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 News and information about the Sun-Earth environment

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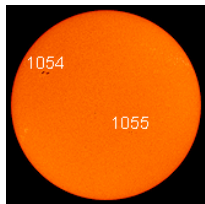
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SPACE WEATHER
Current conditions

Solar wind
 speed: **521.6** km/sec
 density: **0.8** protons/cm³
[explanation](#) | [more data](#)
 Updated: Today at 1556 UT

X-ray Solar Flares
 6-hr max: **B2** 1530 UT Mar12
 24-hr: **B2** 1530 UT Mar12
[explanation](#) | [more data](#)
 Updated: Today at: 1555 UT

Daily Sun: 12 Mar. 10



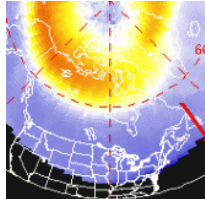
Sunspot 1054 is growing rapidly and poses a threat for C-class solar flares. Credit: SOHO

Sunspot number: 31
[What is the sunspot number?](#)
 Updated 11 Mar 2010

Spotless Days
 Current Stretch: 0 days
 2010 total: 6 days (9%)
 2009 total: 260 days (71%)
 Since 2004: 776 days
 Typical Solar Min: 485 days
[explanation](#) | [more info](#)
 Updated 11 Mar 2010

The Radio Sun
 10.7 cm flux: **84** sfu
[explanation](#) | [more data](#)
 Updated 11 Mar 2010

Current Auroral Oval:



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

Planetary K-index
 Now: **Kp= 2** quiet
 24-hr max: **Kp= 4** unsettled
[explanation](#) | [more data](#)

Interplanetary Mag. Field
 B_{total}: **3.9** nT
 B_z: **0.6** nT north
[explanation](#) | [more data](#)
 Updated: Today at 1556 UT

Coronal Holes:

What's up in Space

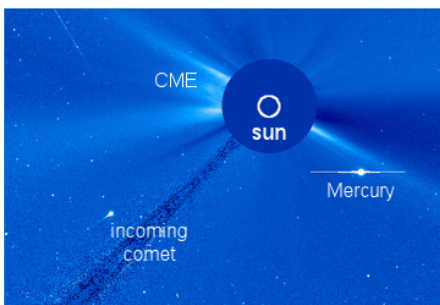
March 12, 2010

NEW AND IMPROVED: Turn your iPhone or iPod Touch into a field-tested *global* satellite tracker. The [Satellite Flybys app](#) now works in all countries.



CHILEAN QUAKE SHIFTS EARTH'S AXIS: Widespread press reports have noted that February's Chilean earthquake might have shortened Earth's day by a small amount. [Today's story](#) from Science@NASA explores a more significant effect---how the quake might have shifted Earth's axis.

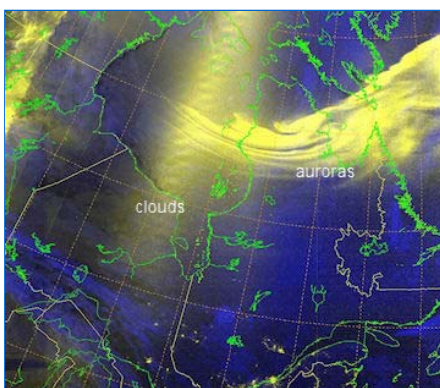
DOOMED COMET: A newly-discovered comet is plunging toward the sun and probably will not survive. The encounter is too close to the sun for human eyes to see, but the Solar and Heliospheric Observatory (SOHO) is able to monitor the action using an opaque disk to block the sun's glare. Click on the image to launch a 12-hour time-lapse animation:



The doomed comet is probably a member of the Kreutz sungrazer family. Named after a 19th century German astronomer who studied them in detail, Kreutz sungrazers are fragments from the breakup of a giant comet at least 2000 years ago. Several of these fragments pass by the sun and disintegrate every day. Most are too small to see but occasionally a big fragment--like this one--attracts attention.

Keep an eye on SOHO for the [latest images](#).

AURORAS FROM SPACE: A solar wind stream is buffeting Earth's magnetic field and stirring up geomagnetic activity around the Arctic Circle. "On March 11th," reports Paul McCrone, "the DMSP F-18 weather satellite recorded a dramatic auroral event over northern Canada."



McCrone processed the image at the US Navy's Fleet Numerical Meteorology and Oceanography Center in Monterey, California. It shows a broad swirl of Northern Lights stretching from Newfoundland across Quebec to the Hudson Bay. "I included [an infrared image](#) to show that this is really not a cloud," he says. Auroras are not strong sources of infrared radiation, but clouds are, so infrared images can be used to distinguish the two.

The solar wind continues to blow. High-latitude sky watchers should remain alert for auroras.

March Northern Lights Gallery

[previous Marches: [2009](#), [2008](#), [2007](#), [2006](#), [2005](#), [2004](#), [2003](#)]

Cool links:

[archives](#)

March

12

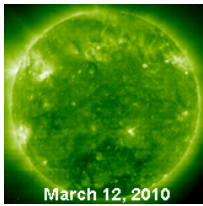
2010



Astronomy DVD Course
 Alex Filippenko DVD Explaining Black Holes & the Universe.
[Teach12.com/Astronomy](#)

YardBright Solar Lighting
 Path, Spot, and Decor Garden Lights Same Day \$5.95 Shipping!
[www.YardBright.com](#)

Solar Data Logger
 Measure and log solar irradiance for up to 170 days.
[www.microcircuitlabs.com](#)



There are no large coronal holes on the Earth-facing side of the sun. Credit: SOHO Extreme UV Telescope

**SPACE WEATHER
NOAA
Forecasts**

Updated at: 2010 Mar 11 2201 UTC

FLARE	0-24 hr	24-48 hr
CLASS M	05 %	05 %
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: 2010 Mar 11 2201 UTC

Mid-latitudes

	0-24 hr	24-48 hr
ACTIVE	05 %	10 %
MINOR	01 %	01 %
SEVERE	01 %	01 %

High latitudes

	0-24 hr	24-48 hr
ACTIVE	05 %	10 %
MINOR	01 %	05 %
SEVERE	01 %	01 %

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 March 12, 2010 there were **1106** potentially hazardous asteroids.

March 2010 Earth-asteroid encounters:

Asteroid	Date(UT)	Miss Distance	Mag.	Size
2001 PT9	March 3	11.1 LD	15	305 m
4486 Mithra	March 12	73.5 LD	15	3.3 km
2001 FM129	March 13	44.1 LD	16	1.5 km
2002 TE66	March 28	48.0 LD	15	940 m

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.

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 sun dogs, 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

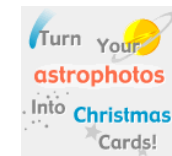
[LINK](#) [Science Central](#)

[more links...](#)

Personal Solar Telescope

Coronado Personal Solar Telescope 1.6" f/10 Refractor H-alpha filter
[www.astronomics.com](#)

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