



spaceweather.com
News and information about the Sun-Earth environment

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SPACE WEATHER
Current conditions

Solar wind
 speed: **346.0** km/sec
 density: **8.2** protons/cm³
[explanation](#) | [more data](#)
 Updated: Today at 0616 UT

X-ray Solar Flares
 6-hr max: **A0** 0610 UT Aug11
 24-hr: **A0** 0610 UT Aug11
[explanation](#) | [more data](#)
 Updated: Today at: 0610 UT

Daily Sun: 07 Aug 09



The sun is blank--no sunspots.
Credit: SOHO/MDI

NOTE: The Solar and Heliospheric Observatory is passing through a [telemetry keyhole](#). Daily sun images will be intermittently delayed until routine contact is established later this week.

Sunspot number: 0
[What is the sunspot number?](#)
 Updated 09 Aug 2009

Spotless Days
 Current Stretch: 30 days
 2009 total: 172 days (78%)
 Since 2004: 683 days
 Typical Solar Min: 485 days
[explanation](#) | [more info](#)
 Updated 09 Aug 2009

Far side of the Sun:



This [holographic image](#) reveals no sunspots on the far side of the sun.
Image credit: SOHO/MDI

Planetary K-index
 Now: **Kp= 1** quiet

 **What's up in Space**

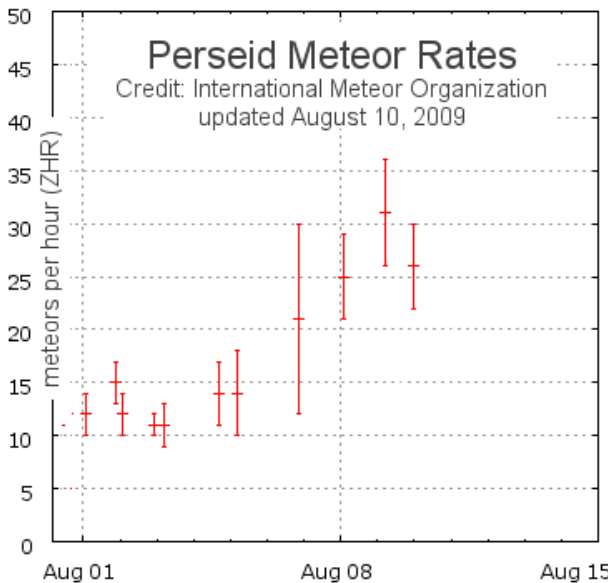
August 11, 2009

THERE'S AN APP FOR THAT: You can now experience the Perseid meteor shower on your iPhone. It's cloud-proof!
[Learn more](#) and [give it a try](#).



SPACEWEATHER RADIO: The US Air Force Space Surveillance Radar is scanning the skies over North America. When a Perseid meteor passes overhead--"ping"--there is an echo. Tune into [Spaceweather Radio](#) for a live audio feed from the radar facility.

PERSEID UPDATE: The Perseid meteor shower is about to peak. The show begins after sunset on Tuesday, August 11th, and continues until dawn on Wednesday, August 12th. Sky watchers could see dozens of meteors per hour. (continued below)



A time of particular interest is 0800 UT (1 am PDT) on August 12th. That's when Earth is expected to pass through a denser-than-usual filament of dust from the shower's parent Comet Swift-Tuttle. For an hour or so, rates could surge to 200 per hour. Bright moonlight will blot out many of those Perseids, but even a fraction of 200 is a good show. Observing tips may be found in the Science@NASA story "[The Perseids are Coming](#)."

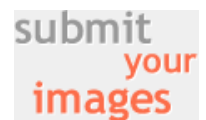
[2009 Perseid Photo Gallery](#)
 [Previous Perseids: [2008](#), [2007](#), [2006](#), [2005](#), [2004](#), [2001](#)]

EVOLUTION OF AN IMPACT: Since July 19th, when Anthony Wesley of Australia discovered the scattered remains of a [mystery impactor](#) in the high clouds of Jupiter, amateur astronomers around the world have been photographing the planet every night. "German astronomer Hans Joerg Mettig has converted some of the best images into polar projections," says Theo Ramakers, "and I have stitched them together to make a movie." Click on the image to set the scene in motion:

Cool links:

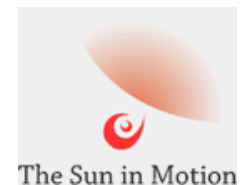
[archives](#)

August
 11
 2009



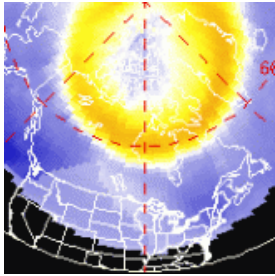
[You: an electricity fool?](#)
 A shocking secret electric co's don't want you to know
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24-hr max: **Kp= 2** quiet
[explanation](#) | [more data](#)

Current Auroral Oval:

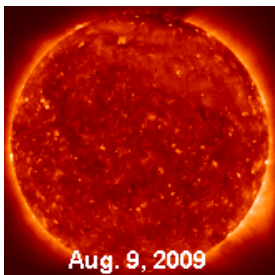


Switch to: [Europe](#), [USA](#), [New Zealand](#), [Antarctica](#)
 Credit: NOAA/POES

