



**GEOLOGICAL SURVEY OF CANADA  
OPEN FILE 7391**

**Space Weather Bulletin - 2012**

**R.A.D. Fiori, H.-L. Lam, L. Trichtchenko,  
L. McKee, D. Danskin, L. Nikolic**

**2013**



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**Canada**



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# 1. Summary

Space weather refers to the conditions and processes occurring in space which have the potential to affect the near Earth environment. Space weather processes can include changes in the interplanetary magnetic field, coronal mass ejections from the Sun, and disturbances in Earth's magnetic field. The effects of space weather include (but are not limited to) geomagnetically induced currents in power systems and pipelines, azimuthal errors in directional drilling, disruptions to high frequency radio communication and GPS navigation, and failure or misoperation of satellites.

The Canadian Space Weather Forecast Centre monitors, analyzes, and forecasts space weather and dispatches warnings and alerts across Canada. This includes tracking solar disturbances from the Sun to the Earth and monitoring the Earth's magnetic field on the ground using a network of magnetic observatories distributed throughout Canada.

The Space Weather Bulletin is generated by the Canadian Space Weather Forecast Centre and provides recipients with a daily description of current space weather conditions. The bulletin begins with a summary of the most important observations followed by a description of the current geomagnetic activity levels and a 24 hour forecast of the future geomagnetic activity levels. Current conditions and forecasted conditions are provided individually for the polar cap, auroral, and sub-auroral zones in Canada. Potential impacts to power systems, HF radio, geostationary satellites, aeromagnetic surveys, and directional drilling operations are provided for each zone based on the level of geomagnetic activity. In addition to this summary, detailed information about solar conditions, interplanetary conditions, and the geostationary satellite environment are provided. Descriptions of solar conditions include the observation of coronal mass ejections, coronal holes, active regions, and solar flares. Where possible, the time at which effects are expected to be observed at the Earth are provided. Interplanetary conditions refer to the solar wind speed, and the magnitude and polarity of the north / south (perpendicular to the ecliptic plane) component of the interplanetary magnetic field. In the geostationary satellite environment, the observed and predicted values of the electron fluence at geostationary orbit with respect to threshold levels are provided for the previous and following day. Geomagnetic activity levels for the past and future 24 hours in the polar cap, auroral, and sub-auroral zones are also provided. All descriptions are based on data products and links available at [www.spaceweather.gc.ca](http://www.spaceweather.gc.ca).

This report provides a description of the Space Weather Bulletin and documents the bulletin in 2012. Section 2 provides an introduction and description of the bulletin. A listing of typical bulletin statements is provided in Section 3 for the three versions of the bulletin issued in 2012. Section 4 lists possible impacts associated with varying levels of space weather activity, and Section 5 contains tables of values used to select descriptive statements (very low / low / moderate / high / very high) used in the bulletin. A glossary of terms is included in Section 6. Section 7 provides a summary of space weather activity for 2012 that will be useful for examining bulletins provided in Section 8.

## **2. Introduction**

### ***2.1 Purpose***

The purpose of the daily space weather bulletin is to provide a simplified description of the 24-hour review, current conditions, and 24-hour prediction of solar, interplanetary, and geomagnetic conditions and observed events, and to describe possible impacts to infrastructure in the near-Earth space.

### ***2.2 Email Recipients***

Canadian Hazards Information Service (CHIS) officials  
Defence Research and Development Canada (DRDC) officials  
Public Safety Canada officials  
Space Weather Duty Forecasters

### ***2.3 Audience***

Government officials not trained in space physics.

### 3. Outline of the Bulletin – 2012

The space weather bulletin was heavily revised in 2012, and three different versions of the bulletin were used for the period of 01 JAN 2012 – 13 FEB 2012, 14 FEB 2012 – 08 SEP 2012, 09 SEP 2012 – 31 DEC 2012. For each version statement templates were created to describe a variety of space weather conditions. The duty forecaster reviews conditions and selects appropriate statements to include in the bulletin. If the current situation cannot be adequately described, new statements are developed.

#### 3.1 2012 – Version 1: 01 JAN 2012 – 13 FEB 2012

The document *Space Weather Bulletin – 2011* (see reference below) provides a description of the 2011 space weather bulletin, which was in effect until February 13, 2012. This version of the bulletin is broken into six sections: *Preamble*, *Overview*, *Solar*, *Interplanetary*, *Near-Earth Environment*, and *Geomagnetic*. In the *Preamble*, the date and time the bulletin was issued is indicated in both Universal Time (UT), and either Eastern Standard Time (EST) or Eastern Daylight Savings Time (EDT). The *Overview* provides a brief summary of solar or geomagnetic activity that may be of importance to the user, including a listing of events that are likely to impact the Earth and the expected time of impact. The remaining sections provide detailed information about activity on the sun (*Solar*), the solar wind speed and orientation of the z component of the interplanetary magnetic field (IMF) (*Interplanetary*), an indication of the magnitude of the energetic electron fluence (*Near Earth Environment*), and a 24 hour review and forecast of geomagnetic activity levels (*Geomagnetic*).

A listing of the sample statements for this version of the bulletin is provided in Section 4 of *Space Weather Bulletin – 2011*.

Fiori, R. A. D., Lam, H.-L., Trichtchenko, L., McKee, L., Danskin, D., and Nikolic, L., 2012. *Space Weather Bulletin – 2011*; Geological Survey of Canada, Open File 7197, 282 p. doi:10.4095/291896.

#### 3.2 2012 – Version 2: 14 FEB 2012 – 08 SEP 2012

After critical review by duty forecasters, and based on requests by bulletin users, a new format of the space weather bulletin was developed. The new bulletin became effective February 14, 2012. Changes are summarized as follows:

- Generalization of statements made in all sections.
- Statements to describe when data is not available in all sections.
- Additional statements to describe major storm watches in the *Overview*.
- Summary of current conditions (at the time of issue) and 24 hour forecast of conditions (at the time of issue) for geomagnetic activity, the ionosphere, and the space environment in the *Overview*. Note that conditions are not described for the ionosphere.
- Additional statements for issuing, extending, and canceling magnetic storm warnings and alerts in the *Overview*.



- Reference to possible impacts in *Overview*.
- *Solar, Interplanetary, Near-Earth Environment, and Geomagnetic* sections become subsections of *Detailed Information*.
- Statements to describe active regions, multiple events, and long duration flares in *Solar* section.
- Statements to describe interplanetary shocks, polarity of the IMF, and solar proton events in *Interplanetary* section.
- Statements to describe sudden impulses in the *Geomagnetic* section.

Statement templates for the 2012 – Version 2 bulletin are listed below. Red text indicates text to be altered by the duty forecaster issuing the bulletin.

## PREAMBLE

Space Weather Bulletin – **June 23, 2011** issued by the Canadian Space Weather Forecast Centre at **12:00 UT (16:00 EDT)**

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

## OVERVIEW:

- A major storm watch is currently in effect for the (**auroral / polar cap, auroral, and sub-auroral**) zone(s).
- (**Stormy / Major storm**) conditions are possible in the (**polar cap / auroral / sub-auroral**) zone(s) within the next 24 hours.
- (**Stormy / Major storm**) conditions are currently observed in the (**polar cap / auroral / sub-auroral**) zone(s).
- There is currently no storm major watch in effect.
- (**A / Two / Three / ... / Several**) Earth-directed CME(s) have erupted over the past 24 hours.
- (**A / Two / Three / ... / Several**) (**medium / large / medium to large**) (**long duration**) flare(s) have erupted over the past 24 hours. (CMEs may be associated with these flares.)
- Disturbed geomagnetic conditions due to solar activity observed on (**June 10, 2011**) are not expected.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between **June 24, 2011** and **June 25, 2011**.
- Disturbed geomagnetic conditions due to solar activity are expected today.
- Disturbed geomagnetic conditions due to solar activity are currently observed in (**polar / auroral / subauroral**) zones.
- Ionospheric absorption is currently observed in the (**polar / auroral / subauroral**) zone(s).
- Possibility of impacts to (**ground systems / aeromagnetic surveys / radio systems / satellites**). See list of impacts (below).
- See our website for current information: <http://www.spaceweather.gc.ca>

- Magnetic Storm Warning issued at 2006/12/15 20:15 UT.
- Magnetic Storm Warning Cancellation issued at 2006/12/15 20:15 UT.
- Magnetic Storm Warning Extension issued at 2006/12/15 20:15 UT.
- Magnetic Storm Warning Extension issued at 2006/12/15 20:15 UT. Major magnetic storm conditions are still expected. Anticipated onset: 2006/12/15 @23:00 UT. Anticipated end: 2006/12/16 @ 04:00 UT.
- Magnetic Storm Warning issued at 2006/12/15 20:15 UT. Major magnetic storm conditions are expected. Anticipated onset: 2006/12/15 @23:00 UT. Anticipated end: 2006/12/16 @ 04:00 UT.
- Magnetic Storm Warning Cancellation issued at 2006/12/15 20:15 UT. Major magnetic storm conditions expected from: 2006/12/15 @23:00 UT to: 2006/12/16 @04:00 UT did not occur.
- Magnetic Storm Alert Termination issued at 2006/12/15 20:15 UT.
- Magnetic Storm Alert issued at 2006/12/15 20:15 UT.
- Magnetic Storm Alert Extension issued at 2006/12/15 20:15 UT.
- Magnetic Storm Alert issued at 2006/12/15 20:15 UT. Major magnetic storm conditions began on: 2006/12/15 @ 23:00 UT. Expected end: 2006/12/15 @ 04:00 UT.
- Magnetic Storm Alert Termination issued at 2006/12/15 20:15 UT. Major magnetic storm conditions ended on: 2006/12/16 @ 04:00 UT.
- Forecast/Data quality is reduced due to a lightning strike at our Forecast Centre.
- Forecast/Data quality is reduced due to a technical problem with the GOES satellite.

### Geomagnetic Activity:

#### Current conditions

polar cap zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)  
auroral zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)  
sub-auroral zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)

#### 24 hour forecast

polar cap zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)  
auroral zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)  
sub-auroral zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)

### Ionosphere:

#### Current conditions

polar cap zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)  
auroral zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)  
sub-auroral zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)

#### 24 hour forecast

polar cap zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)  
auroral zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)  
sub-auroral zone: \_\_\_\_\_ (with \_\_\_\_\_ intervals)

## Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: (Low / Normal / Moderate / High / Very High)

24 hour forecast

energetic electron fluence at geostationary orbit: (Low / Normal / Moderate / High / Very High)

## DETAILED INFORMATION:

### SOLAR:

- Solar activity has been (very low / low / moderate / high / very high).
- There are 3 active regions visible on the solar disk.
- The active region located near the (east limb / central region / west limb) of the solar disk has produced (solar flare / long duration solar flare) (and associated CME) (and has the potential to produce subsequent solar eruptions).
- An Earth-directed CME erupted at June 23, 2011 16:10 UT.
- A non-Earth-directed CME erupted at June 23, 2011 16:10 UT.
- A CME was observed June 08, 2011, and is expected to deliver a glancing blow to the Earth on June 10-12, 2011, resulting in unsettled to active geomagnetic activity.
- Two coronal holes is/are located near the (centre / edge)<sup>1</sup> of the solar disk.
- An (M (medium) / X (large)) flare erupted at June 23, 2011 16:10 UT near the (centre / edge)<sup>1</sup> of the solar disk.
- (Ten) (M (medium) / X (large)) flare(s) have erupted over the past 24 hours.
- A long duration (C (low) / M (medium) / X (large)) flare erupted at January 19, 2011 HH:MM UT near the (centre / edge) of the solar disk.
- Data about solar conditions are currently unavailable.

<sup>1</sup>[Center is defined as +/- 35<sup>0</sup> latitude and +/- 35<sup>0</sup> longitude. Edge is defined as +/- 35<sup>0</sup> latitude and <-35<sup>0</sup> or >+35<sup>0</sup> longitude. Top/bottom will be defined as any latitude poleward of +/- 35<sup>0</sup>. Top/bottom events can be ignored. ]

### INTERPLANETARY:

- Interplanetary activity has been (very low / low / moderate / high / very high).<sup>1</sup>
- The solar wind speed is currently (very slow <400 km/s) / slow (400-500 km/s) / moderate (500-700 km/s) / fast 700-1000 km/s) / very fast (>1000 km/s).<sup>2</sup>
- The solar wind speed has been (increasing / decreasing) over the last xx hours (currently ~ 500 km/s).<sup>3</sup>
- (Moderate / fast) solar wind speeds are due to (high speed streams from coronal holes / a CME) observed June 21, 2011 16:10 UT.
- The solar wind speed has been at xxxx km/s since the passage of an interplanetary shock at June 21, 2001 16:10 UT.

- The interplanetary magnetic field has been fluctuating at (very low ( $|B_z| < 2$  nT) / low ( $2 < |B_z| < 5$  nT) / moderate ( $5 < |B_z| < 10$  nT) / high ( $10 < |B_z| < 20$  nT) / very high ( $|B_z| > 20$  nT)) levels.
- The interplanetary magnetic field has been primarily (positive / negative) at (very low ( $|B_z| < 2$  nT) / low ( $2 < |B_z| < 5$  nT) / moderate ( $5 < |B_z| < 10$  nT) / high ( $10 < |B_z| < 20$  nT) / very high ( $|B_z| > 20$  nT)) levels.
- The interplanetary magnetic field currently has  $B_z = (+/-) 15$  nT.<sup>3</sup>
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.
- An interplanetary shock has been observed at HH:MM UT June 08, 2011.
- A solar energetic proton event started at June 08, 2011 HH:MM UT. Current levels are (normal / moderate / high / very high).
- Data about interplanetary conditions are currently unavailable.

<sup>1</sup>only use this statement if solar wind and IMF both match the table independently

<sup>2</sup>only use this statement if the solar wind speed is moderate or higher

<sup>3</sup>currently refers to the average value for the last hour

#### NEAR-EARTH ENVIRONMENT:

- Energetic electron fluence at geostationary orbit was (below / above) threshold level June 22, 2011 and is expected to be (below / above) threshold level today.
- Energetic electron fluence at geostationary orbit was at (low / normal / moderate / high / very high) levels June 22, 2011 and is expected to be at (low / normal / moderate / high / very high) levels today.
- The 5-minute integral energetic electron flux is currently high.
- Data about conditions in the near-Earth environment are currently unavailable.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### GEOMAGNETIC:

- Geomagnetic activity has been<sup>1</sup> (\_\_\_\_) in the polar zone, (\_\_\_\_) in the auroral zone, and (\_\_\_\_) in the subauroral zone. Activity is forecast<sup>2</sup> to be (\_\_\_\_) in the polar zone, (\_\_\_\_) in the auroral zone, and (\_\_\_\_) in the subauroral zone.
- Geomagnetic sudden impulse due to a shock in the solar wind was observed June 08, 2011 HH:MM UT.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- Data about geomagnetic conditions are currently unavailable.

<sup>1</sup> Based on the 24 hour review.

<sup>2</sup> Based on the 24 hour forecast.

### 3.3 2012 – Version 3: 09 SEP 2012 – 31 DEC 2012

Based on comments and requests from Public Safety Canada officials, the bulletin was reorganized, statements evaluated, and a section describing possible impacts to power systems, HF radio, Geostationary satellites, aeromagnetic surveys, and directional drilling was added.

Version 3 of the 2012 bulletin has been translated as a step toward its official publication, and the bulletin was sent out in both official languages beginning 23 OCT 2012.

An English statement templates for the 2012 – Version 3 bulletin is provided below in tabular format. Tables are used to separate statements into common groupings. The description below represents a fill-in-the-blank style form template would be completed by the duty forecaster. Examples of the formatted bulletin are provided in Section 8.

Symbolic text hi-lighted in red represents dates and times. For example:

YYYY-MM-DD	year-month-day	2012-06-26
DD MMM YYYY	day month year	26 June 2012
HH:MM	hour:minute	08:19
xx	any number	5

In some instances the duty forecaster completing the form has a selection of terms. The words to be selected from are encased in brackets and hi-lighted in blue. Each possible term is separated by the ‘/’ symbol. For example:

(Stormy / Major storm) conditions are possible within the next 24 hours.

Creates two possible sentences:

Stormy conditions are possible within the next 24 hours.

Major storm conditions are possible within the next 24 hours.

In some instances the duty forecaster completing the form may pick any number of entries hi-lighted in blue. In these cases, the last entry in the list is preceded by ‘and’ and the user is expected to place ‘and’ wherever it is required in the list. For example:

Stormy conditions are possible in the (polar cap / auroral / and sub-auroral) (zone / zones).

Creates several possibilities, such as

Stormy conditions are possible in the auroral zone.

Stormy conditions are possible in the polar cap and auroral zones.

Stormy conditions are possible in the polar cap, auroral, and sub-auroral zones.

