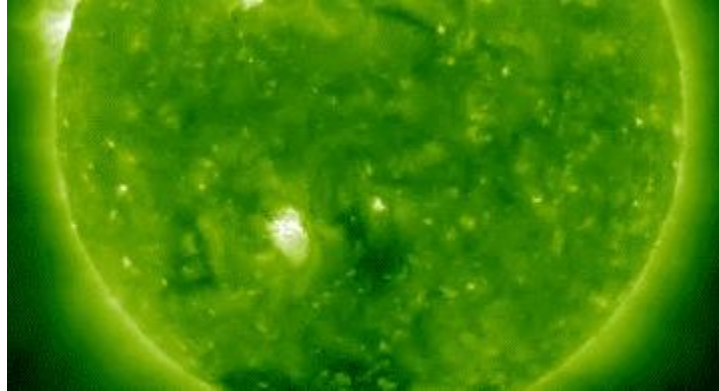


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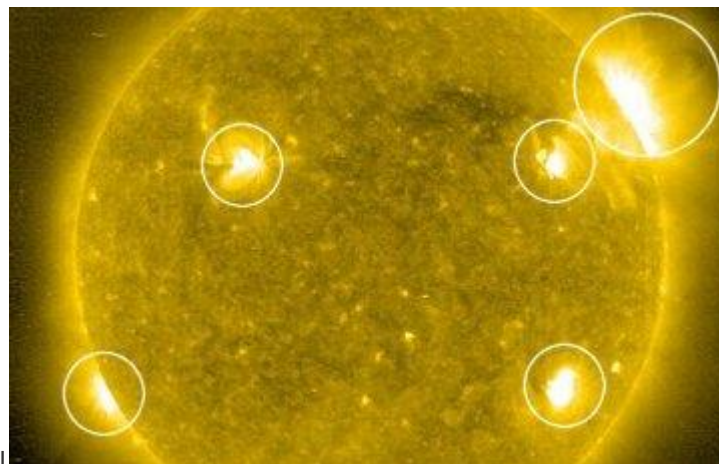
SOLAR ACTIVITY: Yesterday, Dec. 22nd at approximately 0455 UT, magnetic fields around sunspot 1036 erupted, producing a [C7-class](#) solar flare. NASA's STEREO-A spacecraft was almost directly above the sunspot at the time of the blast and recorded this extreme ultraviolet movie:



The shadowy wave racing away from the blast site is a "[solar tsunami](#)"--a swell of hot, magnetized plasma about 100,000 km high packing as much energy as a million megatons of TNT. The tsunami petered out before it went more than halfway around the sun, but another manifestation of the blast is still going. The eruption hurled a faint coronal mass ejection (CME) into space and the billion-ton cloud should cross Earth's orbit on or about Dec. 25th. A glancing blow to Earth's magnetic field could spark polar auroras for Christmas.

Subject: 22 Dec 2009 The Sun and snowflakes on the 18th from www.spaceweather.com

SOLAR ACTIVITY: The sun is showing signs of life. There are no fewer than five active regions on the sun's surface, shown here in an extreme ultraviolet photo taken this morning by the Solar and Heliospheric Observatory (SOHO):



Each circle contains a sunspot or proto-sunspot belonging to new Solar Cycle 24. After two years of record-low sunspot numbers and many month-long stretches of utter quiet, this is a notable outbreak. Whether it heralds a genuine trend or merely marks a temporary, statistical uptick in activity remains to be seen. Stay tuned!