Interplanetary Mag. Field

B_{total} : **0.8** nT
 B_z : **0.6** nT **south**
[explanation](#) | [more data](#)
 Updated: Today at 0617 UT

Coronal Holes:



There are no coronal holes on the Earth-facing side of the sun. Credit: Hinode X-ray Telescope

SPACE WEATHER NOAA Forecasts



Updated at: 2009 Aug 10 2201 UTC

FLARE	0-24 hr	24-48 hr
CLASS M	01 %	01 %
CLASS X	01 %	01 %

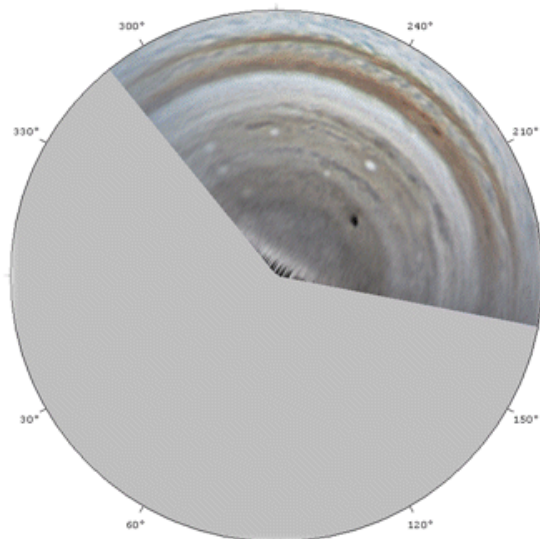
Geomagnetic Storms:

Probabilities for significant disturbances in Earth's magnetic field are given for three activity levels: [active](#), [minor storm](#), [severe storm](#)

Updated at: 2009 Aug 10 2201 UTC

Mid-latitudes

	0-24 hr	24-48 hr



Animations: [large](#), [small](#), [zoom](#)

The 3-week animation, which begins with Wesley's discovery image, shows the cindery cloud expanding, swirling, and ultimately being torn into three or more pieces by turbulent south polar winds. "The spot has really progressed dramatically," says Ramakers.

No one knows how the movie will end. Planetary scientists say the debris could evolve in interesting and unexpected ways before it finally disperses some weeks from now. Astronomers who wish to contribute scenes can monitor the cloud near Jupiter's System II longitude 210°. For predicted times when it will cross the planet's central meridian, add 2 hours to Sky and Telescope's [predicted transit times](#) for Jupiter's Great Red Spot.

more images: from Brian Combs of Buena Vista, Georgia; [from Mike Hood](#) of Kathleen, Georgia; [from George Tarsoudis](#) of Alexandroupolis - Evros, Greece; [from W.Verhesen](#) of Sittard, The Netherlands; [from Glenn Jolly](#) of Gilbert, Arizona; [from Alphajuno](#) of League City, Texas;

[2009 Noctilucent Photo Gallery](#)

[previous years: [2008](#), [2007](#), [2006](#), [2005](#), [2004](#), [2003](#)]

[July 2009 Aurora Gallery](#)

[previous Julys: [2008](#), [2007](#), [2006](#), [2005](#), [2004](#), [2003](#)]

[Explore the Sunspot Cycle](#)



Near-Earth Asteroids

Potentially Hazardous Asteroids ([PHAs](#)) are space rocks larger than approximately 100m that can come closer to Earth than 0.05 AU. None of the known PHAs is on a collision course with our planet, although astronomers are finding [new ones](#) all the time.

On August 11, 2009 there were **1067** potentially hazardous asteroids.



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 CleanPowerBlog.com/Sol

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ACTIVE	05 %	05 %
MINOR	01 %	01 %
SEVERE	01 %	01 %

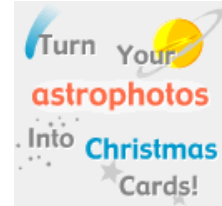
High latitudes

	0-24 hr	24-48 hr
ACTIVE	10 %	10 %
MINOR	01 %	01 %
SEVERE	01 %	01 %

August 2009 Earth-asteroid encounters:

Asteroid	Date(UT)	Miss Distance	Mag.	Size
2009 MC9	Aug. 7	70.3 LD	16	1.2 km
2009 OF	Aug. 8	15.4 LD	18	220 m
2007 RQ17	Aug. 9	8.4 LD	17	130 m
2000 LC16	Aug. 17	75.6 LD	14	2.0 km
2006 SV19	Aug. 21	59.2 LD	16	1.3 km

Notes: LD means "Lunar Distance." 1 LD = 384,401 km, the distance between Earth and the Moon. 1 LD also equals 0.00256 AU. MAG is the visual magnitude of the asteroid on the date of closest approach.



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Essential Links

[LINK](#) [NOAA Space Weather Prediction Center](#)

The official U.S. government space weather bureau

[LINK](#) [Atmospheric Optics](#)

The first place to look for information about sundogs, pillars, rainbows and related phenomena.

[LINK](#) [Solar and Heliospheric Observatory](#)

Realtime and archival images of the Sun from SOHO.

[LINK](#) [STEREO](#)

3D views of the sun from NASA's Solar and Terrestrial Relations Observatory

[LINK](#) [Daily Sunspot Summaries](#)

from the NOAA Space Environment Center

[LINK](#) [Current Solar Images](#)

from the National Solar Data Analysis Center

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