**EMAIL SUBJECT:** Space Weather Bulletin – **YYYY-MM-DD** issued at **HH:MM** UT  
(**HH:MM** EDT/EST) (- **UPDATE / CORRECTED COPY**)

## SUMMARY

- |                             |   |
|-----------------------------|---|
| <b>major storm watch</b>    | <ol style="list-style-type: none"><li>1. A major storm WATCH is in effect for the (auroral zone / polar cap, auroral, and sub-auroral zones) from <b>DD MMM YYYY HH:MM</b> UT to <b>DD MMM YYYY HH:MM</b> UT.</li><li>2. A major storm WATCH is in effect for the (auroral zone / polar cap, auroral, and sub-auroral zones), and is anticipated to end <b>DD MMM YYYY HH:MM</b> UT.</li><li>3. The major storm WATCH issued <b>DD MMM YYYY HH:MM</b> UT for the (auroral zone / polar cap, auroral, and sub-auroral zones) has been extended to <b>DD MMM YYYY HH:MM</b> UT.</li><li>4. The major storm WATCH issued <b>DD MMM YYYY HH:MM</b> UT for the (auroral zone / polar cap, auroral, and sub-auroral zones) ended <b>DD MMM YYYY HH:MM</b> UT.</li><li>5. There is currently no major storm watch in effect.</li></ol> |
| <b>Stormy Conditions</b>    | <ol style="list-style-type: none"><li>1. (Stormy / Major storm) conditions are possible in the (polar cap / auroral / and sub-auroral) (zone / zones) within the next 24 hours.</li><li>2. (Stormy / Major storm) conditions are (possible / expected) from <b>DD MMM YYYY HH:MM</b> UT to <b>DD MMM YYYY HH:MM</b> for the (polar cap / auroral / and sub-auroral) zone(s).</li><li>3. (Stormy / Major storm) conditions are currently observed in the (polar cap / auroral / and sub-auroral) (zone / zones).</li><li>4. (Stormy / Major storm) conditions expected from <b>DD MMM YYYY HH:MM</b> UT to <b>DD MMM YYYY HH:MM</b> UT for the (auroral zone / polar cap, auroral, and sub-auroral zones) did not occur.</li></ol>   |
| <b>Disturbed Conditions</b> | <ol style="list-style-type: none"><li>1. Disturbed geomagnetic conditions due to solar activity observed on <b>DD MMM YYYY</b> are not expected.</li><li>2. Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between <b>DD MMM YYYY</b> and <b>DD MMM YYYY</b>.</li><li>3. Disturbed geomagnetic conditions due to solar activity are expected today.</li><li>4. Disturbed geomagnetic conditions due to solar activity are currently observed in the (polar cap / auroral / and sub-auroral) (zone / zones).</li></ol>  |

- |                           |   |
|---------------------------|---|
| <b>Ionosphere</b>         | <ol style="list-style-type: none"> <li>1. (An ionospheric / A polar cap) absorption event is currently in progress in the (polar cap / auroral / and sub-auroral) (zone / zones).</li> <li>2. The (ionospheric / polar cap) absorption event reported yesterday has ended.</li> <li>3. (An ionospheric / A polar cap) absorption event is currently not in effect.</li> <li>4. (An ionospheric / A polar cap) absorption event is possible.</li> <li>5. An (ionospheric / polar cap) absorption event is currently in progress for the (polar cap / auroral / and sub-auroral) zone(s) from DD MMM YYYY HH:MM UT to DD MMM YYYY HH:MM UT.</li> <li>6. An (ionospheric / polar cap) absorption event is currently in progress for the (polar cap / auroral / and sub-auroral) zone(s), and is anticipated to end at DD MMM YYYY HH:MM UT.</li> <li>7. The (ionospheric / polar cap) absorption event that began DD MMM YYYY HH:MM UT in the (polar cap / auroral / and sub-auroral) zone(s) has been extended to DD MMM YYYY HH:MM UT.</li> <li>8. The (ionospheric / polar cap) absorption event that began DD MMM YYYY HH:MM UT in the (polar cap / auroral / and sub-auroral) zone(s) ended DD MMM YYYY HH:MM UT.</li> <li>9. The (ionospheric / polar cap) absorption event expected from DD MMM YYYY HH:MM UT to DD MMM YYYY HH:MM UT for the (polar cap / auroral / and sub-auroral) zone(s) did not occur.</li> </ol> |
| <b>Solar Activity</b>     | <ol style="list-style-type: none"> <li>1. An Earth-directed CME has erupted over the past 24 hours.</li> <li>2. (Two / Three / Several) Earth-directed CMEs have erupted over the past 24 hours.</li> <li>3. A (medium / large / medium to large) (long duration) solar x-ray flare has erupted over the past 24 hours.</li> <li>4. (Two / Three / Several) (medium / large / medium to large) (long duration) solar x-ray flares have erupted over the past 24 hours.</li> <li>5. CMEs may be associated with these flares.</li> </ol>   |
| <b>Linking Statements</b> | <ol style="list-style-type: none"> <li>1. The major storm WATCH issued DD MMM YYYY HH:MM UT for the (auroral zone / polar cap, auroral, and sub-auroral zones) ended DD MMM YYYY HH:MM UT.</li> <li>2. (Disturbed / Stormy / Major storm) conditions observed DD MMM YYYY in the (polar cap / auroral / and sub-auroral) (zone / zones) have ended.</li> <li>3. An Earth-directed CME erupted on DD MMM YYYY HH:MM UT (and is expected to reach the Earth on DD MMM YYYY)(, resulting in increased / disturbed geomagnetic activity).</li> <li>4. (Two/Three/Several) Earth-directed CMEs erupted on DD MMM YYYY at HH:MM UT, HH:MM UT, ..., and HH:MM UT (and are expected to reach the Earth on DD MMM YYYY) (, resulting in increased/disturbed geomagnetic activity).</li> <li>5. A CME was observed on DD MMM YYYY, and is expected to deliver a glancing blow to the Earth on DD MMM YYYY (, resulting in increased/disturbed geomagnetic activity).</li> <li>6. (Two / Three / Several) CMEs were observed on DD MMM YYYY, and are expected to deliver a glancing blow to the Earth on DD MMM YYYY (, resulting in increased/disturbed geomagnetic activity).</li> <li>7. Disturbed geomagnetic conditions are expected DD MMM YYYY to DD MMM YYYY due to high speed streams from coronal holes.</li> </ol>  |

**Other**

1. Possibility of impacts to (power systems / radio systems / satellites / aeromagnetic surveys / and directional drilling).
2. See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**CURRENT CONDITIONS (HH:MM UT)**

**Geomagnetic Activity:**

1. polar cap zone: (quiet / unsettled / active / stormy / major storm)
2. auroral zone: (quiet / unsettled / active / stormy / major storm)
3. sub-auroral zone: (quiet / unsettled / active / stormy / major storm)

**Geostationary Satellite Environment:**

1. energetic electron fluence at geostationary orbit: (Low / Normal / Moderate High / Very High)

**Possible Impact:**

1. Power Systems: (Possibility of weak voltage fluctuations / Geomagnetically induced currents may cause misoperation of protective relays and transformer heating) in the (polar cap / auroral / and sub-auroral) zone(s).
2. HF radio: Ionospheric and polar cap absorption events may affect radio communications for transpolar flights and other arctic operations.
3. Geostationary satellites: (Moderate risk of internal charging / High risk of internal charging / Very high risk of internal charging).
4. Aeromagnetic surveys: (Potential for disruption / Potential for significant disruptions / Potential for severe disruptions) in the (polar cap / auroral / and sub-auroral) zone(s).
5. Directional Drilling: (Significant deviations possible) in the (polar cap / auroral / and sub-auroral) zone(s).
6. Impacts are not expected.

**24 HOUR FORECAST**

**Geomagnetic Activity:**

1. polar cap zone: (quiet / unsettled / active / stormy / major storm) (with quiet / unsettled / active / stormy / major storm intervals)
2. auroral zone: (quiet / unsettled / active / stormy / major storm) (with unsettled / active / stormy / major storm intervals)
3. sub-auroral zone: (quiet / unsettled / active / stormy / major storm) (with unsettled / active / stormy / major storm intervals)



## Geostationary Satellite Environment:

1. energetic electron fluence at geostationary orbit: (Low / Normal / Moderate / High / Very High)

## Possible Impact:

1. Power Systems: (Possibility of weak voltage fluctuations / Geomagnetically induced currents may cause misoperation of protective relays and transformer heating) in the (polar cap / auroral / and sub-auroral) zone(s).
2. HF radio: Ionospheric and polar cap absorption events may affect radio communications for transpolar flights and other arctic operations.
3. Geostationary satellites: (Moderate risk of internal charging / High risk of internal charging / Very high risk of internal charging).
4. Aeromagnetic surveys: (Potential for disruption / Potential for significant disruptions / Potential for severe disruptions) in the (polar cap / auroral / and sub-auroral) zone(s).
5. Directional Drilling: (Significant deviations possible) in the (polar cap / auroral / and sub-auroral) zone(s).
6. Impacts are not expected.

**ADDITIONAL INFORMATION** at <http://www.spaceweather.gc.ca>

1. Updated conditions and forecast; Background information; FAQ, Glossary of terms, and potential impacts.<sup>1</sup>

<sup>1</sup>This statement will provide information links once the links are active.

## DETAILED INFORMATION: SOLAR

<b>General</b>	<ol style="list-style-type: none"><li>1. Solar activity has been (very low / low / moderate / high / very high).</li><li>2. Data about solar conditions are currently unavailable.</li></ol>
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Active Regions	<ol style="list-style-type: none"> <li>1. (There is one active region / There are xx active regions / There are several active regions) visible on the solar disk.</li> <li>2. The active region located near the (east limb / central region / west limb) of the solar disk has produced a (solar x-ray flare / long duration solar x-ray flare) (and an associated CME) (and has the potential to produce subsequent solar eruptions).</li> <li>3. The active region located near the (east limb / central region / west limb) of the solar disk has produced (solar x-ray flares / long duration solar x-ray flares) (and an associated CME / and associated CMEs) (and has the potential to produce subsequent solar eruptions).</li> </ol>
CME	<ol style="list-style-type: none"> <li>1. An Earth-directed CME erupted on DD MMM YYYY HH:MM UT (and is expected to reach the Earth on DD MMM YYYY)(, resulting in increased/disturbed geomagnetic activity).</li> <li>2. (Two/Three/Several) Earth-directed CMEs erupted on DD MMM YYYY at HH:MM UT, HH:MM UT, ..., and HH:MM UT (and are expected to reach the Earth on DD MMM YYYY) (, resulting in increased/disturbed geomagnetic activity).</li> <li>3. A CME was observed on DD MMM YYYY, and is expected to deliver a glancing blow to the Earth on DD MMM YYYY (, resulting in increased/disturbed geomagnetic activity).</li> <li>4. (Two / Three / Several) CMEs were observed on DD MMM YYYY, and are expected to deliver a glancing blow to the Earth on DD MMM YYYY (, resulting in increased/disturbed geomagnetic activity).</li> <li>5. A non-Earth-directed CME erupted on DD MMM YYYY HH:MM UT.</li> <li>6. (Two/Three/Several) non-Earth-directed CMEs erupted on DD MMM YYYY at HH:MM UT, HH:MM UT, ..., and HH:MM UT.</li> <li>7. A CME erupted on DD MMM YYYY HH:MM UT. It is not yet known if the CME will impact the Earth.</li> <li>8. (Two / Three / Several) CMEs erupted on DD MMM YYYY at HH:MM UT, HH:MM UT, ..., and HH:MM UT. It is not yet known if the CMEs will impact the Earth.</li> </ol>
Coronal Hole	<ol style="list-style-type: none"> <li>1. One (small / medium / large) coronal hole (elongated in longitude) is located near the (centre / edge) of the solar disk.</li> <li>2. (Two / Three / Four / Five / Six) (small / medium / large) coronal holes (elongated in longitude) are located near the (centre / edge) of the solar disk.</li> </ol>
Solar Flare	<ol style="list-style-type: none"> <li>1. An (M (medium) / X (large)) solar x-ray flare erupted DD MMM YYYY HH:MM UT near the (centre / edge) of the solar disk.</li> <li>2. (Two / Three / Four / Five / Six / Seven / Eight / Nine / Ten / Several) (M (medium) / X (large)) solar x-ray flares have erupted over the past 24 hours.</li> <li>3. A long duration (C (low) / M (medium) / X (large)) solar x-ray flare erupted at DD MMM YYYY HH:MM UT near the (centre / edge) of the solar disk.</li> </ol>

## INTERPLANETARY

<b>General</b>	<ol style="list-style-type: none"> <li>Interplanetary activity has been (very low / low / moderate / high / very high).</li> <li>Data about interplanetary conditions are currently unavailable.</li> </ol>
<b>Solar Wind Speed</b>	<ol style="list-style-type: none"> <li>The solar wind speed is currently (very slow (&lt;400 km/s) / slow (400-500 km/s) / moderate (500-700 km/s) / fast 700-1000 km/s) / very fast (&gt;1000 km/s)).</li> <li>The solar wind speed has been (increasing / decreasing) over the last (hour / xx hours) (currently ~ xx km/s).</li> <li>(Moderate / fast) solar wind speeds are due to (high speed streams from coronal holes / a CME observed at DD MMM YYYY HH:MM UT).</li> <li>The solar wind speed has been at xx km/s since the passage of an interplanetary shock DD MMM YYYY at HH:MM UT.</li> </ol>
<b>IMF</b>	<ol style="list-style-type: none"> <li>The interplanetary magnetic field has been fluctuating at (very low (<math> B_z  &lt; 2</math> nT) / low (<math>2 &lt;  B_z  &lt; 5</math> nT) / moderate (<math>5 &lt;  B_z  &lt; 10</math> nT) / high (<math>10 &lt;  B_z  &lt; 20</math> nT) / very high (<math> B_z  &gt; 20</math> nT)) levels.</li> <li>The interplanetary magnetic field has been primarily (positive / negative) at (very low (<math> B_z  &lt; 2</math> nT) / low (<math>2 &lt;  B_z  &lt; 5</math> nT) / moderate (<math>5 &lt;  B_z  &lt; 10</math> nT) / high (<math>10 &lt;  B_z  &lt; 20</math> nT) / very high (<math> B_z  &gt; 20</math> nT)) levels.</li> <li>The interplanetary magnetic field currently has <math>B_z = (+ / -)</math> xx nT.</li> <li>Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.</li> </ol>
<b>Shock</b>	<ol style="list-style-type: none"> <li>An interplanetary shock has been observed on DD MMM YYYY HH:MM UT.</li> </ol>
<b>Proton Events</b>	<ol style="list-style-type: none"> <li>A solar energetic proton event started on DD MMM YYYY at HH:MM UT. Current levels are (normal / moderate / high / very high).</li> </ol>

## GEOSTATIONARY SATELLITE ENVIRONMENT

<b>General</b>	<ol style="list-style-type: none"> <li>Energetic electron fluence at geostationary orbit was at a (low / normal / moderate / high / very high) level DD MMM YYYY and is expected to be at a (low / normal / moderate / high / very high) level tomorrow.</li> <li>The 5-minute integral energetic electron flux is currently high.</li> <li>Data about conditions in the near-Earth environment are currently unavailable.</li> <li>Visit <a href="http://www.spaceweather.gc.ca/sffl-eng.php">http://www.spaceweather.gc.ca/sffl-eng.php</a> for the electron forecast.</li> </ol>
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## GEOMAGNETIC

<b>General</b>	<ol style="list-style-type: none"> <li>1. Over the last 24 hours geomagnetic activity has been (quiet / unsettled / active / stormy / major storm) (with unsettled / active / stormy / major storm intervals) in the polar zone, (quiet / unsettled / active / stormy / major storm) (with unsettled / active / stormy / major storm intervals) in the auroral zone, and (quiet / unsettled / active / stormy / major storm) (with unsettled / active / stormy / major storm intervals) in the subauroral zone.</li> <li>2. Over the next 24 hours geomagnetic activity is forecast to be (quiet / unsettled / active / stormy / major storm) (with unsettled / active / stormy / major storm intervals) in the polar zone, (quiet / unsettled / active / stormy / major storm) (with unsettled / active / stormy / major storm intervals) in the auroral zone, and (quiet / unsettled / active / stormy / major storm) (with unsettled / active / stormy / major storm intervals) in the subauroral zone.</li> <li>3. Visit <a href="http://www.spaceweather.gc.ca/sfst-1-eng.php">http://www.spaceweather.gc.ca/sfst-1-eng.php</a> for the magnetic forecast.</li> <li>4. Data about geomagnetic conditions are currently unavailable.</li> </ol>
<b>Impulse</b>	<ol style="list-style-type: none"> <li>1. A geomagnetic sudden impulse due to a shock in the solar wind was observed on <b>DD MMM YYYY HH:MM</b> UT.</li> </ol>

## SIGNATURE

Space weather scientist

**Your name here**

Canadian Space Weather Forecast Centre

Canadian Hazard Information Service

Natural Resources Canada

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## 4. Possible Impacts

Users requested that space weather impacts accompany descriptions of activity levels. This section provides a listing of possible impacts associated with each level of activity for geomagnetic activity, the ionosphere, and the space environment.

### 4.1 Geomagnetic Activity

Activity Level	System	Possible Impact
Quiet	Power Systems:	Impacts are not expected
	Aeromagnetic surveys:	Impacts are not expected
	Directional Drilling:	Impacts are not expected
Unsettled	Power Systems:	Impacts are not expected
	Aeromagnetic surveys:	Potential for disruption
	Directional Drilling:	Impacts are not expected
Active	Power Systems:	Impacts are not expected
	Aeromagnetic surveys:	Potential for significant disruptions
	Directional Drilling:	Significant deviations possible
Stormy	Power Systems:	Possibility of weak voltage fluctuations
	Aeromagnetic surveys:	Potential for severe disruptions
	Directional Drilling:	Significant deviations possible
Major Storm	Power Systems:	Geomagnetically induced currents may cause misoperation of protective relays and transformer heating
	Aeromagnetic surveys:	Potential for severe disruptions
	Directional Drilling:	Significant deviations possible

### 4.2 Ionosphere

Ionospheric and polar cap absorption events may affect radio communications for transpolar flights and other arctic operations.

### 4.3 Geostationary Satellite Environment

<b>Activity Level</b>	<b>System</b>	<b>Possible Impact</b>
<b>Low</b>	Geostationary satellites:	No risk of internal charging
<b>Normal</b>	Geostationary satellites:	No risk of internal charging
<b>Moderate</b>	Geostationary satellites:	Moderate risk of internal charging
<b>High</b>	Geostationary satellites:	High risk of internal charging
<b>Very High</b>	Geostationary satellites:	Very high risk of internal charging

## 5. Table of Values – 2012

In Section 3, descriptors *very low*, *low*, *moderate*, *high*, and *very high* are used to describe the solar and interplanetary activity levels. Tables 1 and 2 provides criteria for determining which descriptor to use for the solar and interplanetary conditions, respectively.

**Table 1: Criteria for describing solar conditions.**

<b>Very low</b>	<b>Low</b>	<b>Moderate</b>	<b>High</b>	<b>Very high</b>
no coronal holes, flares, or CMEs detected	coronal holes	coronal holes	coronal holes	coronal holes
	or	or	and/or	and
or	class A, B, C flares	class M flares	class M, X flares	class M, X flares
class A, B flares	or	or	and/or	and
	or	CME activity	CME activity	CME activity
	CME activity	or	or	or
		long duration events	long duration events	long duration events

**Table 2: Criteria for describing interplanetary conditions.**

<b>Very low</b>	<b>Low</b>	<b>Moderate</b>	<b>High</b>	<b>Very high</b>
$V < 400$ km/s	$400 < v < 500$ km/s	$500 < v < 700$ km/s	$700 < v < 1000$ km/s	$v > 1000$ km/s
$ B_z  < 2$ nT	$2 <  B_z  < 5$ nT	$5 <  B_z  < 10$ nT	$10 <  B_z  < 20$ nT	$ B_z  > 20$ nT

The summary of current conditions and 24 hour forecast for Geomagnetic Activity, the Ionosphere, and the space environment in the *Overview/Summary* presented in Section 3.1, 3.2, and 3.3 above are based on five different activity levels. The terminologies for each of the five levels are given in Table 3, and the values used to determine activity level are given in Table 4.

**Table 3: Terminology for describing activity level.**

	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<b>Geomagnetic Activity</b>	quiet	unsettled	active	stormy	major storm
<b>Ionosphere</b>	TBD	TBD	TBD	TBD	TBD
<b>Space Environment</b>	low	normal	moderate	high	very high

**Table 4: Quantitative description of activity level**

	<b>Based on</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<b>Geomagnetic Activity</b>	$K_r$	0-3	3-4	4-5	5-7	7+
<b>Ionosphere</b>	absorption	TBD	TBD	TBD	TBD	TBD
<b>Space Environment</b>	fluence	$10^5 < f < 10^6$	$10^6 < f < 5 \times 10^7$	$5 \times 10^7 < f < 5 \times 10^8$	$5 \times 10^8 < f < 5 \times 10^9$	$5 \times 10^9 < f$



## 6. Glossary of Terms - 2012

**Auroral Zone:** Canada has three zones of geomagnetic activity: the polar cap zone, the auroral zone, and the sub-auroral zone. The greatest geomagnetic disturbances are observed in the auroral zone. The aurora is most frequently observed in the auroral zone. Current and forecast conditions for the auroral zone apply to the region of Canadian territory extending between 63 and 77 degrees north magnetic latitude.

**Corona:** The corona is the outermost region of the Sun's atmosphere that extends millions of kilometres out. The corona consists of ionized gas at a temperature of 1 million degrees Celsius. Because of its high temperature, the corona produces a continual flow of electrically charged particles called the solar wind.

**Coronal Mass Ejections (CME):** CMEs are ejections of plasma from the corona of the Sun. Their arrival at Earth is the main cause for large geomagnetic disturbances. CMEs travel at speeds from 400 to 2000 km/s and their travel time to Earth varies from 1 to 4 days. CMEs are often associated with solar x-ray flares

**Coronal Holes:** Coronal holes are regions in the corona where the magnetic field lines are open to space allowing high speed streams of plasma to escape from the Sun. High speed streams interacting with the Earth can be the cause of long lasting (3 or 4 days) periods of geomagnetic activity, particularly in the auroral zone. High speed streams from coronal holes that are extended in longitude can interact with the Earth for extended periods of time.

