

Aurora Watch

*A Beginners Guide to Seeing the Aurora
From Northern Scotland*

Space Weather Essentials

1. Sun unleashes solar storm

2. Coronal mass ejection bursts into space

3. Earth's magnetosphere at times gets hit with charged particles

4. Our atmosphere glows with auroral lights (seen from Earth and space)

5. Charged particles affect communications, navigation, satellites, the power grids, more.

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Turning observations into information from the center of the earth to the center of the sun

Geophysical Institute

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Aurora Forecast for Saturday, October 22, 2011

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Select a Map

Quiet: 0 1 2 3 4 5 6 7 8 9

Forecast: Auroral activity will be quiet. Weather permitting, quiet displays will be visible directly overhead in Yellowknife, Canada, northern Norway and Wrangel Island, Russia, and visible low on the horizon as far south as Fairbanks, Alaska, Rovaniemi, Finland and Chersky, Russia.

Short term (1hr) Aurora Forecast
October 22, 2011 10:15 GMT (October 22, 2011 11:15 ADT)
Minimum:

Current Aurora Activity

NOAA/POES

Auroral Activity by Solar Rotation

<http://www.gi.alaska.edu/AuroraForecast/3>

Life: View: 20:37:55 Sat

Report Subscribers | Contact | Solar | Home Radio

The Sun Today: Updated October 20, 2011

Last Month AVGs: Solar Flux: 134.5 A | Neutron: 106.4 A | Solar Wind: X2.1

SolarHam.com

by Amateur Radio Station VE3EN

Daily Reports WWW | SOLAR REPORT | LATEST ALERTS | SOLAR PLUS

Solar Forecast: Solar Risk: M-Class: 63% X-Class: 10%

Main Menu: Click to View

Quick Links: NOAA | SWPC | SolarSoft | STEREO

Welcome to SolarHam.com [Version 6.9] - Updates every 3 minutes! All of your solar and aurora needs in one place!

[Ri] [Solar Wind] [Auroral Oval] [K-Index] [X-Ray] [Proton]

Currently: M CLASS FLARE

Solar Images: [More Images]

Latest Solar News and Updates

Possible Earths Directed CME / Long Duration M Flare 10/22/2011 by Kevin VE3EN at 11:15 UTC

<http://www.solarham.com/>

spaceweather.com

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Current Conditions

Solar wind speed: 321.9 km/sec
density: 0.7 protons/cm³
Updated: Today at 20:27 UT

X-ray Solar Flare:
6-hr max: G3 1000 UT Mar02
24-hr C1 1210 UT Mar02
Updated: Today at: 21:00 UT

Daily Sun: 03 Mar 11

Clearing aurora: IGI has a "strongest possible" magnetar flare the future energy for 2011 solar flare. Credit: NOAA/POES

Sunspot number: 72
Updated 01 Mar 2011

Spotless Days:
Current streak: 0 days
2011 total: 1 day (2%)
2010 total: 21 days (7.4%)
2009 total: 260 days (71.9%)
Since 2000: 820 days
Typical solar flares: 654 days
Updated 01 Mar 2011

The Radio Sun:
10.7 cm flux: 111 s.u.
Updated 01 Mar 2011

What's up in space

Wednesday, Mar 2, 2011

Turn your cell phone into a field-based satellite tracker. Works for Android and iPhone.

WHAT'S GETTING EARLY? Have you ever seen a fireball streak through the night sky and gone to bed wondering "What was that?" NOAA is deploying a network of nanosatellites that will have an answer waiting for you when you wake up. Get the [full story](#) from [Science@NASA](#).

GEOMAGNETIC STORM: Solar wind stream hits Earth's magnetic field on March 1st sparking a day-long geomagnetic storm and bright auroras around the Arctic Circle. NOAA space physicist James Spann photographed the display from Poker Flat, Alaska, where he is attending a [scientific conference](#) to study (you guessed it) auroras.

Aurora hunters

Join Us On the Suburbs of a Lifetime

Home DEER or just Fun? You can make your own space station. Have your own space station. The space station and the space station.

Averted Imagination

solar astronomy.org

SunGazer.net

FIGHT LIGHT POLLUTION

ATKINS LIFE

Switch to [Google Maps](#) [New Zealand](#) [Australia](#)
Credit: NOAA/POES

Polarity K-Index:
10-min max: G3 gular
24-hr max: G3 gular
Updated: Today at 20:27 UT

Interplanetary Mag. Field:
B_z: 2.9 nT
B_y: 0.2 nT south
Updated: Today at 20:27 UT

Coronal Holes: 03 Mar 11

www.spaceweather.com

Summary

- Using a website like *www.spaceweather.com*, watch out for active regions on the Earth facing side of the Sun that could propel material our direction
- Monitor for activity (coronal holes, solar flares, CMEs) that ejects material in the direction of Earth – it can produce an increased chance of seeing aurora a few days later
- On arrival of the ejected solar material monitor the extent of the auroral oval → there's a good chance of seeing aurora from Caithness when planetary K-index (Kp) is 5 or higher (you can see it from Caithness at Kp=3 with a clear, flat northern horizon)
- If clouds are not in the way get outside and find a dark spot
- When the Bz value tips southwards get ready to enjoy the show!

GOOD LUCK!

Weblinks

Basic info on aurora and seeing them from the UK:

http://www.geomag.bgs.ac.uk/education/viewing_aurora.html

<http://aurorawatch.lancs.ac.uk/introduction> - aurorawatch UK

Real time solar and aurora data:

<http://aurorawatch.lancs.ac.uk/> - *subscribe for alerts*

www.auroraspy.co.uk

www.swpc.noaa.gov/pmap/pmapN.html

www.spaceweather.com

www.gi.alaska.edu/AuroraForecast

www.spaceweatherlive.com/en/

Detailed info for those that want to know more:

<http://odin.gi.alaska.edu/FAQ/> - answers to FAQ about the aurora

www.swpc.noaa.gov/Aurora/ - tips on viewing aurora

www2.gi.alaska.edu/asahi/asahimap.htm - aurora "classroom"