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## Current Conditions

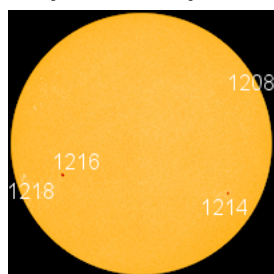
### Solar wind

speed: **408.8** km/sec  
density: **1.9** protons/cm<sup>3</sup>  
[explanation](#) | [more data](#)  
Updated: Today at 1036 UT

### X-ray Solar Flares

6-hr max: **B3** 0506 UT May19  
24-hr: **B3** 0213 UT May19  
[explanation](#) | [more data](#)  
Updated: Today at: 1000 UT

### Daily Sun: 19 May 11



None of these sunspots poses a threat for strong flares. Credit: SDO/HMI

### Sunspot number: 65

[What is the sunspot number?](#)  
Updated 18 May 2011

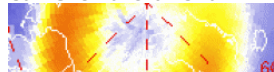
### Spotless Days

Current Stretch: 0 days  
2011 total: 1 day (<1%)  
2010 total: 51 days (14%)  
2009 total: 260 days (71%)  
Since 2004: 820 days  
Typical Solar Min: 486 days  
Updated 18 May 2011

### The Radio Sun

10.7 cm flux: **91** sfu  
[explanation](#) | [more data](#)  
Updated 18 May 2011

### Current Auroral Oval:



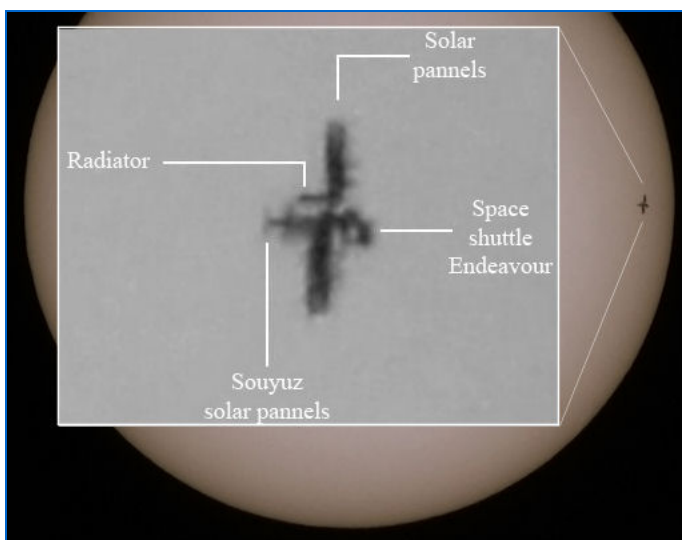
## What's up in space

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



**FREE-FLOATING PLANETS:** Astronomers have discovered a new class of planets floating alone in the dark of space. These lone worlds are probably outcasts from developing planetary systems and, moreover, they could be twice as numerous as the stars themselves. Get the [full story](#) from Science@NASA.

**SPACESHIPS IN THE SUN:** Space shuttle Endeavour is docked to the ISS and, joined together, the two spaceships can make a very bright light [in the night sky](#). But the night sky isn't the only place to see them. Yesterday in Romania, the docked spaceships passed directly in front of the midday sun:



Maximilian Teodorescu recorded the split-second transit from Bucharest, Romania: "I used an 80 mm refracting telescope capped by a Baader ND 5 solar filter, and caught the silhouette of ISS-Endeavour in two video frames--lucky shots I would say!"

Ready for your own lucky shot? Check [Calsky.org](#) for transit predictions, and don't forget to use a [safe solar filter](#) when checking for spaceships in the sun.

more images: [from Alex Conu](#) of Berceni, Romani

**MORNING PLANETS:** Wake up and smell the coffee! Or better yet, [see the planets](#). Venus and Jupiter are beaming brightly in the eastern sky at dawn. Stephen W. Ramsden sends this photo of the view from Atlanta, Georgia:

Thursday, May. 19, 2011

### archives

May  
19  
2011  
[view](#)



**Averted Imagination**  
ASTROPHOTOGRAPHY

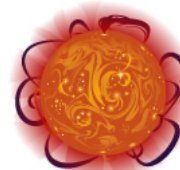
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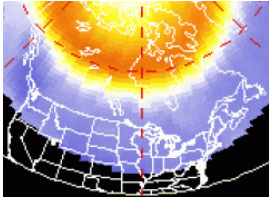
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**Satellite Flybys**  
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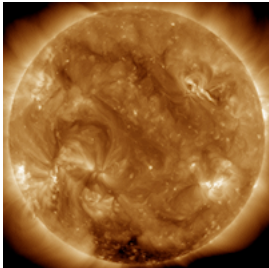


Switch to: [Europe](#), [USA](#), [New Zealand](#), [Antarctica](#)  
 Credit: NOAA/POES

**Planetary K-index**  
 Now: **Kp= 1 quiet**  
 24-hr max: **Kp= 2 quiet**  
[explanation](#) | [more data](#)

**Interplanetary Mag. Field**  
 $B_{total}$ : **4.1 nT**  
 $B_z$ : **0.8 nT south**  
[explanation](#) | [more data](#)  
 Updated: Today at 1036 UT

**Coronal Holes: 19 May 11**



There are no large coronal holes on the Earthside of the sun. Credit: SDO/AIA.