**Electron fluence:** Electron fluence refers to the total number of energetic electrons with energies  $>2$  MeV passing through a given area in a day. Electron fluence is measured in units of electrons per square centimetre per steradian per day (electrons / cm<sup>2</sup>-sr-day). To determine electron fluence over 1 day, flux measurements made at a geosynchronous orbit of 6.6 Earth radii are taken at 5 minute intervals and summed over a 24 hour period. The fluence value of  $5.0 \times 10^7$  electrons / cm<sup>2</sup>-sr-day is considered as a threshold level for possible adverse space weather conditions hazardous to geostationary satellites. Possible impacts are provided in Section 4.

**Geomagnetic Activity:** Geomagnetic activity is derived from measurements made at magnetic observatories located in the polar cap, auroral, and sub-auroral zones. The data are processed to produce an hourly range index to characterize the range of magnetic field variations measured during one hour at ground level. Hourly range indices are divided into 5 activity levels: classified as quiet, unsettled, active, stormy, and major storm. Hourly range values corresponding to different activity levels depend on observatory locations and can be found at <http://www.spaceweather.gc.ca/current-actuelle/short-court/sfst-5-eng.php> by clicking on each observatory. For more information about the Earth's magnetic field, see <http://www.geomag.nrcan.gc.ca/>. Possible impacts for each activity level are provided in Section 4.

**Geomagnetic Disturbances:** Geomagnetic disturbances are produced by electric currents in the ionosphere and magnetosphere. These currents are generated by the interaction of CMEs or high

speed streams with the Earth's magnetic field. The strongest currents are associated with the aurora.

**Geomagnetically Induced Currents (GIC):** During a geomagnetic disturbance, magnetic field variations induce currents in the ground and in long conductors at the Earth's surface. These geomagnetically induced currents (GIC) can produce problems for the operation of pipelines and power systems.

**Geostationary:** A satellite in a geostationary orbit is located at an altitude of ~35900 km above the Earth at the equator and has an angular velocity equal to that of the Earth so that the position of the satellite is fixed with respect to the Earth.

**Geostationary Satellite Environment:** Geostationary satellite environment refers to energetic electron fluence measured at a geostationary orbit (~35900 km altitude) which influences the operation of satellites in this orbit.

**Interplanetary Magnetic Field (IMF):** The IMF is the solar magnetic field carried out into interplanetary space by the solar wind. The north-south component of the IMF,  $B_z$ , has a strong influence on the occurrence of geomagnetic activity. Prolonged periods of negative  $B_z$  are often associated with increased levels of geomagnetic activity.

**Ionosphere:** The ionosphere is a layer of the upper atmosphere that is ionized by solar radiation. It is made up of several ionized layers and extends from about 70 to 1000 km above the Earth's surface.

**Ionospheric Absorption:** Ionospheric absorption is the loss in signal strength or attenuation of radio waves as they propagate through the ionosphere. Precipitating electrons and protons are the main causes of strong ionospheric absorption. During the daytime, ionization of the ionosphere by solar radiation is also a source of ionospheric absorption.

**Ionospheric Disturbances:** Ionospheric disturbances are produced by charged particles precipitating into the ionosphere. These particles create extra ionization that causes absorption of radio waves.

**Major Storm watch:** A major storm watch is issued to indicate that major storm conditions have been observed by multiple observatories during the same period. These conditions are likely to continue to be observed by more than one observatory for at least the next few hours. The space weather watch is either limited to the auroral zone if such conditions have only been observed in that zone or applies to all of Canada if major storm conditions have been observed in both the auroral zone and the sub-auroral zone.

**Magnetosphere:** The magnetosphere is an asymmetrical region surrounding the Earth in which charged particles are trapped and their behaviour is dominated by the Earth's magnetic field. The magnetosphere extends from one hundred to several thousand kilometres above the surface of the Earth.

**Polar Cap Absorption:** Polar Cap Absorption is a term given to a type of ionospheric absorption that is caused by the precipitation of energetic protons into the auroral and polar regions. The energetic protons react with the particles of the lower ionosphere and during sunlit conditions cause severe attenuation of radio waves for magnetic latitudes greater than 63 degrees. During periods when the ionosphere is dark, the attenuation is substantially reduced.

**Polar Cap Zone:** The region poleward of the auroral oval. Current and forecast conditions for the polar cap zone apply to the region of Canadian territory extending between 77 and 90 degrees north magnetic latitude.

**Solar Flare:** A solar flare is a burst of electromagnetic radiation across the electromagnetic spectrum, notably in visible light, and x-rays that can last from a few minutes to a few hours. Long duration flares can last for more than 3 hours. Solar x-ray flares are one indicator of possible solar plasma eruptions, and can be classified according to x-ray intensities into 4 categories: B (very low), C (low), M (medium), and X (large). Each category (except X) has 9 subdivisions ranging from, e.g., M1 to M9. The scaling is defined so that an M2 x-ray flare is twice as powerful as an M1 flare. X class flares >9 are possible.

**Solar Wind:** The solar wind is a continuous stream of charged particles flowing outward from the Sun. Typical speeds are 300 – 400 km/second.

**Space Weather:** Space weather refers to changes in the space environment and geomagnetic disturbances resulting from eruptions on the Sun. Space weather ultimately affects human activities and technologies on Earth and in space.

**Sub-Auroral Zone:** The region equatorward of the auroral oval. Current and forecast conditions for the sub-auroral zone apply to the region of Canadian territory extending between 49 and 63 degrees north magnetic latitude.

## 7. Summary of Activity

A variety of space weather conditions were present during 2012. The following Table summarizes conditions reported in the bulletin. Descriptions for the column headers are as follows:

<b>DOY</b>	<ul style="list-style-type: none"><li>• day of year</li></ul>
<b>DATE</b>	<ul style="list-style-type: none"><li>• day of month and month of year</li></ul>
<b>FLARE</b>	<ul style="list-style-type: none"><li>• class / magnitude of solar x-ray flares occurring that day</li></ul>
<b>CME</b>	<ul style="list-style-type: none"><li>• each × symbol denotes a fully or partially Earth-directed coronal mass ejection expected to produce geomagnetic effects when reaching the Earth</li></ul>
<b>CORONAL HOLE</b>	<ul style="list-style-type: none"><li>• the number of coronal holes visible in the central solar disk (<math>\pm 30^\circ</math> latitude and longitude based on Suntracker images)</li></ul>
<b>INTERPLANETARY SHOCK</b>	<ul style="list-style-type: none"><li>• shock in solar wind or interplanetary magnetic field was detected</li></ul>
<b>FLUENCE ABOVE THRESHOLD</b>	<ul style="list-style-type: none"><li>• energetic electron fluence at geostationary orbit was above threshold level</li></ul>
<b>HIGHEST GEOMAGNETIC ACTIVITY</b>	<ul style="list-style-type: none"><li>• most active geomagnetic activity level reported that day in any zone (polar cap, auroral, or sub-auroral) according to the tabular forecast (24 review), coloured coded by activity level, pink coloured cells indicate days where a major storm watch was issued</li></ul>
<b>BULLETIN UPDATE ISSUED</b>	<ul style="list-style-type: none"><li>• indicates conditions were such that the duty forecaster was required to issue an update to the bulletin</li></ul>

Table entries are useful for inspecting the bulletin statements chosen for the corresponding days.

DOY	DATE	FLARE	CME	CORONAL HOLE	INTERPLANETARY SHOCK	FLUENCE ABOVE THRESHOLD	HIGHEST GEOMAGNETIC ACTIVITY	BULLETIN UPDATE ISSUED
1	01-Jan						active	
2	02-Jan						unsettled	
3	03-Jan			1			stormy	
4	04-Jan			1			quiet	
5	05-Jan			1			active	
6	06-Jan			1			unsettled	
7	07-Jan			2			unsettled	
8	08-Jan			1			active	
9	09-Jan			1			active	
10	10-Jan			1			active	
11	11-Jan			1			unsettled	
12	12-Jan			1		x	unsettled	
13	13-Jan			1			stormy	
14	14-Jan	M1.5		1			unsettled	
15	15-Jan			2			quiet	
16	16-Jan			1			stormy	
17	17-Jan			2			unsettled	
18	18-Jan						unsettled	
19	19-Jan	M3	x				active	x
20	20-Jan						active	
21	21-Jan				x		stormy	
22	22-Jan				x		stormy	
23	23-Jan	M8.2	x			x	stormy	
24	24-Jan					x	major storm	
25	25-Jan			1		x	major storm	
26	26-Jan			1		x	stormy	
27	27-Jan			1		x	stormy	x
28	28-Jan			1		x	unsettled	
29	29-Jan			1		x	stormy	
30	30-Jan		x	2		x	stormy	
31	31-Jan			1			stormy	
32	01-Feb			1			stormy	
33	02-Feb			1			active	
34	03-Feb			1			stormy	
35	04-Feb						active	

36	05-Feb						active	
37	06-Feb			1			stormy	
38	07-Feb			1			stormy	
39	08-Feb			2			stormy	
40	09-Feb			2		×	unsettled	
41	10-Feb			2			unsettled	
42	11-Feb			1			active	
43	12-Feb			1			stormy	
44	13-Feb			1			stormy	
45	14-Feb			2			stormy	
46	15-Feb			2			stormy	
47	16-Feb			2			active	
48	17-Feb			2			active	
49	18-Feb			2			unsettled	
50	19-Feb			1			stormy	
51	20-Feb			1			stormy	
52	21-Feb			1		×	active	
53	22-Feb			1			stormy	
54	23-Feb			1			unsettled	
55	24-Feb		×	1			active	
56	25-Feb			1			active	
57	26-Feb			1			active	
58	27-Feb			1			stormy	
59	28-Feb			2			stormy	
60	29-Feb			2			active	
61	01-Mar			2			stormy	
62	02-Mar	M3.3		2			stormy	
63	03-Mar			3		×	stormy	
64	04-Mar	M2.0		1			stormy	
65	05-Mar	X1.1 M2.1 M1.4 M1.1 M1.3		1		×	stormy	
66	06-Mar	M1.3 M1.2 M1.0 M1.0 M2.1 M1.3 M1.0	×	1			stormy	
67	07-Mar	X1.1 X5.4	×	1			major storm	×
68	08-Mar			1		×	major storm	
69	09-Mar	M1.6	×				major storm	

		M2.1 M6.3						
70	10-Mar	M5.4 M8.4	×			×	stormy	
71	11-Mar					×	stormy	
72	12-Mar			1	×		major storm	
73	13-Mar	M7.9	×	2		×	active	
74	14-Mar	M2.8		2		×	stormy	
75	15-Mar	M1.8		2		×	stormy	
76	16-Mar					×	stormy	
77	17-Mar	M1.4				×	stormy	
78	18-Mar			1		×	stormy	
79	19-Mar			1		×	stormy	×
80	20-Mar			1		×	unsettled	
81	21-Mar			1		×	active	
82	22-Mar			1		×	active	
83	23-Mar	M1		2			active	
84	24-Mar			3			stormy	
85	25-Mar			3			active	
86	26-Mar			2			unsettled	
87	27-Mar			1			stormy	
88	28-Mar						stormy	
89	29-Mar						active	
90	30-Mar			1			active	
91	31-Mar			1			stormy	
92	01-Apr			2			active	
93	02-Apr			1			stormy	
94	03-Apr						active	
95	04-Apr						stormy	
96	05-Apr						stormy	
97	06-Apr						active	
98	07-Apr						stormy	
99	08-Apr						active	
100	09-Apr		×	1			active	
101	10-Apr			1			active	×
102	11-Apr			1			active	
103	12-Apr						stormy	
104	13-Apr						stormy	
105	14-Apr					×	stormy	
106	15-Apr					×	active	
107	16-Apr	M1.7				×	active	
108	17-Apr					×	stormy	
109	18-Apr						stormy	
110	19-Apr		×				active	

111	20-Apr						active	
112	21-Apr			1			stormy	
113	22-Apr			1			stormy	
114	23-Apr		×	1	×		stormy	×
115	24-Apr			1			major storm	
116	25-Apr					×	stormy	
117	26-Apr			1		×	stormy	
118	27-Apr	M1.0		1		×	stormy	
119	28-Apr			1		×	active	
120	29-Apr			1		×	active	
121	30-Apr					×	unsettled	
122	01-May					×	active	
123	02-May					×	unsettled	
124	03-May						active	
125	04-May						active	
126	05-May	M1.4 M1.3					active	
127	06-May	M1.1 M1.3					stormy	
128	07-May	M1.9					active	
129	08-May	M1.4		1			stormy	
130	09-May	M4.7 M1.8 M4.1		1			stormy	
131	10-May	M5.7 M1.7		1			stormy	
132	11-May			1		×	stormy	
133	12-May			1		×	stormy	
134	13-May			1		×	stormy	
135	14-May			1		×	stormy	
136	15-May			1		×	stormy	
137	16-May					×	stormy	
138	17-May	M5.1	×				stormy	
139	18-May			1			stormy	
140	19-May			1	×		stormy	
141	20-May			1			stormy	
142	21-May			2			active	
143	22-May			2			stormy	
144	23-May			1			stormy	
145	24-May					×	stormy	
146	25-May			1		×	stormy	
147	26-May			1		×	active	
148	27-May					×	active	
149	28-May					×	stormy	



150	29-May					×	stormy	
151	30-May						stormy	
152	31-May						stormy	
153	01-Jun			1			stormy	
154	02-Jun			1			active	
155	03-Jun	M3.3		1			stormy	
156	04-Jun			1			stormy	
157	05-Jun			1			stormy	
158	06-Jun	M2.1	×	1		×	stormy	
159	07-Jun			1		×	stormy	
160	08-Jun		×	1			stormy	
161	09-Jun	M1.9 M1.8					active	
162	10-Jun	M1.3		2		×	stormy	
163	11-Jun			2			stormy	
164	12-Jun			2			stormy	
165	13-Jun	M1.2	×				stormy	
166	14-Jun	M1.9	×				stormy	
167	15-Jun						active	
168	16-Jun			2	×		major storm	×
169	17-Jun			2			major storm	×
170	18-Jun			2		×	stormy	
171	19-Jun			2		×	unsettled	
172	20-Jun			2		×	stormy	
173	21-Jun			1		×	active	
174	22-Jun			2		×	stormy	
175	23-Jun			1		×	stormy	
176	24-Jun			1		×	stormy	
177	25-Jun						stormy	
178	26-Jun						stormy	
179	27-Jun						stormy	
180	28-Jun	M2		1			stormy	
181	29-Jun	M2		1			stormy	
182	30-Jun	M1		1			major storm	
183	01-Jul	M2		1		×	stormy	
184	02-Jul	M1.1 M5.6 M3.8		1			stormy	
185	03-Jul	M2.0					stormy	
186	04-Jul	M2.3 M5.3 M2.3 M1.3 M1.8	×				stormy	

		M4.6 M1.2					
187	05-Jul	M1.1 M2.4 M1.0 M2.2 M1.0 M4.7 M1.1 M1.3 M1.8 M6.2 M1.2 M1.6 M1.5					stormy
188	06-Jul	M2.9 M1.0 M1.5 M1.8 M1.2 M1.3 X1.1		1			stormy
189	07-Jul	M1.2 M1.0 M2.6		1			stormy ×
190	08-Jul	M1.3 M1.1 M1.4 M6.9		1	×		stormy
191	09-Jul	M1.1		1			stormy
192	10-Jul	M1.7 M2.1		2			stormy
193	11-Jul			1			stormy
194	12-Jul	X1.4	×				stormy
195	13-Jul			1			unsettled
196	14-Jul	M1.0		1	×		major storm ×
197	15-Jul			1			major storm ×
198	16-Jul			1			stormy
199	17-Jul	M1.7					stormy
200	18-Jul						stormy
201	19-Jul	M7.7					stormy
202	20-Jul			1			stormy
203	21-Jul			1	×		major storm
204	22-Jul			1			stormy
205	23-Jul			1			stormy

206	24-Jul			1			stormy
207	25-Jul			1			stormy
208	26-Jul			1			stormy
209	27-Jul	M2.8		1			stormy
210	28-Jul	M6.1	×	1			stormy
211	29-Jul	M2.3		1			stormy
212	30-Jul	M1.1					stormy
213	31-Jul						stormy
214	01-Aug						stormy
215	02-Aug						major storm
216	03-Aug						stormy
217	04-Aug		×				stormy
218	05-Aug						active
219	06-Aug	M1.6					stormy
220	07-Aug			1			active
221	08-Aug			1			stormy
222	09-Aug			1			active
223	10-Aug			1			unsettled
224	11-Aug	M1.0		1			active
225	12-Aug			2			active
226	13-Aug		×	2			stormy
227	14-Aug		×	2			stormy
228	15-Aug			1			stormy
229	16-Aug		×	1			stormy
230	17-Aug	M2.4 M1.0		1			stormy
231	18-Aug	M1.3 M5.5 M1.9 M2.0		2			stormy
232	19-Aug			1			stormy
233	20-Aug			1		×	stormy
234	21-Aug			2		×	active
235	22-Aug			2		×	stormy
236	23-Aug			1			stormy
237	24-Aug			2		×	stormy
238	25-Aug			2			stormy
239	26-Aug			1			stormy
240	27-Aug			1			stormy
241	28-Aug			1			active
242	29-Aug			1		×	stormy
243	30-Aug	M1.3		1		×	active
244	31-Aug		×			×	unsettled
245	01-Sep			2			active

246	02-Sep		xx	2			active	x
247	03-Sep			1	x		major storm	
248	04-Sep			1			stormy	
249	05-Sep						stormy	
250	06-Sep	M1					stormy	
251	07-Sep						stormy	
252	08-Sep	M1.5		1			stormy	
253	09-Sep	M1.3		1			active	
254	10-Sep			1		x	active	
255	11-Sep					x	unsettled	
256	12-Sep						active	
257	13-Sep			1			stormy	
258	14-Sep			1			active	
259	15-Sep						active	
260	16-Sep						stormy	
261	17-Sep			1		x	active	
262	18-Sep			1			stormy	
263	19-Sep			1			stormy	
264	20-Sep			1			active	
265	21-Sep			1			active	
266	22-Sep			1			active	
267	23-Sep						unsettled	
268	24-Sep						active	
269	25-Sep						unsettled	
270	26-Sep						stormy	
271	27-Sep						unsettled	
272	28-Sep		x				quiet	
273	29-Sep						unsettled	
274	30-Sep					x	active	
275	01-Oct						stormy	
276	02-Oct						active	
277	03-Oct						stormy	
278	04-Oct			1			active	
279	05-Oct		x	1			unsettled	
280	06-Oct			1			stormy	
281	07-Oct		x	1			unsettled	
282	08-Oct	M2.3				x	stormy	x
283	09-Oct	M1					major storm	
284	10-Oct						stormy	
285	11-Oct			1			active	
286	12-Oct			1			stormy	
287	13-Oct			1			stormy	
288	14-Oct			1			stormy	
289	15-Oct			2			stormy	

290	16-Oct			2			active	
291	17-Oct			1			stormy	
292	18-Oct			2			active	
293	19-Oct			2			unsettled	
294	20-Oct	M9.0		2			unsettled	
295	21-Oct	M1.3					active	
296	22-Oct	M5.0					quiet	
297	23-Oct	X1.7					active	
298	24-Oct			2			stormy	
299	25-Oct			2			stormy	
300	26-Oct			2			active	
301	27-Oct		x	2			active	
302	28-Oct						stormy	
303	29-Oct						active	
304	30-Oct						quiet	
305	31-Oct			1			active	
306	01-Nov			1			major storm	
307	02-Nov			1			unsettled	
308	03-Nov			1			quiet	
309	04-Nov						unsettled	
310	05-Nov						unsettled	
311	06-Nov			1			active	
312	07-Nov			1			stormy	
313	08-Nov	M1.7		1			quiet	
314	09-Nov		x	1			active	
315	10-Nov			1			quiet	
316	11-Nov	M1.0	x	1			unsettled	
317	12-Nov	M2.0			x		unsettled	
318	13-Nov	M6.0 M2.5 M2.8		2			stormy	
319	14-Nov	M1.1		2			stormy	x
320	15-Nov			2			unsettled	
321	16-Nov			1			active	
322	17-Nov			2			active	
323	18-Nov						active	
324	19-Nov						active	
325	20-Nov	M1.7 M1.6	x				stormy	
326	21-Nov	M1.4 M3.5	x				stormy	
327	22-Nov		x				unsettled	
328	23-Nov		x		x		active	
329	24-Nov						stormy	

330	25-Nov					unsettled	
331	26-Nov			1		active	
332	27-Nov	M1.6 M1.0		1		stormy	
333	28-Nov	M2.2		1		quiet	
334	29-Nov			1		active	
335	30-Nov					unsettled	
336	01-Dec					active	
337	02-Dec					stormy	
338	03-Dec					active	
339	04-Dec					active	
340	05-Dec					quiet	
341	06-Dec					quiet	
342	07-Dec			1		quiet	
343	08-Dec			1	×	unsettled	
344	09-Dec			3		unsettled	
345	10-Dec			3		unsettled	
346	11-Dec			2		quiet	
347	12-Dec					unsettled	
348	13-Dec					quiet	
349	14-Dec					unsettled	
350	15-Dec					stormy	
351	16-Dec					active	
352	17-Dec					stormy	
353	18-Dec					active	
354	19-Dec					stormy	
355	20-Dec			1		stormy	
356	21-Dec			1		active	
357	22-Dec			2		active	
358	23-Dec			1		active	
359	24-Dec			1		unsettled	
360	25-Dec			1		unsettled	
361	26-Dec					active	
362	27-Dec					quiet	
363	28-Dec					quiet	
364	29-Dec			1		active	
365	30-Dec			2		unsettled	
366	31-Dec					quiet	

## 8. Daily Bulletins

This section provides a chronological listing of the daily space weather bulletin issued in 2012. Alterations made to the original bulletins include (1) removing the list of email recipients, (2) altering the font to be consistent with the document, (3) removing the list of possible impacts and glossary terms included at the end of the bulletin email in Version 1 and Version 2, (4) removing the email signature to limit the length of the document.

