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AURORA ALERTS

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EARTH TO SKY

Current Conditions

What's up in space

Tuesday, Mar. 19, 2019

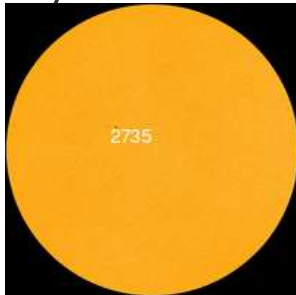
Solar wind

speed: **402.5** km/sec
density: **7.1** protons/cm³
more data: [ACE](#), [DSCOVR](#)
Updated: Today at 2208 UT

X-ray Solar Flares

6-hr max: **A0** 2125 UT Mar19
24-hr: **A1** 1421 UT Mar19
[explanation](#) | [more data](#)
Updated: Today at: 2200 UT

Daily Sun: 19 Mar 19



Sunspot AR2735 is a remnant member of old Solar Cycle 24. Credit: SDO/HMI

Sunspot number: 13

[What is the sunspot number?](#)
Updated 19 Mar 2019

Spotless Days

Current Stretch: 0 days
2019 total: 53 days (69%)
2018 total: 221 days (61%)
2017 total: 104 days (28%)
2016 total: 32 days (9%)
2015 total: 0 days (0%)
2014 total: 1 day (<1%)
2013 total: 0 days (0%)
2012 total: 0 days (0%)
2011 total: 2 days (<1%)
2010 total: 51 days (14%)
2009 total: 260 days (71%)
2008 total: 268 days (73%)
2007 total: 152 days (42%)
2006 total: 70 days (19%)
Updated 19 Mar 2019

Thermosphere Climate Index

today: 4.28×10^{10} W **Cold**
Max: 49.4×10^{10} W **Hot** (10/1957)
Min: 2.05×10^{10} W **Cold** (02/2009)
[explanation](#) | [more data](#)
Updated 19 Mar 2019

The Radio Sun

10.7 cm flux: **70** sfu
[explanation](#) | [more data](#)
Updated 19 Mar 2019

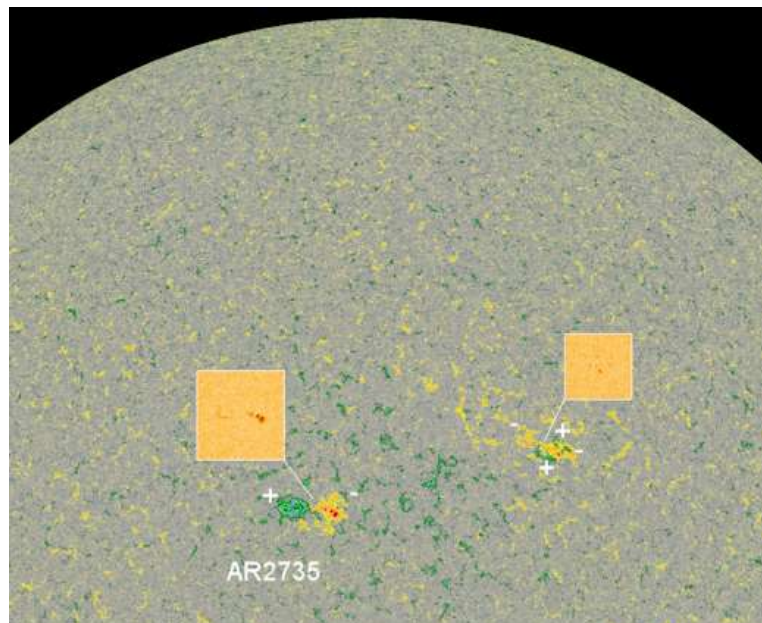
Current Auroral Oval:

Solar minimum is here - but even now strangely beautiful auroras are dancing around the poles. Deep inside the Arctic Circle, the expert guides of [Aurora Holidays](#) in Utsjoki, Finland, can help you chase them. [Book now!](#)

AURORA HOLIDAYS

SOLAR WIND APPROACHES EARTH: Geomagnetic unrest is possible on **March 20th** when a stream of solar wind hits Earth's magnetic field. The gaseous material is flowing from [a minor hole](#) in the sun's atmosphere. Arctic sky watchers should be alert for auroras mixed with full moonlight. **Aurora Alerts:** [SMS text](#), [email](#).

EARTH-FACING SUNSPOTS: Two sunspot groups are emerging on the Earth-facing side of the sun. They are inset in this magnetic map of the sun from NASA's Solar Dynamics Observatory on March 19th:



Sunspots are, essentially, islands of magnetism floating on the surface of the sun. Like all magnets they have poles, + and -. Sunspot AR2735 has a simple bipolar magnetic structure that identifies it as a member of old Solar Cycle 24.

The other sunspot, as yet unnumbered, has a more complicated structure with multiple magnetic poles. It is probably a member of old Solar Cycle 24 as well. The mixture of magnetic polarities makes it worth watching. Mixed-polarity magnetic fields can criss, cross, and explode--a process known as "[magnetic reconnection](#)" underlying solar flares.

The most likely outcome, however, is continued quiet as a deep Solar Minimum continues. Stay tuned for updates. **Aurora Alerts:** [SMS text](#), [email](#).

Realtime Aurora Photo Gallery

A GIFT FROM THE EDGE OF SPACE: Don't just see the Northern Lights, wear them! To support their cosmic ray balloon program, the students of [Earth to Sky Calculus](#) have flown a payload of Northern Light Pendants to the edge of space. This one reached an altitude 109,908 feet above Earth's surface:

archives

March ▾

19 ▾

2019 ▾

[view](#)



RADS
ON A PLANE