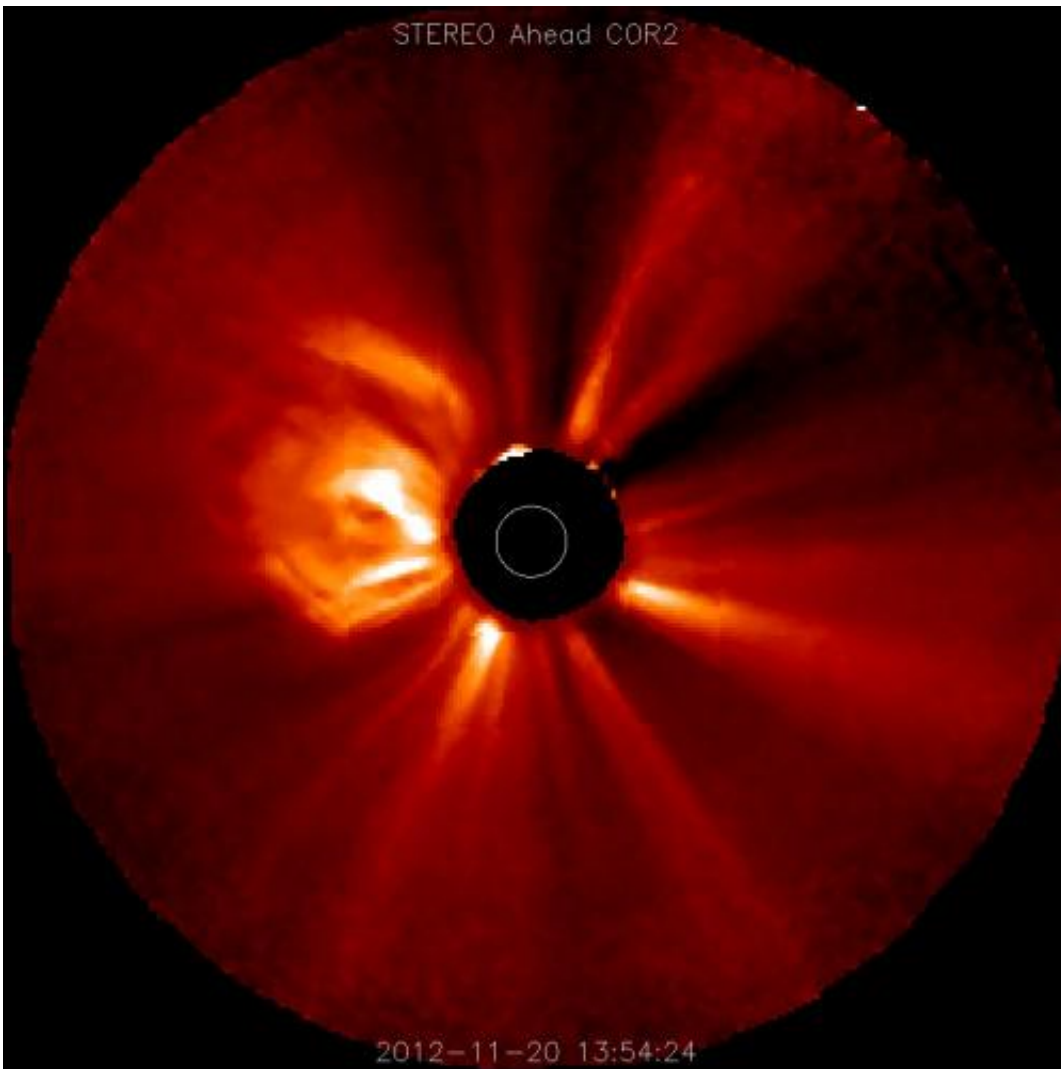


NASA spacecraft observe Nov. 20 solar eruption

November 20 2012, by Karen C. Fox



NASA's Solar Terrestrial Relations Observatory (STEREO) captured this image of a coronal mass ejection on Nov. 20, 2012 at 8:54 a.m. EST, about two hours after it left the sun. Credit: NASA/STEREO

On Nov. 20, 2012, at 7:09 a.m. EST, the sun erupted with a coronal mass ejection or CME. Not to be confused with a solar flare, a CME is a solar phenomenon that can send solar particles into space and can reach Earth one to three days later. When Earth-directed, CMEs can affect electronic systems in satellites and on Earth.

Experimental NASA research models, based on observations from the [Solar Terrestrial Relations Observatory](#) (STEREO), show that the Nov. 20 CME left the sun at speeds of 450 miles per second, which is a slow to average speed for CMEs. CMEs can cause a space [weather phenomenon](#) called a geomagnetic storm, which occurs when CMEs successfully connect up with the outside of the Earth's magnetic envelope, the magnetosphere, for an extended period of time.

In the past, CMEs of this speed have not usually caused substantial geomagnetic storms. They have caused auroras near the poles but are unlikely to cause disruptions to electrical systems on Earth or interfere with GPS or satellite-based communications systems.

Provided by NASA's Goddard Space Flight Center

Citation: NASA spacecraft observe Nov. 20 solar eruption (2012, November 20) retrieved 18 April 2024 from <https://phys.org/news/2012-11-nasa-spacecraft-nov-solar-eruption.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.