**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** January-01-12 9:45 AM

**Subject:** Space Weather Bulletin - 2012-01-01

Space Weather Bulletin - January 1, 2012 issued by the Canadian Space Weather Forecast Centre at 14:45 UT (09:45 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>.

**SOLAR:** Solar activity has been low to moderate.

**INTERPLANETARY:** Interplanetary activity has been low.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was below threshold level on December 31, 2011 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for fluence forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet in polar zone, quiet (with active intervals) in auroral zone, and quiet in subauroral zone. Geomagnetic activity is expected to be quiet in polar zone, quiet in auroral zone, and quiet in subauroral zone. Visit <http://www.spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the most recent geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** January-02-12 7:38 AM

**Subject:** Space Weather Bulletin - 2012-01-02

Space Weather Bulletin - January 2, 2012 issued by the Canadian Space Weather Forecast Centre at 13:00 UT (08:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>.

**SOLAR:** Solar activity has been low.

**INTERPLANETARY:** Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level on January 1, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/current-actuelle/fluence/sfll-eng.php> for fluence forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet in polar zone, quiet (with unsettled intervals) in auroral zone, and quiet in subauroral zone. Geomagnetic activity is expected to be quiet in polar zone, quiet in auroral zone, and quiet in subauroral zone. Visit <http://www.spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the most recent geomagnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-03-12 11:11 AM  
**Subject:** Space Weather Bulletin - 2012-01-03

Space Weather Bulletin – January 3, 2012 issued by the Canadian Space Weather Forecast Centre at 16:15 UT (11:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. A coronal hole is located near the centre of the solar disk.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 2, 2011 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-04-12 7:31 AM  
**Subject:** Space Weather Bulletin - 2011-01-04

Space Weather Bulletin – January 4, 2011 issued by the Canadian Space Weather Forecast Centre at 12:30 UT (07:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. A coronal hole is located near the centre of the solar disk.

INTERPLANETARY: Interplanetary activity has been very low. The solar wind speed is currently very slow (<400 km/s). The interplanetary magnetic field has been fluctuating between 0 nT and 4 nT.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 3, 2011 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.



**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-05-12 7:54 AM  
**Subject:** Space Weather Bulletin - 2012-01-05

Space Weather Bulletin – January 05, 2012 issued by the Canadian Space Weather Forecast Centre at 13:00 UT (08:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. A coronal hole is located near the centre of the solar disk.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently very slow (<400 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 05, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, unsettled in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-06-12 9:19 AM  
**Subject:** Space Weather Bulletin - 2012-01-06

Space Weather Bulletin – January 06, 2012 issued by the Canadian Space Weather Forecast Centre at 14:20 UT (09:20 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. One coronal hole is located near the centre of the solar disk.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating between 0 nT and 5 nT.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 05, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [<mailto:Robyn.Fiori@NRCan-RNCan.gc.ca>]  
**Sent:** January-07-12 6:24 AM  
**Subject:** Space Weather Bulletin - 2012-01-07

Space Weather Bulletin - January 07, 2012 issued by the Canadian Space Weather Forecast Centre at 12:30 UT (06:30 EST)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>.

SOLAR: Solar activity has been low. Two coronal holes are located near the edge of the solar disk.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 06, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-08-12 8:30 AM  
**Subject:** Space Weather Bulletin - 2012-01-08

Space Weather Bulletin – January 08, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (08:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. One coronal hole is located near the centre of the solar disk. One coronal hole is located near the edge of the solar disk.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 07, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-09-12 9:14 AM  
**Subject:** Space Weather Bulletin - 2012-01-09

Space Weather Bulletin – January 09, 2012 issued by the Canadian Space Weather Forecast Centre at 14:15 UT (09:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. One coronal hole is located near the centre of the solar disk.  
INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.  
NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 08, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.  
GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-10-12 9:32 AM  
**Subject:** Space Weather Bulletin - 2012-01-10

Space Weather Bulletin – January 10, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (09:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. A coronal hole is located near the centre of the solar disk.  
INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.  
NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 09, 2011 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.  
GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn  
**Sent:** January-11-12 7:43 AM  
**Subject:** Space Weather Bulletin - 2012-01-11

Space Weather Bulletin – January 11, 2012 issued by the Canadian Space Weather Forecast Centre at 12:40 UT (07:40 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. Two coronal holes are located near the centre of the solar disk.  
INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently moderate (500-700 km/s). Moderate solar wind speeds are due to high speed streams from coronal holes. The interplanetary magnetic field is currently 4 nT.  
NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 10, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-12-12 7:59 AM  
**Subject:** Space Weather Bulletin - 2012-01-12

Space Weather Bulletin – January 12, 2012 issued by the Canadian Space Weather Forecast Centre at 12:00 UT (08:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. One coronal hole is located near the centre of the solar disk.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently very slow (<400 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 11, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-13-12 9:34 AM  
**Subject:** Space Weather Bulletin - 2012-01-13

Space Weather Bulletin – January 13, 2012 issued by the Canadian Space Weather Forecast Centre at 14:35 UT (09:35 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. One coronal hole is located near the centre of the solar disk.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was above threshold level January 12, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-14-12 9:34 AM  
**Subject:** Space Weather Bulletin - 2012-01-14

Space Weather Bulletin – January 14, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (09:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. CMEs have been observed but are not expected to have effects on the Earth. See our website for current information: <http://www.spaceweather.gc.ca>  
SOLAR: Solar activity has been low. A non-Earth-directed CME erupted at June 12, 2011 21:25 UT. One coronal hole is located near the centre of the solar disk. An M (medium) flare erupted at January 14, 2012 13:15 UT.  
INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.  
NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 13, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.  
GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.  
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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-15-12 8:33 AM  
**Subject:** Space Weather Bulletin - 2012-01-05

Space Weather Bulletin – January 15, 2012 issued by the Canadian Space Weather Forecast Centre at 13:35 UT (08:35 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>  
SOLAR: Solar activity has been low. Two coronal holes are located near the centre of the solar disk.  
INTERPLANETARY: Interplanetary activity has been very low. The solar wind speed is currently very slow (<400 km/s). The interplanetary magnetic field is currently 2 nT.  
NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 14, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.  
GEOMAGNETIC: Geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.  
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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** January-16-12 8:49 AM  
**Subject:** Space Weather Bulletin - 2012-01-16

Space Weather Bulletin – January 16, 2012 issued by the Canadian Space Weather Forecast Centre at 13:50 UT (08:50 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. One coronal hole is located near the centre of the solar disk.

INTERPLANETARY: Interplanetary activity has been moderate. The solar wind speed is increasing (currently ~ 450 km/s). The interplanetary magnetic field has been primarily negative at low ( $2 < |B_z| < 5$  nT) levels. Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 15, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** January-17-12 10:12 AM

**Subject:** Space Weather Bulletin-2012-01-17

Space Weather Bulletin - January 17, 2012 issued by the Canadian Space Weather Forecast Centre at 15:30 UT (10:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca> <<http://www.spaceweather.gc.ca>>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently slow (<450 km/s). The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 16, 2011 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/current-actuelle/sf-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** January-18-12 8:25 AM

**Subject:** Space Weather Bulletin-2012-01-18

Space Weather Bulletin - January 18, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (08:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

<<https://email.nrcan.gc.ca/exchweb/bin/redir.asp?URL=http://www.spaceweather.gc.ca>>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently at low level (<450 km/s). The interplanetary magnetic field has been fluctuating at low (<5nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 17, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> <<http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php>> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> <<http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php>> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** January-19-12 8:42 AM

**Subject:** Space Weather Bulletin-2012-01-19

Space Weather Bulletin – January 19, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (08:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently at low level (<350 km/s). The interplanetary magnetic field has been fluctuating at low (<5nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 18, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** January-19-12 4:57 PM  
**Subject:** UPDATE/Space Weather Bulletin-2012-01-19

Space Weather Bulletin January 19, 2012 UPDATE issued by the Canadian Space Weather Forecast Centre at 17:00 UT (22:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. **Geomagnetic effects associated with today's solar activity are expected on January 22-23.** Minor effects due to CMEs of January 16 and high speed streams from coronal holes can be expected today and tomorrow. See our website for current information: <http://www.spaceweather.gc.ca>

**SOLAR: Long duration solar M3-flare has erupted on January 19, at ~15 UT associated with earth-directed CME. At that point estimated speed of the eruption is about 600km/sec. More exact information will be available tomorrow.**

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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** January-20-12 11:30 AM  
**Subject:** Space Weather Bulletin-2012-01-20

Space Weather Bulletin January 20, 2012 issued by the Canadian Space Weather Forecast Centre at 16:30 UT (11:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. Geomagnetic effects associated with January 19 solar activity are expected on January 22-23. See our website for current information: <http://www.spaceweather.gc.ca>

**SOLAR:** Solar activity has been moderate. Complex activity region is currently located near the centre of the solar disk which already produced a long duration M3.2 flare and associated CME on January 19.

**INTERPLANETARY:** Interplanetary activity has been low. The solar wind speed is currently at low level (<400 km/s). The interplanetary magnetic field has been fluctuating at low (<5nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was below threshold level January 19, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** January-21-12 8:03 AM  
**Subject:** Space Weather Bulletin-2012-01-21



Space Weather Bulletin – January 21, 2012 issued by the Canadian Space Weather Forecast Centre at 13:00 UT (08:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. Geomagnetic activity in polar and auroral zones most likely is due to CME of January 18. See our website for current information: <http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been moderate. The solar wind speed is currently at low level (<350 km/s). The interplanetary magnetic field has been fluctuating at moderate (<10nT) levels. The interplanetary shock has been observed at 04 UT (23 ETC, 20 January).

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 20, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** January-22-12 10:32 AM

**Subject:** Space Weather Bulletin-2012-01-22

Space Weather Bulletin – January 22, 2012 issued by the Canadian Space Weather Forecast Centre at 15:30 UT (10:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. Geomagnetic activity in polar and auroral zones this morning most likely is due to CME of January 19. See our website for current information: <http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been high. The solar wind speed is currently at moderate level (<500 km/s). The interplanetary magnetic field has been fluctuating at high (<20nT) levels. The interplanetary shock has been observed at 05 UT 22 January (22 ETC, 21 January).

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level January 21, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be unsettled in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit

<http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** January-23-12 12:00 PM  
**Subject:** Space Weather Bulletin-2012-01-23

Space Weather Bulletin January 23, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (12:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm watch in effect. Geomagnetic effects associated with January 23 M8 flare and fast CME are expected on January 24-26. See our website for current information: <http://www.spaceweather.gc.ca>

**SOLAR:** Solar activity has been moderate. Complex activity region located near the west of the solar disk produced M8.2 flare and associated CME on January 23 at ~ 04:00 UT (23:00 January 22 EST).

**INTERPLANETARY:** Interplanetary activity has been moderate to low. The solar wind speed is currently at low level (<400 km/s). The interplanetary magnetic field has been fluctuating at low to moderate (<10nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was below threshold level January 22, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast. Energetic protons produced by tonight's solar event caused ionospheric absorption in the polar zone.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the updates on geomagnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** January-24-12 10:57 AM  
**Subject:** Space Weather Bulletin-2012-01-24

Space Weather Bulletin January 24, 2012 issued by the Canadian Space Weather Forecast Centre at 16:00 UT (11:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently storm watch for auroral zone in effect, geomagnetic conditions fast evolving to affect polar zone. Geomagnetic effects associated with January 23 M8 flare and fast CME can be seen in all zones, but the most affected is auroral zone. See our website for current information: <http://www.spaceweather.gc.ca>

**SOLAR:** Solar activity has been moderate. Complex activity region located near the west of the solar disk produced M8.2 flare and associated CME on January 23 at ~ 04:00 UT (23:00 January 22 EST).

INTERPLANETARY: Interplanetary activity is high. The solar wind speed is currently at low level (<300 km/s). The interplanetary magnetic field is high with northward (positive) direction < 40 nT.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was above threshold level January 23, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast. Energetic protons produced by tonight's solar event caused ionospheric absorption in the polar zone. As well, current geomagnetic activity has created auroral absorption in auroral zone.

GEOMAGNETIC: Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone in the last 24 hours. Activity is forecast to be active with major storm intervals in the polar zone, active with major storm intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone for the next 24 hours. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the updates on geomagnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** January-25-12 11:29 AM

**Subject:** Space Weather Bulletin-2012-01-25

Space Weather Bulletin January 25, 2012 issued by the Canadian Space Weather Forecast Centre at 16:30 UT (11:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. The large coronal hole is located near the centre of the solar disk.

INTERPLANETARY: Interplanetary activity is moderate. The solar wind speed is currently at moderate level (~600 km/s). The interplanetary magnetic field is fluctuating at moderate(<10nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was above threshold level January 23, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast. Energetic protons produced by tonight's solar event caused ionospheric absorption in the polar zone. As well, current geomagnetic activity has created auroral absorption in auroral zone.

GEOMAGNETIC: Geomagnetic activity has been active with major storm intervals in the polar zone, stormy with major storm intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone in the last 24 hours. High speed solar wind streams from coronal hole can produce active conditions in polar and auroral zones in the next 2-3 days during local night time. Activity is forecast to be stormy in the polar zone, stormy in the auroral zone, and unsettled with active intervals in the subauroral zone for the next 24 hours. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the updates on geomagnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** January-26-12 9:57 AM

**Subject:** Space Weather Bulletin-2012-01-26

Space Weather Bulletin January 26, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (10:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. The large coronal hole is located near the centre of the solar disk.

INTERPLANETARY: Interplanetary activity is moderate to low. The solar wind speed is currently at moderate level (~500 km/s), possible effect of coronal hole. The interplanetary magnetic field is fluctuating at low(<5nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was above threshold level January 25, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone in the last 24 hours. High speed solar wind streams from coronal hole can produce active conditions in polar and auroral zones in the next 2 days especially during local night time. Activity is forecast to be unsettled in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone for the next 24 hours. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the updates on geomagnetic forecast.

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**From:** Trichtchenko, Larisa  
**Sent:** January 27, 2012 12:29  
**Subject:** Space Weather Bulletin-2012-01-27

Space Weather Bulletin January 27, 2012 issued by the Canadian Space Weather Forecast Centre at 18:00 UT (13:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low. The large coronal hole is located near the centre of the solar disk.

INTERPLANETARY: Interplanetary activity is moderate to low. The solar wind speed is currently at moderate level (~500 km/s), possible effect of coronal hole. The interplanetary magnetic field is fluctuating at low(<5nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was above threshold level January 26, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone in the last 24 hours. High speed solar wind streams from coronal hole can produce active conditions in polar and auroral zones in the next day especially during local night time. Activity is forecast to be quite with active intervals in the polar zone, unsettled

with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone for the next 24 hours. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the updates on geomagnetic forecast.

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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** January-27-12 3:06 PM  
**Subject:** UPDATE Space Weather Bulletin-2012-01-27

UPDATE Space Weather Bulletin January 27, 2012 issued by the Canadian Space Weather Forecast Centre at 20:00 UT (15:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW: An X1.7 X-ray flare was observed at 1840UT from active region on solar limb. Associated high energy particles might cause ionosphere Absorption event and effects on HF communications. NO geomagnetic activity associated with this flare is expected due to its source location.** There is currently no storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>  
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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** January-28-12 9:27 AM  
**Subject:** Space Weather Bulletin-2012-01-28

Space Weather Bulletin – January 28, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (09:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

**SOLAR:** Solar activity has been low.

**INTERPLANETARY:** Interplanetary activity has been low. The solar wind speed is low (< 500 km/sec). The interplanetary magnetic field has been fluctuating at low (<5nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was above threshold level January 27, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.  
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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** January-29-12 11:13 AM  
**Subject:** Space Weather Bulletin-2012-01-29

Space Weather Bulletin – January 29, 2012 issued by the Canadian Space Weather Forecast Centre at 16:30 UT (11:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is low (< 500 km/sec). The interplanetary magnetic field has been fluctuating at low (<5nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was above threshold level January 28, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** January-30-12 8:07 AM

**Subject:** Space Weather Bulletin-2012-01-30

Space Weather Bulletin – January 30, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (08:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is low (< 400 km/sec). The interplanetary magnetic field has been fluctuating at low (<5nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was above threshold level January 29, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** January-31-12 1:19 PM  
**Subject:** Space Weather Bulletin-2012-01-31

Space Weather Bulletin - January 31, 2012 issued by the Canadian Space Weather Forecast Centre at 18:15 UT (13:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

**SOLAR:** Solar activity has been low.

**INTERPLANETARY:** Interplanetary activity has been moderate to low. Moderate interplanetary magnetic field ( $5 < |B_z| < 10$  nT) are due to a CME observed January 30, 2011 15:54 UT. The solar wind speed is decreasing and is currently very low ( $< 400$  km/s).

