



ICS-CERT ALERT

ICS-ALERT-12-068-01—SOLAR FLARE WARNING

March 08, 2012

ALERT

SUMMARY

ICS-CERT is tracking reports of [two large solar](#) flares that erupted Tuesday, March 06, 2012, at 1900 EST, from an active region on the sun identified as AR 1429. The first flare, rated at X5.4, produced a coronal mass ejection (CME) that struck the earth a glancing blow on March 07, 2012, 0625 GMT. The second flare, rated at X1.3, occurred an hour later. The CME produced by that flare is anticipated to hit the Earth on March 08, 2012.

NASA reports the first CME caused a moderate geomagnetic storm (rated G2)^a and a strong solar radiation storm (rated S3); the second CME caused a minor geomagnetic storm (rated G1) and a strong solar radiation storm (rated S3).

The resulting geomagnetic storms can cause aurora at low latitudes and possibly disrupt satellite and high frequency radio communication, global positioning systems (GPS), and power grids. Currently, ICS-CERT has no reports of damage or significant effects from these events.

ICS-CERT requests that any issues from this solar event affecting control systems in critical infrastructure environments be reported (ics-cert@dhs.gov) for tracking and correlation with other similar events.

BACKGROUND

NASA reports that its Advanced Composition Explorer (ACE) satellite, located just outside the Earth's magnetic environment, identified on March 08, 2012, 0542 EST, the resulting magnetic storm rated G1 (on a scale of G1 to G5). The CMEs are expected to impact the Earth over a two day period.

Please refer to the National Oceanic and Atmospheric Administration (NOAA) website^b for an explanation of space weather terminology and severity ratings. NASA has also published a web page explaining the possible ramifications of more severe space weather events.^c

ICS-CERT previously released an advisory titled "[ICSA-11-084-01 – Solar Magnetic Storm Impact On Control Systems](#)" on March 25, 2011, that contains pertinent information on how these solar events can impact electrical systems.

a. http://www.swpc.noaa.gov/NOAA_scales/index.html#GeomagneticStorms, website last accessed March 08, 2012.

b. <http://www.swpc.noaa.gov/SWN/>, website last accessed March 08, 2012.

c. http://science.nasa.gov/science-news/science-at-nasa/2009/21jan_severespaceweather/, website last accessed March 08, 2012.



ICS-CERT

INDUSTRIAL CONTROL SYSTEMS CYBER EMERGENCY RESPONSE TEAM
CONTROL SYSTEMS SECURITY PROGRAM

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DOCUMENT FAQ

What is an ICS-CERT Alert? An ICS-CERT Alert is intended to provide timely notification to critical infrastructure owners and operators concerning threats or activity with the potential to impact critical infrastructure computing networks.