**SPACE WEATHER NOAA Forecasts**



Updated at: 2011 May 18 2200 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](#)

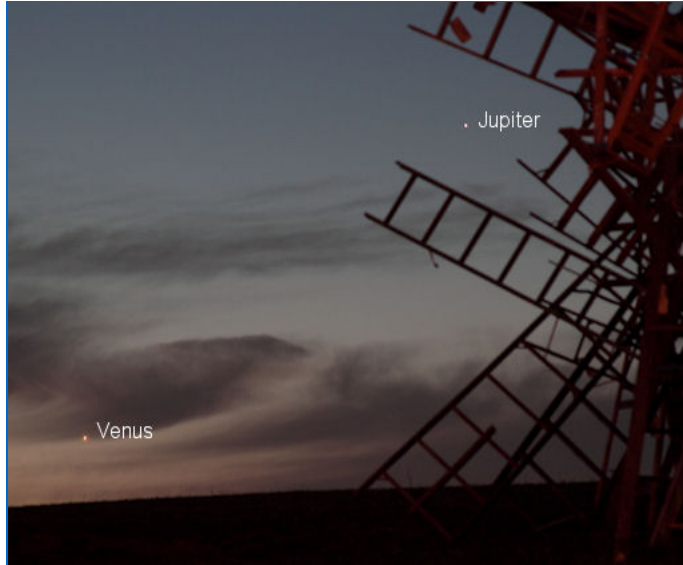
Updated at: 2011 May 18 2200 UTC

**Mid-latitudes**

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

**High latitudes**

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



"The recently installed *Rise Up Atlanta* sculpture made by Charles Brouwer from donated ladders was a perfect foreground for the planetary conjunction," says Ramsden. "I woke up early and went to Freedom Park in Atlanta to photograph the planets in their majestic peaceful rise."

Venus and Jupiter aren't alone. Clear, dark skies reveal Mars and Mercury alongside their brighter cousins. The four planets are putting on an [eye-opening show](#) every morning for the rest of the month. It's a great way to begin the day.

**more images:** [from Daphne Gonzalvez](#) of Sydney, Australia; [from Konstantinos Christodouloupoulos](#) of Korinthos, Greece; [from Beatrice van Eden](#) of the SANAE base, Antarctica; [from John Phillips](#) of Upper Hutt, Wellington, New Zealand;

**April 2011 Aurora Gallery**

[previous Aprils: [2010](#), [2009](#), [2008](#), [2007](#), [2006](#), [2005](#), [2004](#), [2003](#), [2002](#)]

**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 May 19, 2011 there were **1224** potentially hazardous asteroids.

**Recent & Upcoming Earth-asteroid encounters:**

Asteroid	Date(UT)	Miss Distance	Mag.	Size
<a href="#">2011 HC24</a>	May 12	5.9 LD	--	58 m
<a href="#">2002 JC</a>	Jun 1	57.5 LD	--	1.6 km
<a href="#">2009 BD</a>	Jun 2	0.9 LD	--	10 m
<a href="#">2002 JB9</a>	Jun 11	71.5 LD	--	3.2 km
<a href="#">2001 VH75</a>	Jun 12	42.2 LD	--	1.1 km
<a href="#">2004 LO2</a>	Jun 15	9.9 LD	--	48 m
<a href="#">2011 GA55</a>	Jul 6	64.1 LD	--	1.0 km
<a href="#">2011 EZ78</a>	Jul 10	37.3 LD	--	1.5 km
<a href="#">2003 YS117</a>	Jul 14	73.9 LD	--	1.0 km
<a href="#">2007 DD</a>	Jul 23	9.3 LD	--	31 m
<a href="#">2009 AV</a>	Aug 22	49.7 LD	--	1.1 km
<a href="#">2003 QC10</a>	Sep 18	50 LD	--	1.2 km
<a href="#">2004 SV55</a>	Sep 19	67.5 LD	--	1.2 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.

**Essential web links**

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

The official U.S. government space weather bureau

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

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

[LINK](#) [Solar Dynamics Observatory](#)

Researchers call it a "Hubble for the sun." SDO is the most advanced solar observatory ever.

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

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

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

Realtime and archival images of the Sun from SOHO.

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