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was above threshold level January 30, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne  
**Sent:** February-01-12 10:05 AM  
**Subject:** Space Weather Bulletin-2012-02-01

Space Weather Bulletin - February 1, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (10:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

**SOLAR:** Solar activity has been low.

**INTERPLANETARY:** Interplanetary activity has been low. The solar wind speed is low ( $< 400$  km/sec). The interplanetary magnetic field has been fluctuating at low ( $< 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was below threshold level January 31, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the



subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** February-02-12 9:59 AM  
**Subject:** Space Weather Bulletin-2012-02-02

Space Weather Bulletin - February 2, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (10:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm watch in effect. Effects from coronal holes are expected to be observed on the Earth between February 3, 2012 and February 4, 2012. See our website for current information: <http://www.spaceweather.gc.ca>

**SOLAR:** Solar activity has been low.

**INTERPLANETARY:** Interplanetary activity has been low.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was below threshold level February 1, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** February-03-12 9:55 AM  
**Subject:** Space Weather Bulletin-2012-02-03

Space Weather Bulletin - February 3, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (10:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm watch in effect. Effects from coronal holes are expected to be observed on the Earth between February 3, 2012 and February 4, 2012. See our website for current information: <http://www.spaceweather.gc.ca>

**SOLAR:** Solar activity has been low.

**INTERPLANETARY:** Interplanetary activity has been low.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was below threshold level February 2, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.



GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** February-04-12 9:34 AM  
**Subject:** Space Weather Bulletin-2012-02-04

Space Weather Bulletin - February 4, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (09:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca> <<http://www.spaceweather.gc.ca/>>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 3, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettld with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** February-05-12 8:25 AM  
**Subject:** Space Weather Bulletin-2012-02-05

Space Weather Bulletin - February 5, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (08:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca> <<http://www.spaceweather.gc.ca/>>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 4, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** February-06-12 9:34 AM  
**Subject:** RE: Space Weather Bulletin-2012-02-06

Space Weather Bulletin - February 6, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (09:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm watch in effect.  
See our website for current information: <http://www.spaceweather.gc.ca>

**SOLAR:** Solar activity has been low.

**INTERPLANETARY:** Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 5, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne  
**Sent:** February-07-12 10:21 AM  
**Subject:** RE: Space Weather Bulletin-2012-02-07

Space Weather Bulletin - February 7, 2012 issued by the Canadian Space Weather Forecast Centre at 15:20 UT (10:20 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm watch in effect.  
See our website for current information: <http://www.spaceweather.gc.ca>

**SOLAR:** Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low to moderate. Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 6, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** February-08-12 9:34 AM  
**Subject:** Space Weather Bulletin-2012-02-08

Space Weather Bulletin - February 8, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (09:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect.  
See our website for current information: <http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low to moderate.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 7, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** February-09-12 9:11 AM  
**Subject:** Space Weather Bulletin-2012-02-09

Space Weather Bulletin - February 9, 2012 issued by the Canadian Space Weather Forecast Centre at 14:10 UT (09:10 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low to moderate. Moderate solar wind conditions are due to high speed streams from coronal holes.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 8, 2012 and is expected to be above threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** February-10-12 9:52 AM

**Subject:** Space Weather Bulletin-2012-02-10

Space Weather Bulletin - February 10, 2012 issued by the Canadian Space Weather Forecast Centre at 14:50 UT (9:50 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low to moderate.

INTERPLANETARY: Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was above threshold level February 9, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** February-11-12 9:29 AM

**Subject:** Space Weather Bulletin-2012-02-11

Space Weather Bulletin - February 11, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (9:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect.  
See our website for current information: <http://www.spaceweather.gc.ca> <<http://www.spaceweather.gc.ca/>>

SOLAR: Solar activity has been low to moderate.

INTERPLANETARY: Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 10, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** February-12-12 10:10 AM  
**Subject:** Space Weather Bulletin-2012-02-12

Space Weather Bulletin - February 12, 2012 issued by the Canadian Space Weather Forecast Centre at 15:15 UT (10:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect.  
See our website for current information: <http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low to moderate.

INTERPLANETARY: Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 11, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** February-13-12 9:26 AM  
**Subject:** Space Weather Bulletin-2012-02-13

Space Weather Bulletin - February 12, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (9:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect.  
See our website for current information: <http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 12, 2012 and is expected to be below threshold level today. Visit <http://spaceweather.gc.ca/current-actuelle/fluence/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Visit <http://spaceweather.gc.ca/current-actuelle/short-court/sfst-1-eng.php> for the real-time updates on geomagnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** February-14-12 10:09 AM  
**Subject:** Space Weather Bulletin - 2012-02-14

Space Weather Bulletin – February 14, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (10:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 13, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** February-15-12 10:11 AM  
**Subject:** Space Weather Bulletin - 2012-02-15

Space Weather Bulletin – February 15, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (10:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

OVERVIEW: There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 14, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been unsettled with active intervals in the polar zone, active with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** February-16-12 10:13 AM  
**Subject:** Space Weather Bulletin - 2012-02-16

Space Weather Bulletin – February 16, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (10:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 15, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** February-16-12 10:13 AM  
**Subject:** Space Weather Bulletin - 2012-02-16

Space Weather Bulletin – February 16, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (10:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 15, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** February-17-12 9:57 AM

**Subject:** Space Weather Bulletin - 2012-02-17

Space Weather Bulletin – February 17, 2012 issued by the Canadian Space Weather Forecast Centre at 14:45 UT (09:45 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW: There is currently no storm watch in effect. See our website for current information:

<http://www.spaceweather.gc.ca>

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level February 16, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** February-18-12 10:33 AM

**Subject:** Space Weather Bulletin - 2012-02-18

Space Weather Bulletin – February 18, 2012 issued by the Canadian Space Weather Forecast Centre at 15:15 UT (10:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet



auroral zone: quiet  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

**Space Environment:**

Current conditions  
geostationary orbit: normal  
24 hour forecast  
geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently very slow (<400 km/s).  
The interplanetary magnetic field has been fluctuating at low ( $|Bz| < 5nT$ ) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 17, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** February-19-12 10:48 AM

**Subject:** Space Weather Bulletin - 2012-02-19

Space Weather Bulletin – February 19, 2012 issued by the Canadian Space Weather Forecast Centre at 15:30 UT (10:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: quiet with unsettled intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions  
geostationary orbit: normal  
24 hour forecast

geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow (400-500 km/s).

The interplanetary magnetic field has been fluctuating at moderate levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 18, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** February-20-12 10:37 AM

**Subject:** Space Weather Bulletin - 2012-02-20

Space Weather Bulletin – February 20, 2012 issued by the Canadian Space Weather Forecast Centre at 15:30 UT (10:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: active

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions

geostationary orbit: normal

24 hour forecast

geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~500 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 19, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** February-21-12 10:19 AM

**Subject:** Space Weather Bulletin - 2012-02-21

Space Weather Bulletin – February 21, 2012 issued by the Canadian Space Weather Forecast Centre at 15:10 UT (10:10 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: unsettled

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow (< 500 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 20, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir  
**Sent:** February-22-12 10:11 AM  
**Subject:** Space Weather Bulletin - 2012-02-22

Space Weather Bulletin – February 22, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (10:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: stormy

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently moderate (~ 550 km/s).

The interplanetary magnetic field has been fluctuating at moderate levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level February 21, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** February-23-12 10:25 AM

**Subject:** Space Weather Bulletin - 2012-02-23

Space Weather Bulletin – February 23, 2012 issued by the Canadian Space Weather Forecast Centre at 15:15 UT (10:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed has been decreasing over the last 24 hours (currently ~425 km/s).

The interplanetary magnetic field has been fluctuating at very low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 22, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** February-24-12 10:42 AM

**Subject:** Space Weather Bulletin - 2012-02-24

Space Weather Bulletin – February 24, 2012 issued by the Canadian Space Weather Forecast Centre at 15:10 UT (10:10 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~420 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 23, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** February-25-12 11:11 AM

**Subject:** Space Weather Bulletin - 2012-02-25

Space Weather Bulletin – February 25, 2012 issued by the Canadian Space Weather Forecast Centre at 16:10 UT (11:10 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with stormy intervals

auroral zone: quiet with stormy intervals

sub-auroral zone: quiet with stormy intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~450 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 24, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** February-26-12 12:04 PM

**Subject:** Space Weather Bulletin - 2012-02-26

Space Weather Bulletin – February 26, 2012 issued by the Canadian Space Weather Forecast Centre at 16:10 UT (11:10 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

A predicted increase in Geomagnetic Activity late today is associated with a small possibility for a glancing blow from the CME observed on February 24.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: active with stormy intervals

auroral zone: active with stormy intervals

sub-auroral zone: active with stormy intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~400-420 km/s).

The interplanetary magnetic field has been fluctuating at moderate levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 25, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and active with stormy intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** February-27-12 10:29 AM

**Subject:** Space Weather Bulletin - 2012-02-27

Space Weather Bulletin – February 27, 2012 issued by the Canadian Space Weather Forecast Centre at 15:20 UT (10:20 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: stormy

sub-auroral zone: unsettled

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~ 500 km/s).

The interplanetary magnetic field has been fluctuating at moderate levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 26, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** February-28-12 11:09 AM  
**Subject:** Space Weather Bulletin - 2012-02-28

Space Weather Bulletin – February 28, 2012 issued by the Canadian Space Weather Forecast Centre at 16:08 UT (11:08 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: active

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: active with stormy intervals

sub-auroral zone: unsettled with active intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~ 450 km/s).

The interplanetary magnetic field has been fluctuating at moderate levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 27, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, active with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** February-29-12 10:50 AM  
**Subject:** Space Weather Bulletin - 2012-02-29

Space Weather Bulletin – February 29, 2012 issued by the Canadian Space Weather Forecast Centre at 15:50 UT (10:50 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low. One coronal hole is located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (~ 450 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 28, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-01-12 12:57 PM

**Subject:** Space Weather Bulletin - 2012-03-01

Space Weather Bulletin – March 1, 2012 issued by the Canadian Space Weather Forecast Centre at 17:55 UT (12:55 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: unsettled  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. One coronal hole is located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (~ 500 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level February 29, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-02-12 11:10 AM

**Subject:** Space Weather Bulletin - 2012-03-02

Space Weather Bulletin – March 2, 2012 issued by the Canadian Space Weather Forecast Centre at 16:10 UT (11:10 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. Two coronal holes are located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (~425 km/s).  
The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level March 1, 2012 and is expected to be below threshold level today.  
Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.  
Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** March-03-12 1:22 PM  
**Subject:** Space Weather Bulletin - 2012-03-03

Space Weather Bulletin – March 3, 2012 issued by the Canadian Space Weather Forecast Centre at 18:20 UT (13:20 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

**OVERVIEW:**

There is currently no storm watch in effect.  
See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: quiet with unsettled intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate. One coronal hole is located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (~400 km/s).  
The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was at threshold level March 2, 2012 and is expected to be at threshold level today.  
Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be

quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-04-12 1:28 PM

**Subject:** Space Weather Bulletin - 2012-03-04

Space Weather Bulletin – March 4, 2012 issued by the Canadian Space Weather Forecast Centre at 18:25 UT (13:25 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: active

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate. One coronal hole is located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (~400 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level March 3, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-05-12 11:06 AM

**Subject:** Space Weather Bulletin - 2012-03-05

Space Weather Bulletin – March 5, 2012 issued by the Canadian Space Weather Forecast Centre at 16:05 UT (11:05 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect. A large long duration flare has erupted over the past 24 hours.

A CME may be associated with this flares.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been high. A long duration X1.1 (large) flare erupted on March 5, 2012 at 0409 UT near the edge of the solar disk. A coronal hole (elongated in longitude) is located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently very slow (~370 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was at threshold level March 4, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-06-12 11:17 AM

**Subject:** Space Weather Bulletin - 2012-03-06

Space Weather Bulletin – March 6, 2012 issued by the Canadian Space Weather Forecast Centre at 16:15 UT (11:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: active  
auroral zone: active  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: quiet with active intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate. The active region located near the limb of the solar disk has produced several M flares and a X flare with associated CMEs, and has the potential to produce more solar eruptions as it traverses across the solar disk. A coronal hole (elongated in longitude) is located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently very slow (~380 km/s).  
The interplanetary magnetic field has been fluctuating at moderate levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level March 5, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-07-12 11:34 AM

**Subject:** Space Weather Bulletin - 2012-03-07

Space Weather Bulletin – March 7, 2012 issued by the Canadian Space Weather Forecast Centre at 16:15 UT (11:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: active  
auroral zone: stormy  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: active with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: active

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: normal  
24 hour forecast  
energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been high. A X5.4 flare erupted on March 7, 2012 at 0024 UT, accompanied by a CME and increases in energetic proton flux. As the active region that produced the X flare approaches the solar central meridian, more solar eruptions may be possible. A coronal hole (elongated in longitude) is located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently moderate (~550 km/s).  
The interplanetary magnetic field has been fluctuating at high levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level March 6, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, active with major storm intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and active in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-07-12 12:50 PM

**Subject:** Space Weather Bulletin - 2012-03-07 UPDATE

Space Weather Bulletin – Update March 7, 2012 issued by the Canadian Space Weather Forecast Centre at 17:45 UT (12:45 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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A fast moving CME associated with the X5.4 flare mentioned in today's bulletin has just been reported. It is expected that a major storm would occur within the next 24 hours.

The X flare has caused increases in energetic protons, resulting in polar cap absorption that would affect radio communications for transpolar flights and other arctic operations.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-08-12 11:28 AM

**Subject:** Space Weather Bulletin - 2012-03-08

Space Weather Bulletin – March 8, 2012 issued by the Canadian Space Weather Forecast Centre at 16:25 UT (11:25 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect. Polar cap absorption (mentioned in yesterday's update as due to the X flare) that would affect radio communications for transpolar flights and other arctic operations is still on going.



See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: stormy  
auroral zone: stormy  
sub-auroral zone: stormy  
24 hour forecast  
polar cap zone: stormy  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled with active intervals

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low since yesterday's X5.4 flare. As the active region that produced the X flare approaches the solar central meridian, more solar eruptions may be possible. A coronal hole (elongated in longitude) is located from the center of the solar disk to the limb.

**INTERPLANETARY:**

The solar wind speed is currently fast (~700 km/s).  
The interplanetary magnetic field has been fluctuating at high levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was at threshold level March 7, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with major storm intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Activity is forecast to be stormy in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-08-12 1:21 PM

**Subject:** Space Weather Bulletin - 2012-03-08 CORRECTION on OVERVIEW

Space Weather Bulletin – March 8, 2012 (Correction on OVERVIEW in the Bulletin dispatched earlier, and also update on current geomagnetic conditions)

Issued by the Canadian Space Weather Forecast Centre at 18:20 UT (13:20 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

Stormy conditions are currently observed in the polar cap and auroral zones. Polar cap absorption (mentioned in yesterday's update as due to the X flare) that would affect radio communications for transpolar flights and other arctic operations is still on going.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: stormy

auroral zone: stormy  
sub-auroral zone: unsettled  
24 hour forecast  
polar cap zone: stormy  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled with active intervals

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low since yesterday's X5.4 flare. As the active region that produced the X flare approaches the solar central meridian, more solar eruptions may be possible. A coronal hole (elongated in longitude) is located from the center of the solar disk to the limb.

**INTERPLANETARY:**

The solar wind speed is currently fast (~700 km/s).  
The interplanetary magnetic field has been fluctuating at high levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was at threshold level March 7, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with major storm intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Activity is forecast to be stormy in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-09-12 11:12 AM

**Subject:** Space Weather Bulletin - 2012-03-09

Space Weather Bulletin – March 9, 2012 issued by the Canadian Space Weather Forecast Centre at 16:10 UT (11:10 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

A storm watch was issued for the auroral zone from 04 UT to 07 UT, March 8, 2012. A storm watch was issued for polar cap, auroral and subauroral zone from 08 UT of March 8 to 15 UT of March 9. Storm watch was issued because of MAJOR storm conditions. A medium long duration flare has erupted over the past 24 hours, and a CME may be associated with this flare. Polar cap absorption that would affect radio communications for transpolar flights and other arctic operations is still ongoing.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: active  
auroral zone: active  
sub-auroral zone: active  
24 hour forecast  
polar cap zone: stormy

auroral zone: stormy with major storm intervals  
sub-auroral zone: stormy

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate. A M6.3 flare (medium) erupted at March 9, 2012 0353 UT near the center of the solar disk. The active region that produced the X flares and the latest M flare has the potential for further solar eruptions as it moves across the solar disk. A coronal hole is located from the edge of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently moderate (~600 km/s).  
The interplanetary magnetic field has been fluctuating at high levels.  
Prolonged periods of negative interplanetary magnetic field from 01 UT to 15 UT on March 9, 2012 has been associated with the disturbed geomagnetic conditions.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level March 8, 2012 and is expected to be above threshold level today.  
Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been stormy with major storm intervals in the polar zone, stormy with major storm intervals in the auroral zone, and active with major storm intervals in the subauroral zone. Activity is forecast to be stormy in the polar zone, stormy with major storm intervals in the auroral zone, and stormy in the subauroral zone.  
Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** March-10-12 1:27 PM  
**Subject:** Space Weather Bulletin - 2012-03-10

Space Weather Bulletin – March 10, 2012 issued by the Canadian Space Weather Forecast Centre at 18:25 UT (13:25 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

A storm watch was issued for the auroral zone from 05 UT to 07 UT, March 10, 2012. An earth-directed CME associated with yesterday's M flare has been reported. Disturbed geomagnetic conditions due to the CME are expected to be observed on March 11 and 12, 2012. Polar cap absorption that would affect radio communications for transpolar flights and other arctic operations is still ongoing.  
See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: unsettled  
auroral zone: active  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: active  
auroral zone: active with major storm intervals  
sub-auroral zone: unsettled with active intervals

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: high

**DETAILED INFORMATION:****SOLAR:**

Solar activity has been moderate. A M8 flare (medium) erupted at March 10, 2012 1744 UT near the center of the solar disk. The active region that produced the X flares and the the M flares has the potential for further solar eruptions as it moves from the center to the edge of the solar disk. A coronal hole is located from the edge of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (~450 km/s).  
The interplanetary magnetic field has been primarily negative at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level March 9, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Activity is forecast to be active in the polar zone, active with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-11-12 1:37 PM

**Subject:** Space Weather Bulletin - 2012-03-11

Space Weather Bulletin – March 11, 2012 issued by the Canadian Space Weather Forecast Centre at 18:35 UT (13:35 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

**OVERVIEW:**

An earth-directed CME associated with yesterday's M flare has been reported. Disturbed geomagnetic conditions due to this CME are expected to be observed on March 12 and 13, 2012. Polar cap absorption that would affect radio communications for transpolar flights and other arctic operations is still ongoing.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: active  
auroral zone: quiet  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: active with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: quiet with stormy intervals

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: high  
24 hour forecast  
energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been low since yesterday's M8 flare. The active region that produced the X flares and the M flares has the potential for further solar eruptions as it moves towards the edge of the solar disk. A coronal hole is located from the edge of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (~450 km/s).  
The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level March 10, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** March-12-12 10:31 AM

**Subject:** Space Weather Bulletin - 2012-03-12

Space Weather Bulletin – March 12, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

A major storm watch is currently in effect for the polar cap, auroral, and sub-auroral zones, and is anticipated to end at 15:30 UT.

