at us.

Today's fireworks were courtesy of another magnetically dominated active region called AR1520 that has been ominously crackling with flare activity. The active region has produced an impressive and beautiful grouping of sunspots.

There's currently no word about the impact this event on the Earth's ionosphere, although sudden ionospheric disturbances (SIDs) are highly likely, stemming from strong X-ray radiation, potentially interrupting radio communications. A coronal mass ejection (CME) -- an expanding "bubble" of solar plasma and magnetism -- has been generated and it is expected to hit Earth on July 14, according to Spaceweather.com. There's a strong possibility that the CME may produce a geomagnetic storm, culminating in auroral activity at high latitudes.

The uptick in solar activity is all part of the natural 11-year cycle of the sun, which is expected to reach its peak by 2013.

Today's event is yet another reminder that we live in the realm of a highly dynamic star and with the help of solar observatories like NASA's Solar Dynamics Observatory (SDO), we can look deep into the solar corona where these impressive explosions are generated. //(c) Discovery