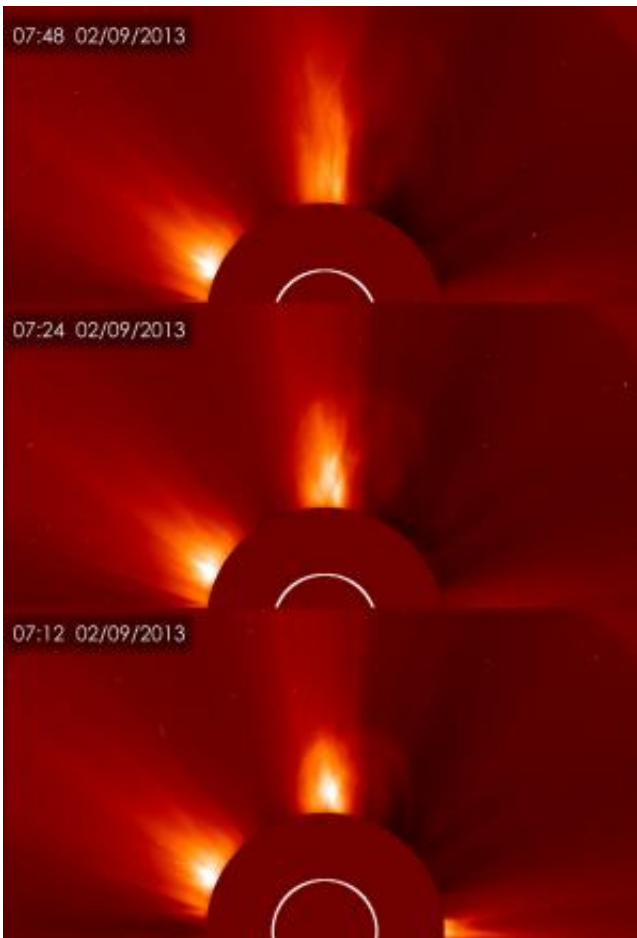


Earth-directed CME released by long duration solar flare

February 11 2013, by Scott Weissinger



Three views over time of the coronal mass ejection (CME) released by the sun on Feb. 9, 2013 as seen by the Solar and Heliospheric Observatory (SOHO). Credit: ESA&NASA/SOHO

(Phys.org)—On Feb. 9, 2013 at 2:30 a.m. EST, the sun erupted with an Earth-directed coronal mass ejection or CME, associated with a long duration C2.4-class flare. Experimental NASA research models, based on observations from the Solar Terrestrial Relations Observatory (STEREO) and ESA/NASA's Solar and Heliospheric Observatory, show that the CME left the sun at speeds of around 500 miles per second, which is a fairly typical speed for CMEs. Historically, CMEs at this speed are usually benign.

Not to be confused with a solar flare, a CME is a solar phenomenon that can send solar particles into space and reach Earth one to three days later.

Earth-directed CMEs can cause a space [weather phenomenon](#) called a geomagnetic storm, which occurs when they connect with the outside of the Earth's magnetic envelope, the magnetosphere, for an extended period of time. In the past, CMEs at this strength have had little effect. They may cause auroras near the poles but are unlikely to disrupt electrical systems on Earth or interfere with GPS or satellite-based communications systems.

NOAA's [Space Weather Prediction](#) Center (swpc.noaa.gov) is the United States Government official source for space weather forecasts, alerts, watches and warnings.

More information: To view past solar events, visit the [Solar Event Archive](#).

Provided by NASA's Goddard Space Flight Center

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