Polar cap absorption that would affect radio communications for transpolar flights and other arctic operations is decreasing.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active  
auroral zone: unsettled  
sub-auroral zone: active

24 hour forecast

polar cap zone: active with possible major storm watch  
auroral zone: active with possible major storm watch  
sub-auroral zone: unsettled with possible major storm watch

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been low. The active region that produced the X flares and the M flares is starting to decay as it moves towards the edge of the solar disk. A coronal hole is located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed has been decreasing from 600 km/s to 500 km/s since the passage of an interplanetary shock at March 12, 2012 ~09 UT. The interplanetary magnetic field has been fluctuating at high levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level March 11, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with major storm intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Activity is forecast to be active with possible major storm watch in the polar zone, active with possible major storm watch in the auroral zone, and unsettled with possible major storm watch in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** March-13-12 9:31 AM

**Subject:** Space Weather Bulletin – 2012-03-13

Space Weather Bulletin – March 13, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (09:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between March 15, 2012 and March 16, 2012. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been low. Two coronal holes are located near the centre of the solar disk.

**INTERPLANETARY:** The solar wind speed is currently moderate (500-700 km/s). The interplanetary magnetic field has been primarily negative at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was below threshold level March 12, 2012 and is expected to be below threshold level today. The 5-minute integral energetic electron flux is currently high. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with major storm intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and

quiet with unsettled intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [<mailto:Robyn.Fiori@NRCan-RNCan.gc.ca>]

**Sent:** March-14-12 8:33 AM

**Subject:** Space Weather Bulletin - 2012-03-14

Space Weather Bulletin – March 14, 2012 issued by the Canadian Space Weather Forecast Centre at 12:50 UT (08:50 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm major watch in effect. An Earth-directed CME has erupted over the last 24 hours. A medium flare has erupted over the past 24 hours. Disturbed geomagnetic conditions due to solar activity are expected today. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: active

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with stormy intervals

auroral zone: unsettled with stormy intervals

sub-auroral zone: quiet with stormy intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: high

**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been moderate. A CME was observed at March 13, 2012 17:40 UT, and is expected to deliver a glancing blow to the Earth on March 14-15, 2012, resulting in unsettled to active geomagnetic activity. Two coronal holes are located near the centre of the solar disk. A M (medium) flare erupted at March 13, 2012 17:18 UT near the edge of the solar disk.

**INTERPLANETARY:** The solar wind speed is currently moderate (500-700 km/s). The interplanetary magnetic field has been primarily negative at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was above threshold level March 13, 2012 and is expected to be above threshold level today. The 5-minute integral energetic electron flux is currently high. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [<mailto:Robyn.Fiori@NRCan-RNCan.gc.ca>]

**Sent:** March-15-12 7:32 AM

**Subject:** Space Weather Bulletin - 2012-03-15

Space Weather Bulletin – March 15, 2012 issued by the Canadian Space Weather Forecast Centre at 03:40 UT (07:40 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW: There is currently no storm major watch in effect. Two medium flare have erupted over the past 24 hours. (CMEs may be associated with these flares.) Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between March 15, 2012 and March 17, 2012. See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet  
auroral zone: active  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: active  
sub-auroral zone: quiet

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: high

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

DETAILED INFORMATION:

SOLAR: Solar activity has been moderate. Two coronal holes are located near the centre of the solar disk. An M (medium) flare erupted at March 14, 2012 15:13 UT near the centre of the solar disk. An M (medium) flare erupted at March 15, 2012 07:44 UT near the centre of the solar disk.

INTERPLANETARY: The solar wind speed is currently moderate (500-700 km/s). The interplanetary magnetic field has been primarily negative at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was above threshold level March 14, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, active in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** March-16-12 11:30 AM

**Subject:** Space Weather Bulletin – 2012-03-16

Space Weather Bulletin – March 16, 2012 issued by the Canadian Space Weather Forecast Centre at 16:30 UT (11:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*



**OVERVIEW:** There is currently no major storm watch in effect. A medium flare has erupted over the past 24 hours. Disturbed geomagnetic conditions due to solar activity are currently observed in the auroral zone. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active  
auroral zone: active  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled with active intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

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**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been moderate. The active region located near the central region of the solar disk has produced solar flares and associated CMEs and has the potential to produce subsequent solar eruptions. A non-Earth-directed CME erupted at March 15, 2012 ~07:50 UT. Two coronal holes are located near the edge of the solar disk. An M (medium) flare erupted at March 15, 2012 07:44 UT near the centre of the solar disk.

**INTERPLANETARY:** The solar wind speed is currently moderate (500-700 km/s). Moderate solar wind speeds are due to high speed streams from coronal holes. The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was above threshold level March 15, 2012 and is expected to be at threshold level today. The 5-minute integral energetic electron flux is currently high. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [<mailto:Robyn.Fiori@NRCan-RNCan.gc.ca>]

**Sent:** March-17-12 9:28 AM

**Subject:** Space Weather Bulletin - 2012-03-17

Space Weather Bulletin – March 17, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (09:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm major watch in effect. Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between today and March 20, 2012. See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled

Space Environment:

Current conditions  
energetic electron fluence at geostationary orbit: High  
24 hour forecast  
energetic electron fluence at geostationary orbit: High

DETAILED INFORMATION:

**SOLAR:** Solar activity has been low. The active region located near the west limb of the solar disk has produced solar flares and has the potential to produce subsequent solar eruptions. Three coronal holes are located near the edge of the solar disk.

**INTERPLANETARY:** The solar wind speed is currently moderate (500-700 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was above threshold level March 16, 2012 and is expected to be above threshold level today. The 5-minute integral energetic electron flux is currently high. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [<mailto:Robyn.Fiori@NRCan-RNCan.gc.ca>]

**Sent:** March-18-12 7:55 AM

**Subject:** Space Weather Bulletin - 2012-03-18

Space Weather Bulletin – March 18, 2012 issued by the Canadian Space Weather Forecast Centre at 12:00 UT (08:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm major watch in effect. An Earth-directed CME has erupted over the past 24 hours. A medium flare has erupted over the past 24 hours. Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between March 19, 2012 and March 20, 2012. See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions  
polar cap zone: active  
auroral zone: active  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: unsettled with active intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: quiet with unsettled intervals

Space Environment:

Current conditions  
energetic electron fluence at geostationary orbit: high  
24 hour forecast

energetic electron fluence at geostationary orbit: high

**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been moderate. The active region located near the west limb of the solar disk has produced solar flares and associated CMEs and has the potential to produce subsequent solar eruptions. An Earth-directed CME erupted at March 18, 2012 00:24 UT. Three coronal holes are located near the edge of the solar disk. A M (medium) flare erupted at March 17, 2012 20:36 UT near the centre of the solar disk.

**INTERPLANETARY:** The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was above threshold level March 17, 2012 and is expected to be above threshold level today. The 5-minute integral energetic electron flux is currently high. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been unsettled with active intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, active with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** March-19-12 8:44 AM  
**Subject:** Space Weather Bulletin – 2012-03-19

Space Weather Bulletin – March 19, 2012 issued by the Canadian Space Weather Forecast Centre at 12:45 UT (08:45 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: unsettled  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: high

24 hour forecast

energetic electron fluence at geostationary orbit: high

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**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been low. A non-Earth-directed CME erupted at March 18, 2012 00:24 UT. Two coronal holes are located near the edge of the solar disk. One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:** The solar wind speed is currently moderate (500-700 km/s). Moderate solar wind speeds are due to high speed streams from coronal holes. The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was above threshold level March 18, 2012 and is expected to be above threshold level today. The 5-minute integral energetic electron flux is currently high. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** March-19-12 2:38 PM

**Subject:** Space Weather Bulletin - 2012-03-19 - UPDATE

Space Weather Bulletin – March 19, 2012 issued by the Canadian Space Weather Forecast Centre at 19:40 UT (14:40 EDT)

**OVERVIEW:** The CME that erupted March 18, 2012 at 00:24 UT was mistakenly reported in the March 18, 2012 bulletin as Earth directed. This CME is in fact non-Earth-directed, as was correctly reported in today's bulletin

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** March-20-12 8:15 AM

**Subject:** Space Weather Bulletin – 2012-03-20

Space Weather Bulletin – March 20, 2012 issued by the Canadian Space Weather Forecast Centre at 12:30 UT (08:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been low. One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:** The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was above threshold level March 19, 2012 and is expected to be at threshold level today. The 5-minute integral energetic electron flux is currently high. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** March-21-12 10:30 AM  
**Subject:** Space Weather Bulletin – 2012-03-21

Space Weather Bulletin – March 21, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: quiet with active intervals  
sub-auroral zone: quiet

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been low. One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:** The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was above threshold level March 20, 2012 and is expected to be at threshold level today. The 5-minute integral energetic electron flux is currently high. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** March-22-12 8:56 AM  
**Subject:** Space Weather Bulletin – 2012-03-22

Space Weather Bulletin – March 22, 2012 issued by the Canadian Space Weather Forecast Centre at 12:55 UT (08:55 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. Disturbed geomagnetic conditions due to solar activity observed on March 21, 2012 are not expected. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: high

24 hour forecast

energetic electron fluence at geostationary orbit: high

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**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been low. A non-Earth-directed CME erupted at March 21, 2012 07:24 UT. One coronal hole is located near the centre of the solar disk. Data about solar conditions are currently unavailable.

**INTERPLANETARY:** Interplanetary activity has been very low. The solar wind speed is currently very slow (<400 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was above threshold level March 21, 2012 and is expected to be above threshold level today. The 5-minute integral energetic electron flux is currently high. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** March-23-12 7:31 AM

**Subject:** Space Weather Bulletin – 2012-03-23

Space Weather Bulletin – March 23, 2012 issued by the Canadian Space Weather Forecast Centre at 11:35 UT (07:35 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: quiet with active intervals  
sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: high  
24 hour forecast  
energetic electron fluence at geostationary orbit: high

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**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been low. Two coronal holes are located near the centre of the solar disk. Two coronal holes are located near the edge of the solar disk.

**INTERPLANETARY:** The solar wind speed has been increasing over the last 8 hours (currently ~ 420 km/s). The interplanetary magnetic field has been primarily positive at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was above threshold level March 23, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [<mailto:Robyn.Fiori@NRCan-RNCan.gc.ca>]

**Sent:** March-24-12 8:17 AM

**Subject:** Space Weather Bulletin – 2012-03-24

Space Weather Bulletin - March 24, 2012 issued by the Canadian Space Weather Forecast Centre at 12:15 UT (08:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm major watch in effect. A medium flare has erupted over the past 24 hours. A CME may be associated with this flare. See our website for current information:

<http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been low. Three coronal holes are located near the centre of the solar disk. An M (medium) flare erupted at March 23, 2012 1937 UT.

**INTERPLANETARY:** Interplanetary activity has been low. The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level March 23, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [<mailto:Robyn.Fiori@NRCan-RNCan.gc.ca>]  
**Sent:** March-25-12 8:44 AM  
**Subject:** Space Weather Bulletin - 2012-03-24

Space Weather Bulletin – March 25, 2012 issued by the Canadian Space Weather Forecast Centre at 12:45 UT (08:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:** There is currently no storm major watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: unsettled with unsettled intervals  
sub-auroral zone: quiet

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been low. A non-Earth directed CME erupted at March 24, 2012 00:36 UT. Three coronal holes are located near the centre of the solar disk.

**INTERPLANETARY:** Interplanetary activity has been very low. The solar wind speed is currently very slow (<400 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was below threshold level March 24, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.



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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** March-26-12 8:08 AM  
**Subject:** Space Weather Bulletin – 2012-03-26

Space Weather Bulletin – March 26, 2012 issued by the Canadian Space Weather Forecast Centre at 12:10 UT (08:10 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. Disturbed geomagnetic conditions due to solar activity observed on March 25, 2012 are not expected. See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been moderate. The active region located near the east limb of the solar disk has produced solar flares, a long duration solar flare and associated CMEs and has the potential to produce subsequent solar eruptions. Three non-Earth-directed CMEs erupted March 25, 2012. Two coronal holes are located near the centre of the solar disk. One coronal hole is located near the edge of the solar disk. A long duration C (low) flare erupted March 24, 2012 near the edge of the solar disk.

**INTERPLANETARY:** Interplanetary activity has been very low. The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was below threshold level March 25, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** March-27-12 11:14 AM  
**Subject:** Space Weather Bulletin – 2012-03-27

Space Weather Bulletin - March 27, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW: There is currently no major storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet with unsettled intervals  
auroral zone: quiet with stormy intervals  
sub-auroral zone: quiet with unsettled intervals

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: below threshold

24 hour forecast

energetic electron fluence at geostationary orbit: above threshold

DETAILED INFORMATION:

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level March 26, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** March-28-12 6:22 AM

**Subject:** Space Weather Bulletin – 2012-03-28

Space Weather Bulletin - March 28, 2012 issued by the Canadian Space Weather Forecast Centre at 11:30 UT (06:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW: There is currently no major storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet

auroral zone: unsettled  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: active with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled with stormy intervals

Space Environment:

Current conditions  
energetic electron fluence at geostationary orbit: below threshold  
24 hour forecast  
energetic electron fluence at geostationary orbit: above threshold

DETAILED INFORMATION:

SOLAR: Solar activity has been low. Slow coronal mass ejection has occurred on March 27.

INTERPLANETARY: Interplanetary activity has been moderate due to coronal hole effects. The solar wind speed is currently moderate (500 km/s). The interplanetary magnetic field has been fluctuating at moderate ( $5 < |Bz| < 15$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level March 26, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** March-29-12 7:37 AM  
**Subject:** Space Weather Bulletin – 2012-03-29

Space Weather Bulletin - March 29, 2012 issued by the Canadian Space Weather Forecast Centre at 11:30 UT (07:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

Geomagnetic Activity:  
Current conditions  
polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

DETAILED INFORMATION:

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently slow (300-400 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level March 28, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone in past 24 hours. Activity is forecast to be quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone in next 24 hours. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** March-30-12 1:49 PM

**Subject:** Space Weather Bulletin – 2012-03-30

Space Weather Bulletin - March 30, 2012 issued by the Canadian Space Weather Forecast Centre at 19:00 UT (14:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW: There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: unsettled;

auroral zone: quiet;

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals;

auroral zone: quiet with unsettled intervals;

sub-auroral zone: quiet

DETAILED INFORMATION:

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently low (<400 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level March 29, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** March-31-12 8:20 AM  
**Subject:** Space Weather Bulletin – 2012-03-31

Space Weather Bulletin - March 31, 2012 issued by the Canadian Space Weather Forecast Centre at 12:30 UT (08:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet;  
auroral zone: quiet;  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals;  
auroral zone: quiet;  
sub-auroral zone: quiet

**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been low.

**INTERPLANETARY:** Interplanetary activity has been low. The solar wind speed is currently low (<400 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was below threshold level March 30, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** April-01-12 7:32 AM  
**Subject:** Space Weather Bulletin – 2012-04-01

Space Weather Bulletin - April 01, 2012 issued by the Canadian Space Weather Forecast Centre at 11:30 UT (07:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet;  
auroral zone: unsettled;  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals;  
auroral zone: quiet;  
sub-auroral zone: quiet

DETAILED INFORMATION:

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently low (<400 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level March 31, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** April-02-12 7:33 AM

**Subject:** Space Weather Bulletin – 2012-04-02

Space Weather Bulletin - April 02, 2012 issued by the Canadian Space Weather Forecast Centre at 11:30 UT (07:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet;  
auroral zone: unsettled;  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals;  
auroral zone: quiet;  
sub-auroral zone: quiet

DETAILED INFORMATION:

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently low (<400 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level April 1, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with unsettled intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** April-03-12 7:28 AM  
**Subject:** Space Weather Bulletin – 2012-04-03

Space Weather Bulletin - April 03, 2012 issued by the Canadian Space Weather Forecast Centre at 11:30 UT (07:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW: There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet;  
auroral zone: quiet;  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals;  
auroral zone: unsettled with active intervals;  
sub-auroral zone: quiet

DETAILED INFORMATION:

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently low (<400 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level April 2, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** April-04-12 6:25 AM  
**Subject:** Space Weather Bulletin – 2012-04-04

Space Weather Bulletin - April 04, 2012 issued by the Canadian Space Weather Forecast Centre at 10:30 UT (06:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW: There is currently no major storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet;  
auroral zone: quiet;  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals;  
auroral zone: quiet with unsettled intervals;  
sub-auroral zone: quiet

DETAILED INFORMATION:

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently low (<400 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level April 3, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** April-06-12 8:15 AM  
**Subject:** Space Weather Bulletin – 2012-04-06

Space Weather Bulletin - April 06, 2012 issued by the Canadian Space Weather Forecast Centre at 12:30 UT (08:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW: There is currently no major storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions



polar cap zone: quiet;  
auroral zone: quiet;  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals;  
auroral zone: quiet;  
sub-auroral zone: quiet

DETAILED INFORMATION:

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been moderate. The solar wind speed is currently low (<400 km/s). The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level April 5, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** April-07-12 9:50 AM

**Subject:** Space Weather Bulletin – 2012-04-07

Space Weather Bulletin - April 07, 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: unsettled;  
auroral zone: unsettled;  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals;  
auroral zone: unsettled with active intervals;  
sub-auroral zone: quiet with active intervals

DETAILED INFORMATION:

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been moderate. The solar wind speed is currently low (<400 km/s). The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level April 6, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** April-08-12 9:37 AM

**Subject:** Space Weather Bulletin – 2012-04-08

Space Weather Bulletin - April 08, 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW: There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet;

auroral zone: quiet;

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals;

auroral zone: quiet with active intervals;

sub-auroral zone: quiet with active intervals

DETAILED INFORMATION:

SOLAR: Solar activity has been low.

INTERPLANETARY: Interplanetary activity has been low. The solar wind speed is currently low (<400 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT: Energetic electron fluence at geostationary orbit was below threshold level April 7, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC: Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** April-09-12 6:29 AM

**Subject:** Space Weather Bulletin – 2012-04-09

Space Weather Bulletin - April 09, 2012 issued by the Canadian Space Weather Forecast Centre at 10:30 UT (06:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:** There is currently no major storm watch in effect. See our website for current information:  
<http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet;  
auroral zone: unsettled;  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals;  
auroral zone: quiet;  
sub-auroral zone: quiet

**DETAILED INFORMATION:**

**SOLAR:** Solar activity has been low.

**INTERPLANETARY:** Interplanetary activity has been low. The solar wind speed is currently low (<400 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:** Energetic electron fluence at geostationary orbit was below threshold level April 8, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:** Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** April-10-12 11:09 AM

**Subject:** Space Weather Bulletin – 2012-04-10

Space Weather Bulletin – April 10, 2012 issued by the Canadian Space Weather Forecast Centre at 15:10 UT (11:10 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

A CME was observed April 9, 2012, and is expected to deliver a glancing blow to the Earth on April 12, 2012, resulting in unsettled to active geomagnetic activity.

One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

Interplanetary activity has been low

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was at normal levels April 9, 2012 and is expected to be at moderate levels today.

The 5-minute integral energetic electron flux is currently high.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** April-10-12 10:13 PM

**Subject:** Space Weather Bulletin – 2012-04-10 UPDATE

Space Weather Bulletin – April 11, 2012 issued by the Canadian Space Weather Forecast Centre at 2:15 UT (22:15 EST April 10)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

Forecast/Data quality, on our website, is reduced due to an ongoing technical issue with departmental email systems and our forecast systems.

Stormy conditions are forecast, on our website, for all zones to begin in 5 hours with a duration of 6 hours however, conditions are actually expected to be Unsettled to Active.

**Geomagnetic Activity:**

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet with unsettled intervals

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**DETAILED INFORMATION:**

**SOLAR:**

A CME was observed April 9, 2012, and is expected to deliver a glancing blow to the Earth on April 11-12, 2012, resulting in unsettled to active geomagnetic activity.

One large coronal hole is located near the centre of the solar disk.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]  
**Sent:** April-11-12 8:37 AM  
**Subject:** Space Weather Bulletin – 2012-04-11

Space Weather Bulletin – April 11, 2012 issued by the Canadian Space Weather Forecast Centre at 12:45 UT (8:45 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

Stormy conditions are possible in the auroral zone within the next 24 hours.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: quiet with stormy intervals

sub-auroral zone: quiet with active intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

A CME was observed on April 9, 2012 and is expected to deliver a glancing blow to the Earth on April 11-12, 2012.

One large coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently very slow <400 km/s

The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT levels).

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level April 10, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]  
**Sent:** April-12-12 8:31 AM  
**Subject:** Space Weather Bulletin – 2012-04-12

Space Weather Bulletin – April 12, 2012 issued by the Canadian Space Weather Forecast Centre at 12:30 UT (7:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been very low.

There are 3 active regions visible on the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (400-500 km/s)

The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT levels).

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level April 11, 2012 and is expected to be below threshold level today.

Energetic electron fluence at geostationary orbit was at normal levels April 11, 2012 and is expected to be at normal levels today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** April-13-12 9:48 AM

**Subject:** Space Weather Bulletin – 2012-04-13

Space Weather Bulletin – April 13, 2012 issued by the Canadian Space Weather Forecast Centre at 13:45 UT ( 8:45 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: unsettled  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: unsettled with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: Normal  
24 hour forecast  
energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low.  
There are 3 active regions visible on the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently moderate ( 500- 700 km/s)  
The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT levels).  
Moderate solar wind speeds are due to high speed streams from coronal holes.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level April 12 , 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** April-14-12 9:37 AM

**Subject:** Space Weather Bulletin – 2012-04-13

Space Weather Bulletin – April 14, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT ( 8:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.  
See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: unsettled  
auroral zone: unsettled  
sub-auroral zone: unsettled  
24 hour forecast  
polar cap zone: quiet with active intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: Normal  
24 hour forecast  
energetic electron fluence at geostationary orbit: Normal

-----  
DETAILED INFORMATION:

SOLAR:

Solar activity has been very low.  
There are 4 active regions visible on the solar disk.

INTERPLANETARY:

The solar wind speed is currently moderate ( 500- 700 km/s) The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT levels).  
Moderate solar wind speeds are due to high speed streams from coronal holes.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was below threshold level April 13 , 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** April-15-12 9:10 AM

**Subject:** Space Weather Bulletin – 2012-04-15

Space Weather Bulletin – April 15, 2012 issued by the Canadian Space Weather Forecast Centre at 13:15 UT ( 8:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

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DETAILED INFORMATION:



SOLAR:

Solar activity has been very low.

INTERPLANETARY:

The solar wind speed is currently low ( 300- 500 km/s) The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was above threshold level April 14 , 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** April-16-12 9:12 AM

**Subject:** Space Weather Bulletin – 2012-04-16

Space Weather Bulletin – April 16, 2012 issued by the Canadian Space Weather Forecast Centre at 14:15 UT ( 9:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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DETAILED INFORMATION:

SOLAR:

Solar activity has been low.

INTERPLANETARY:

Interplanetary activity has been low.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was above threshold level April 15 , 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** April-17-12 9:24 AM

**Subject:** Space Weather Bulletin – 2012-04-17

Space Weather Bulletin – April 17, 2012 issued by the Canadian Space Weather Forecast Centre at 14:25 UT ( 9:25 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: unsettled  
auroral zone: active  
sub-auroral zone: unsettled

24 hour forecast

polar cap zone: unsettled with active intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet with active intervals

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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DETAILED INFORMATION:

SOLAR:

Solar activity has been moderate.

An active region located near the east limb of the solar disk has produced a medium solar flare and an associated CME which is non-Earth-directed.

INTERPLANETARY:

The solar wind speed is currently very slow (<400 km/s).

The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was above threshold level April 16, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sf1-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active interval in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** April-18-12 10:34 AM

**Subject:** Space Weather Bulletin – 2012-04-18

Space Weather Bulletin – April 18, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (9:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: active

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate.

There are 9 active regions visible on the solar disk.

The active region located near the central region of the solar disk has produced solar flare and associated CME and has the potential to produce subsequent solar eruptions.

**INTERPLANETARY:**

The solar wind speed is currently slow (400-500 km/s).

The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level April 17, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled interval in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** April-19-12 10:07 AM

**Subject:** Space Weather Bulletin – 2012-04-19

Space Weather Bulletin – April 19, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT ( 10:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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DETAILED INFORMATION:

SOLAR:

Solar activity has been moderate.

There are 8 active regions visible on the solar disk.

The active region located near the central region of the solar disk has produced solar flare and have the potential to produce subsequent solar eruptions.

INTERPLANETARY:

The solar wind speed is currently slow (400-500 km/s).

The interplanetary magnetic field has been fluctuating at low ( $2 < |Bz| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was below threshold level April 18, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** April-20-12 9:13 AM

**Subject:** Space Weather Bulletin – 2012-04-20

Space Weather Bulletin – April 20, 2012 issued by the Canadian Space Weather Forecast Centre at 13:10 UT (8:10 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet  
auroral zone: unsettled  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

---

DETAILED INFORMATION:

SOLAR:

Solar activity has been low.

There are 9 active regions visible on the solar disk.

INTERPLANETARY:

The solar wind speed is currently very slow (<400 km/s).

The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was below threshold level April 19, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** April-21-12 9:19 AM

**Subject:** Space Weather Bulletin – 2012-04-21

Space Weather Bulletin – April 21, 2012 issued by the Canadian Space Weather Forecast Centre at 13:15 UT (8:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: quiet  
sub-auroral zone: quiet

Space Environment:

Current conditions  
energetic electron fluence at geostationary orbit: Normal  
24 hour forecast  
energetic electron fluence at geostationary orbit: Normal

-----  
DETAILED INFORMATION:

SOLAR:

Solar activity has been low.

INTERPLANETARY:

A CME was observed on April 19, 2012 and is expected to deliver a glancing blow to the Earth on April 21-23, 2012 resulting in unsettled to active geomagnetic activity.  
The solar wind speed is currently very slow (<400 km/s).  
The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was below threshold level April 20, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** April-22-12 10:54 AM

**Subject:** Space Weather Bulletin – 2012-04-22

Space Weather Bulletin – April 22, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (10:00 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions  
polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: unsettled with active intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

Space Environment:

Current conditions  
energetic electron fluence at geostationary orbit: Normal  
24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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DETAILED INFORMATION:

SOLAR:

Solar activity has been low.

INTERPLANETARY:

The solar wind speed is currently very slow (<400 km/s).

The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was below threshold level April 21, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** April-23-12 10:19 AM

**Subject:** Space Weather Bulletin – 2012-04-23

Space Weather Bulletin – April 23, 2012 issued by the Canadian Space Weather Forecast Centre at 14:15 UT (9:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

Disturbed geomagnetic conditions are expected today.

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: unsettled

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: unsettled with unsettled intervals

sub-auroral zone: quiet

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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DETAILED INFORMATION:

SOLAR:

Solar activity has been low.

INTERPLANETARY:

An interplanetary shock has been observed at 02:29 UT April 23, 2012.

The solar wind speed is currently very slow (<400 km/s).

The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was below threshold level April 22, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** April-23-12 10:28 PM

**Subject:** UPDATE Space Weather Bulletin – 2012-04-23

Space Weather Bulletin UPDATE – April 23, 2012 issued by the Canadian Space Weather Forecast Centre at April 24, 2012, 2:30 UT (9:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

A MAJOR STORM WATCH is currently underway.

The major storm watch was issued April 24, 2012, 00:37 UT ( April 23, 2012, 19:37 EST) and it is in effect until April 24, 2012, 15:00 ( 10:00 EST April 24, 2012).

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: active  
auroral zone: stormy  
sub-auroral zone: stormy

24 hour forecast

polar cap zone: unsettled with major storm intervals  
auroral zone: active with major storm intervals  
sub-auroral zone: unsettled with major storm intervals

---

DETAILED INFORMATION:

INTERPLANETARY:

The solar wind speed is currently very slow (<400 km/s).

A major storm is currently underway associated with a CME which was observed on April 19, 2012.

The interplanetary magnetic field has been stable at elevated ( $10 < |B_z| < 15$  nT) levels.

Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

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**From:** Lam, Hing-Lan [<mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca>]

**Sent:** April-24-12 11:21 AM

**Subject:** Space Weather Bulletin - 2012-04-24



Space Weather Bulletin – April 24, 2012 issued by the Canadian Space Weather Forecast Centre at 15:20 UT (11:20 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: active with major storm intervals

sub-auroral zone: active

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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DETAILED INFORMATION:

SOLAR:

Solar activity has been low. A coronal hole is located near the center of the solar disk.

INTERPLANETARY:

The solar wind speed is currently slow (~500 km/s).

The interplanetary magnetic field has been fluctuating at moderate levels.

Prolonged periods of negative interplanetary magnetic field from 17 UT of April 23 to 07 UT of April 24, 2012 was associated with disturbed geomagnetic conditions that resulted in major storm watch being issued at 0037 UT of April 24 and terminated at 09 UT of April 24.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was below threshold level April 23, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with major storm intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and active in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** April-25-12 10:58 AM

**Subject:** Space Weather Bulletin - 2012-04-25

Space Weather Bulletin – April 25, 2012 issued by the Canadian Space Weather Forecast Centre at 14:50 UT (10:50 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect. A CME with low speed of ~400 km/s and associated with a small C2 flare was observed on April 23 at ~ 1900 UT. Increased geomagnetic activity is expected from April 26-27. Another CME erupted near the limb on April 24 at ~ 0800 UT, and is not expected to have geomagnetic effects.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: unsettled  
auroral zone: unsettled  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled

Space Environment:

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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DETAILED INFORMATION:

SOLAR:

Solar activity has been low. Two coronal holes are located near the center of the solar disk.

INTERPLANETARY:

The solar wind speed is currently moderate (~650 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

Prolonged periods of negative interplanetary magnetic field from 16 UT of April 24 to 08 UT of April 25 was associated with disturbed geomagnetic conditions.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was below threshold level April 24, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** April-26-12 11:23 AM

**Subject:** Space Weather Bulletin - 2012-04-26

Space Weather Bulletin – April 26, 2012 issued by the Canadian Space Weather Forecast Centre at 15:20 UT (11:20 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect. A major storm watch was issued for the auroral zone earlier from 04 UT to 06 UT on April 26, 2012.

See our website for current information: <http://www.spaceweather.gc.ca> <<http://www.spaceweather.gc.ca/>>

Geomagnetic Activity:

Current conditions

polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: active with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled with active intervals

Space Environment:

Current conditions  
energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: moderate

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DETAILED INFORMATION:

SOLAR:

Solar activity has been very low. A coronal hole is located near the center of the solar disk.

INTERPLANETARY:

The solar wind speed has been decreasing from a high of ~700 km/s during the late hours of April 25 to the current 570 km/s.

The interplanetary magnetic field has been fluctuating at low levels.

The high-speed solar wind stream bore the signatures of one emanating from a coronal hole, and caused disturbed geomagnetic conditions that triggered the storm watch for the auroral zone mentioned above.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was above threshold level April 25, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** April-27-12 10:21 AM

**Subject:** Space Weather Bulletin - 2012-04-27

Space Weather Bulletin – April 27, 2012 issued by the Canadian Space Weather Forecast Centre at 14:20 UT (10:20 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet with active intervals

Space Environment:

Current conditions  
energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: moderate

---

DETAILED INFORMATION:

SOLAR:

Solar activity has been low. A coronal hole is located at the center of the solar disk.

INTERPLANETARY:

The solar wind speed is currently slow at ~ 400 km/s.  
The interplanetary magnetic field has been fluctuating at very low levels.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was above threshold level April 26, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** April-28-12 1:08 PM

**Subject:** Space Weather Bulletin - 2012-04-28

Space Weather Bulletin – April 28, 2012 issued by the Canadian Space Weather Forecast Centre at 17:05 UT (13:05 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.  
See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions  
polar cap zone: unsettled  
auroral zone: unsettled  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: quiet with active intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

Space Environment:

Current conditions  
energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: moderate

---

DETAILED INFORMATION:

SOLAR:

Solar activity has been low. A coronal hole is located near the center of the solar disk.

INTERPLANETARY:

The solar wind speed is currently slow at ~ 400 km/s.  
The interplanetary magnetic field has been fluctuating at very low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level April 27, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** April-29-12 2:26 PM

**Subject:** Space Weather Bulletin - 2012-04-29

Space Weather Bulletin – April 29, 2012 issued by the Canadian Space Weather Forecast Centre at 18:25 UT (14:25 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow at ~ 400 km/s.

The interplanetary magnetic field has been fluctuating at very low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level April 28, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** April-30-12 10:16 AM  
**Subject:** Space Weather Bulletin - 2012-04-30

Space Weather Bulletin – April 30 , 2012 issued by the Canadian Space Weather Forecast Centre at 14:05 UT ( 10:05 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

**Current conditions**

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

**24 hour forecast**

polar cap zone: quiet with unsettled intervals

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

**Current conditions**

energetic electron fluence at geostationary orbit: high

**24 hour forecast**

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow at ~ 300 km/s.

The interplanetary magnetic field has been at very low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level April 29, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** May-01-12 11:04 AM  
**Subject:** Space Weather Bulletin – 2012-05-01

Space Weather Bulletin – May 1, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

---

**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

Interplanetary activity has been (very low / low / moderate / high / very high).<sup>1</sup>

The solar wind speed is currently very slow <400 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT levels).

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level April 30, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** May-02-12 10:14 AM

**Subject:** Space Weather Bulletin – 2012-05-02

Space Weather Bulletin – May 2, 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast  
polar cap zone: quiet with unsettled intervals  
auroral zone: quiet  
sub-auroral zone: quiet  
**Space Environment:**  
Current conditions  
energetic electron fluence at geostationary orbit: High  
24 hour forecast  
energetic electron fluence at geostationary orbit: High

---

**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

Interplanetary activity has been low.

The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 1, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** May-03-12 10:22 AM

**Subject:** Space Weather Bulletin – 2012-05-03

Space Weather Bulletin – May 3, 2012 issued by the Canadian Space Weather Forecast Centre at 14:15 UT (10:15 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: High

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

Interplanetary activity has been low.

The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 2, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** May-04-12 10:33 AM

**Subject:** Space Weather Bulletin – 2012-05-04

Space Weather Bulletin – May 4, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

Interplanetary activity has been low.

The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 3, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet with unsettled interval in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** May-05-12 10:12 AM

**Subject:** Space Weather Bulletin – 2012-05-05

Space Weather Bulletin – May 5, 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Low

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

Interplanetary activity has been low.

The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been at moderate ( $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 4, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** May-06-12 9:37 AM  
**Subject:** Space Weather Bulletin – 2012-05-06

Space Weather Bulletin – May 6, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (8:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.  
See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: unsettled  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Low

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate.

**INTERPLANETARY:**

Interplanetary activity has been low.

The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT).

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 5, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** May-07-12 10:28 AM  
**Subject:** Space Weather Bulletin – 2012-05-07

Space Weather Bulletin – May 7, 2012 issued by the Canadian Space Weather Forecast Centre at 14:15 UT (10:15 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

Interplanetary activity has been low.

The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT)

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 6, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** May-08-12 10:27 AM

**Subject:** Space Weather Bulletin – 2012-05-08

Space Weather Bulletin – May 8, 2012 issued by the Canadian Space Weather Forecast Centre at 14:15 UT (10:15 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: quiet  
sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate.

A non-Earth-directed CME erupted yesterday. A coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

Interplanetary activity has been moderate.

The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been at moderate ( $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 7, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** May-09-12 10:46 AM

**Subject:** Space Weather Bulletin – 2012-05-09

Space Weather Bulletin – May 9, 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

Disturbed geomagnetic conditions due to solar activity are expected today.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active

auroral zone: stormy

sub-auroral zone: unsettled

24 hour forecast

polar cap zone: active with stormy intervals

auroral zone: active

sub-auroral zone: unsettled

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate.

A coronal hole is located near the centre of the solar disk. 2 M (medium) X-ray flares have erupted over the past 24 hours. Two non-Earth-directed CME erupted yesterday.

**INTERPLANETARY:**

Interplanetary activity has been moderate.

The solar wind speed is currently moderate (500-700 km/s) . Moderate solar wind speeds are due to high speed streams from the coronal hole. The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 8, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and active with stormy intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, active in the auroral zone, and unsettled in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** May-10-12 10:33 AM

**Subject:** Space Weather Bulletin – 2012-05-10

Space Weather Bulletin – May 10, 2012 issued by the Canadian Space Weather Forecast Centre at 14:15 UT (10:15 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: active

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: active with stormy intervals

sub-auroral zone: unsettled

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Low

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

---

**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate.

A coronal hole is located near the centre of the solar disk. A M (medium) X-ray flare erupted at May 9, 2012 4:17 UT near the centre of the solar disk.

**INTERPLANETARY:**

Interplanetary activity has been moderate.

The solar wind speed is currently moderate (500-700 km/s). Moderate solar wind speeds are due to high speed streams from the coronal hole. The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 9, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** May-11-12 10:19 AM

**Subject:** Space Weather Bulletin – 2012-05-11

Space Weather Bulletin – May 11, 2012 issued by the Canadian Space Weather Forecast Centre at 14:15 UT (10:15 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: active with stormy intervals

sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

---

**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate.

A coronal hole is located near the centre of the solar disk. The active region located near the central region of the solar disk has produced X-ray flares and has the potential to produce subsequent solar eruptions.

**INTERPLANETARY:**

Interplanetary activity has been moderate.

The solar wind speed is currently moderate (500-700 km/s). Moderate solar wind speeds are due to high speed streams from the coronal hole. The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was at threshold level May 10, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, active with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** May-12-12 11:08 AM

**Subject:** Space Weather Bulletin – 2012-05-12

Space Weather Bulletin – May 12, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

---

**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active

auroral zone: unsettled

sub-auroral zone: unsettled

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

A coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

Interplanetary activity has been moderate.

The solar wind speed is currently moderate (500-700 km/s). Moderate solar wind speeds are due to high speed streams from coronal holes. The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 11, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** May-13-12 9:15 AM  
**Subject:** Space Weather Bulletin – 2012-05-13

Space Weather Bulletin – May 13, 2012 issued by the Canadian Space Weather Forecast Centre at 13:00 UT (9:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: active

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: unsettled with stormy intervals

sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: High

24 hour forecast

energetic electron fluence at geostationary orbit: High

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

A coronal hole is located near the centre of the solar disk. The active region located near the central region of the solar disk has produced X-ray solar flare and has the potential to produce subsequent solar eruptions.

**INTERPLANETARY:**

Interplanetary activity has been low.

The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 12, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** May-14-12 9:51 AM  
**Subject:** Space Weather Bulletin – 2012-05-14

Space Weather Bulletin – May 14, 2012 issued by the Canadian Space Weather Forecast Centre at 13:45 UT (9:45 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: High

24 hour forecast

energetic electron fluence at geostationary orbit: High

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

Interplanetary activity has been low.

The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been at low  $|B_z| < 5$  nT levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 13, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** May-15-12 10:25 AM

**Subject:** Space Weather Bulletin – 2012-05-15

Space Weather Bulletin – May 15, 2012 issued by the Canadian Space Weather Forecast Centre at 14:25 UT (10:25 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: quiet with active intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~380 km/s).  
The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 14, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** May-16-12 8:57 AM

**Subject:** Space Weather Bulletin – 2012-05-16

Space Weather Bulletin – May 16, 2012 issued by the Canadian Space Weather Forecast Centre at 12:55 UT (08:55 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: quiet with active intervals  
auroral zone: quiet  
sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: normal  
24 hour forecast  
energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~400 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 15, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet with unsettled intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** May-17-12 9:47 AM

**Subject:** Space Weather Bulletin - 2012-05-17

Space Weather Bulletin – May 17, 2012 issued by the Canadian Space Weather Forecast Centre at 13:45 UT (09:45 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect. Possibility of polar cap absorption in the polar zone because of an M flare erupted earlier today.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: unsettled

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been moderate. AM5 (medium) flare erupted at 0125 UT on May 17, 2012 from a departing active region. Energetic protons are observed following the flare.

**INTERPLANETARY:**

The solar wind speed is currently slow (~350 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 16, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with active in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, unsettled in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** May-18-12 10:59 AM

**Subject:** Space Weather Bulletin - 2012-05-18

Space Weather Bulletin – May 18, 2012 issued by the Canadian Space Weather Forecast Centre at 14:55 UT (10:55 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect. A CME, propelled by yesterday's M5 flare, was observed. Though the CME was primarily directed west, there is a small chance of a glancing impact from this event today or tomorrow, with a slight possibility in causing some disturbed geomagnetic conditions.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. A coronal hole is located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (~400 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 17, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** May-19-12 1:09 PM  
**Subject:** Space Weather Bulletin - 2012-05-19

Space Weather Bulletin – May 19, 2012 issued by the Canadian Space Weather Forecast Centre at 17:05 UT (13:05 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. A coronal hole is located at the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (~380 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 18, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** May-20-12 1:57 PM  
**Subject:** Space Weather Bulletin - 2012-05-20

Space Weather Bulletin – May 20, 2012 issued by the Canadian Space Weather Forecast Centre at 17:55 UT (13:55 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low. A coronal hole is located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (~390 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 19, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** May-21-12 1:33 PM

**Subject:** Space Weather Bulletin - 2012-05-21

Space Weather Bulletin – May 21, 2012 issued by the Canadian Space Weather Forecast Centre at 17:30 UT (13:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast  
polar cap zone: quiet with unsettled intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: normal  
24 hour forecast  
energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low. A coronal hole is located near the center of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently very slow (~340 km/s).  
The interplanetary magnetic field has been fluctuating at very low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 20, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** May-22-12 10:22 AM

**Subject:** Space Weather Bulletin - 2012-05-22

Space Weather Bulletin – May 22, 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: stormy  
auroral zone: active  
sub-auroral zone: active

24 hour forecast  
polar cap zone: unsettled with stormy intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: normal  
24 hour forecast  
energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**



**SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently very slow (~400 km/s).

The interplanetary magnetic field has been fluctuating at moderate levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 21, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** May-23-12 10:00 AM

**Subject:** Space Weather Bulletin - 2012-05-23

Space Weather Bulletin – May 23, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (09:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: active with stormy intervals

sub-auroral zone: unsettled

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently moderate (~600 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 22, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** May-24-12 9:55 AM

**Subject:** Space Weather Bulletin - 2012-05-24

Space Weather Bulletin – May 24, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (09:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently very slow (~500 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 23, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** May-25-12 10:06 AM  
**Subject:** Space Weather Bulletin - 2012-05-25

Space Weather Bulletin – May 25, 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: active

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~450 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 24, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** May-26-12 9:54 AM  
**Subject:** Space Weather Bulletin - 2012-05-26

Space Weather Bulletin – May 26, 2012 issued by the Canadian Space Weather Forecast Centre at 13:45 UT (09:45 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~400 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 25, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** May-27-12 11:12 AM

**Subject:** Space Weather Bulletin - 2012-05-27

Space Weather Bulletin – May 27, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: normal

---

**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently very slow (~360 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 26, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** May-28-12 10:04 AM

**Subject:** Space Weather Bulletin - 2012-05-28

Space Weather Bulletin – May 28, 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently very slow (~350 km/s).  
The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 27, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** May-29-12 10:00 AM

**Subject:** Space Weather Bulletin - 2012-05-29

Space Weather Bulletin – May 29, 2012 issued by the Canadian Space Weather Forecast Centre at 13:50 UT (09:50 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~400 km/s).

The interplanetary magnetic field has been fluctuating at moderate levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 28, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** May-30-12 9:47 AM  
**Subject:** Space Weather Bulletin - 2012-05-30

Space Weather Bulletin – May 30, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (09:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active  
auroral zone: unsettled  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: unsettled  
sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently slow (~430 km/s).

The interplanetary magnetic field has been fluctuating at moderate levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level May 29, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** May-31-12 9:30 AM  
**Subject:** Space Weather Bulletin - 2012-05-31

Space Weather Bulletin – May 31, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (09:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently very slow (~390 km/s).

The interplanetary magnetic field has been fluctuating at very low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 30, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** June-01-12 11:15 AM

**Subject:** Space Weather Bulletin - 2012-06-01

Space Weather Bulletin – June 01, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet



sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: unsettled with stormy intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: normal  
24 hour forecast  
energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently very slow (~360 km/s).  
The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level May 31, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** June-02-12 10:15 AM

**Subject:**

Space Weather Bulletin – June 02, 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast  
polar cap zone: unsettled with active intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: normal  
24 hour forecast  
energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently very slow (~340 km/s).

The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 01, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** June-03-12 10:24 AM

**Subject:** Space Weather Bulletin - 2012-06-03

Space Weather Bulletin – June 03, 2012 issued by the Canadian Space Weather Forecast Centre at 14:15 UT (10:15 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: active

sub-auroral zone: unsettled

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently very slow (~350 km/s).

The interplanetary magnetic field has been fluctuating at high levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 02, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** June-04-12 9:49 AM

**Subject:** Space Weather Bulletin - 2012-06-04

Space Weather Bulletin – June 04, 2012 issued by the Canadian Space Weather Forecast Centre at 13:15 UT (09:15 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: stormy

auroral zone: unsettled

sub-auroral zone: unsettled

24 hour forecast

polar cap zone: active with stormy intervals

auroral zone: active with stormy intervals

sub-auroral zone: unsettled

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: normal

---

**DETAILED INFORMATION:****SOLAR:**

Solar activity has been very low.

**INTERPLANETARY:**

The solar wind speed is currently moderate (~550 km/s).

The interplanetary magnetic field has been fluctuating at high levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 03, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** June-05-12 10:43 AM  
**Subject:** Space Weather Bulletin – 2012-06-05

Space Weather Bulletin – June 05, 2012 issued by the Canadian Space Weather Forecast Centre at 15:40 UT (10:40 EST)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

Stormy conditions are currently observed in the polar and auroral zones.  
There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active with stormy intervals  
auroral zone: unsettled with stormy intervals  
sub-auroral zone: unsettled with stormy intervals

24 hour forecast

polar cap zone: active with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

---

**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently moderate (500-700 km/s).

The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 04, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** June-06-12 9:40 AM  
**Subject:** Space Weather Bulletin – 2012-06-06

Space Weather Bulletin – June 06, 2012 issued by the Canadian Space Weather Forecast Centre at 13:45 UT (09:45 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active

auroral zone: active

sub-auroral zone: unsettled

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: active with stormy intervals

sub-auroral zone: unsettled

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been low.

One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently moderate (500-700 km/s).

The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was at threshold level June 05, 2012 and is expected to be at threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** June-07-12 8:36 AM

**Subject:** Space Weather Bulletin – 2012-06-07

Space Weather Bulletin – June 07, 2012 issued by the Canadian Space Weather Forecast Centre at 12:35 UT (08:35 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

A medium flare has erupted over the past 24 hours. A CME may be associated with this flare.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: unsettled with stormy intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: High

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

A coronal hole is located near the edge of the solar disk.

An M (medium) flare erupted at June 06, 2012 20:00 UT near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently moderate (500-700 km/s).

Moderate solar wind speeds are due to high speed streams from coronal holes.

The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level June 06, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** June-08-12 10:04 AM

**Subject:** Space Weather Bulletin – 2012-06-08

Space Weather Bulletin – June 08, 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate. The active region located near the central region of the solar disk has produced solar flares and associated CMEs and has the potential to produce subsequent solar eruptions. A CME was observed June 06, 2012, and is expected to deliver a glancing blow to the Earth on June 10-12, 2011, resulting in unsettled to active geomagnetic activity. One coronal hole is located near the centre of the solar disk. One coronal hole is located near the edge of the solar disk. Several C (low) flares have erupted over the past 24 hours.

**INTERPLANETARY:**

The solar wind speed is currently moderate (500-700 km/s).

The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level June 07, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [<mailto:Robyn.Fiori@NRCan-RNCan.gc.ca>]

**Sent:** June-09-12 7:43 AM

**Subject:** Space Weather Bulletin - 2012-06-09

Space Weather Bulletin – June 09, 2012 issued by the Canadian Space Weather Forecast Centre at 11:45 UT (07:45 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: quiet with active intervals

sub-auroral zone: quiet with unsettled intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. A CME was observed June 06, 2012, and is expected to deliver a glancing blow to the Earth on June 10, 2011, resulting in unsettled to active geomagnetic activity. A CME was observed June 08, 2012, and is expected to deliver a glancing blow to the Earth on June 12, 2011, resulting in unsettled to active geomagnetic activity.

**INTERPLANETARY:**

The solar wind speed is currently slow (400-500 km/s).

The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 08, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [<mailto:Robyn.Fiori@NRCan-RNCan.gc.ca>]

**Sent:** June-10-12 8:17 AM

**Subject:** Space Weather Bulletin - 2012-06-10

Space Weather Bulletin – June 10, 2011 issued by the Canadian Space Weather Forecast Centre at 12:15 UT (08:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

Three medium flares have erupted over the past 24 hours.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

**Current conditions**

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

**24 hour forecast**

polar cap zone: quiet with active intervals

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

**Current conditions**

energetic electron fluence at geostationary orbit: moderate

**24 hour forecast**

energetic electron fluence at geostationary orbit: moderate

**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate.

Two CMEs were observed June 06-08, 2012, and may deliver a glancing blow to the Earth June 10-12, 2011, resulting in unsettled to active geomagnetic activity.

Two coronal holes are located near the centre of the solar disk.

Three M (medium) flares have erupted over the past 24 hours.

**INTERPLANETARY:**



Interplanetary activity has been low.  
The solar wind speed is currently slow (400-500 km/s).  
The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT levels).

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 09, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** June-11-12 8:23 AM

**Subject:** Space Weather Bulletin – 2012-06-11

Space Weather Bulletin – June 11, 2012 issued by the Canadian Space Weather Forecast Centre at 12:25 UT (08:25 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

A medium flare has erupted over the past 24 hours.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: active  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: high

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. Two coronal holes are located near the centre of the solar disk. An M (medium) flare erupted at June 10, 2012 06:46 UT.

**INTERPLANETARY:**

The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been primarily negative at low ( $2 < |B_z| < 5$  nT). Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity. Data about interplanetary conditions are currently unavailable.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level June 10, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** June-12-12 9:27 AM

**Subject:** Space Weather Bulletin – 2012-06-12

Space Weather Bulletin – June 23, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (09:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: active with stormy intervals

sub-auroral zone: unsettled

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been very low. Two coronal holes are located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was at threshold level June 11, 2012 and is expected to be below threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** June-13-12 9:55 AM  
**Subject:** Space Weather Bulletin – 2012-06-13

Space Weather Bulletin – June 13, 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: high

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. A non-Earth-directed CME erupted at June 12, 2012 05:24 UT. Two coronal holes are located near the edge of the solar disk.

**INTERPLANETARY:**

Interplanetary activity has been very low.

The solar wind speed is currently very slow (<400 km/s).

The interplanetary magnetic field has been primarily positive at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 12, 2012 and is expected to be above threshold level today.

Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** June-14-12 7:33 AM  
**Subject:** Space Weather Bulletin – 2012-06-14

Space Weather Bulletin – June 14, 2012 issued by the Canadian Space Weather Forecast Centre at 11:30 UT (07:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

A medium long duration flare has erupted over the past 24 hours.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: moderate

24 hour forecast

energetic electron fluence at geostationary orbit: normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been moderate. A CME was observed June 13, 2012, and is expected to deliver a glancing blow to the Earth on June 16, 2012, resulting in unsettled to active geomagnetic activity.

Two coronal holes are located near the edge of the solar disk. A long duration M (medium) flare erupted at June 13, 2012 13:18 UT near the centre of the solar disk.

**INTERPLANETARY:**

Interplanetary activity has been very low. The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was at threshold level June 13, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, unsettled in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** June-15-12 9:40 AM

**Subject:** Space Weather Bulletin – 2012-06-15

Space Weather Bulletin – June 15, 2012 issued by the Canadian Space Weather Forecast Centre at 13:40 UT (09:40 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect. A medium long duration flare has erupted over the past 24 hours. CME may be associated with this flare. Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between June 16, 2012 and June 17, 2012. Possibility of impacts to ground systems, aeromagnetic surveys, radio systems, satellites. See list of impacts (below). See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: quiet with unsettled intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Space Environment:**

Current conditions  
energetic electron fluence at geostationary orbit: moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been moderate. A CME was observed June 14, 2012, and is expected to deliver a glancing blow to the Earth on June 16-17, 2012, resulting in unsettled to active geomagnetic activity. A long duration M (medium) flare erupted at June 14, 2012 14:36 UT near the centre of the solar disk.

**INTERPLANETARY:**

Interplanetary activity has been very low. The solar wind speed is currently very slow <400 km/s. The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was at threshold level June 14, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** June-16-12 7:44 AM

**Subject:** Space Weather Bulletin – 2012-06-16

Space Weather Bulletin – June 23, 2011 issued by the Canadian Space Weather Forecast Centre at 11:45 UT (07:45 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect. Disturbed geomagnetic conditions due to solar activity are expected today. Possibility of impacts to ground systems, aeromagnetic surveys, radio systems, satellites. See list of impacts (below). See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions  
polar cap zone: active  
auroral zone: unsettled  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: active with stormy intervals  
auroral zone: unsettled with stormy intervals  
sub-auroral zone: quiet with stormy intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been low. A CME was observed June 14, 2012, and is expected to deliver a glancing blow to the Earth on June 16-17, 2012, resulting in unsettled to active geomagnetic activity.

**INTERPLANETARY:**

The solar wind speed is currently very slow (<400 km/s). The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was at threshold level June 15, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]**Sent:** June-16-12 7:43 PM**Subject:** Space Weather Bulletin – 2012-06-16 - UPDATE

Space Weather Bulletin – June 16, 2012 issued by the Canadian Space Weather Forecast Centre at 23:45 UT (19:45 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

Major storm conditions are currently observed in the polar cap zone. Stormy conditions are currently observed in the auroral and sub-auroral zones. Possibility of impacts to ground systems, aeromagnetic surveys, radio systems, and satellites. See list of impacts (below). See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: major storm

auroral zone: stormy

sub-auroral zone: stormy

24 hour forecast

polar cap zone: stormy

auroral zone: unsettled with active intervals

sub-auroral zone: unsettled with stormy intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

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**DETAILED INFORMATION:****SOLAR:**

A CME was observed June 14, 2011, and is expected to deliver a glancing blow to the Earth on June 16-17, 2011, resulting in unsettled to active geomagnetic activity.

**INTERPLANETARY:**

The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been primarily positive at very high ( $|B_z| > 20$  nT) levels. An interplanetary shock has been observed at 08:58 UT, 19:29 UT, and 20:30 UT June 16, 2012.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with major storm intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active in the subauroral zone. Activity is forecast to be stormy in the polar zone, unsettled with active intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Geomagnetic sudden impulse due to a shock in the solar wind was observed June 16, 2012 09:57 UT, 20:19, 21:15 UT. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** June-17-12 8:52 AM

**Subject:** Space Weather Bulletin – 2012-06-17

Space Weather Bulletin – June 17, 2012 issued by the Canadian Space Weather Forecast Centre at 12:50 UT (08:50 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

A major storm watch is currently in effect for the auroral zone. Stormy conditions are currently observed in the auroral and sub-auroral zone. Possibility of impacts to ground systems, aeromagnetic surveys, radio systems, and satellites. See list of impacts (below). Major storm watch is anticipated to end at 14:47 UT. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active

auroral zone: stormy

sub-auroral zone: stormy

24 hour forecast

polar cap zone: stormy

auroral zone: stormy with major storm watch

sub-auroral zone: active with stormy intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: normal

24 hour forecast

energetic electron fluence at geostationary orbit: moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. Two coronal holes are located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently (very slow <400 km/s). The interplanetary magnetic field has been fluctuating at very high ( $|B_z| > 20$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 16, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been stormy with major storm intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be stormy in the polar zone, stormy with major storm watch in the auroral zone, and active with stormy intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** June-17-12 1:08 PM  
**Subject:** Space Weather Bulletin – 2012-06-17 - UPDATE

Space Weather Bulletin – June 17, 2012 issued by the Canadian Space Weather Forecast Centre at 17:15 UT (13:15 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect. See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active  
auroral zone: active  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: stormy  
auroral zone: stormy  
sub-auroral zone: active

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** June-18-12 9:01 AM  
**Subject:** Space Weather Bulletin – 2012-06-18

Space Weather Bulletin – June 18, 2012 issued by the Canadian Space Weather Forecast Centre at 13:00 UT (09:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled with active intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate



24 hour forecast  
energetic electron fluence at geostationary orbit: Very High

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. Two coronal holes are located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been primarily negative at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 17, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, active with major storm intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** June-18-12 11:26 AM

**Subject:** Space Weather Bulletin – 2012-06-18

Space Weather Bulletin – June 18, 2012 issued by the Canadian Space Weather Forecast Centre at 13:00 UT (09:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: active with stormy intervals

sub-auroral zone: unsettled with active intervals

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Very High

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. Two coronal holes are located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been primarily negative at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 17, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, active with major storm intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** June-19-12 12:30 PM

**Subject:** Space Weather Bulletin – 2012-06-19

Space Weather Bulletin – June 19, 2012 issued by the Canadian Space Weather Forecast Centre at 17:00 UT (12:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: High

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. Two coronal holes are located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been primarily negative at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level June 18, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** June-20-12 12:00 PM  
**Subject:** Space Weather Bulletin – 2012-06-20

Space Weather Bulletin – June 20, 2012 issued by the Canadian Space Weather Forecast Centre at 16:00 UT (12:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

polar cap zone: active

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. Two coronal holes are located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (300- 400 km/s). The interplanetary magnetic field has been primarily negative at very low ( $|B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level June 19, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** June-21-12 1:09 PM  
**Subject:** Space Weather Bulletin – 2012-06-21

Space Weather Bulletin – June 21 , 2012 issued by the Canadian Space Weather Forecast Centre at 17:00 UT (13:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions

- polar cap zone: active
- auroral zone: quiet
- sub-auroral zone: quiet

24 hour forecast

- polar cap zone: unsettled with active intervals
- auroral zone: quiet
- sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:****SOLAR:**

Solar activity has been low. One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**The solar wind speed is currently slow (300- 400 km/s). The interplanetary magnetic field has been primarily negative at very low ( $|B_z| < 5$  nT) levels.**NEAR-EARTH ENVIRONMENT:**Energetic electron fluence at geostationary orbit was above threshold level June 20, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.**GEOMAGNETIC:**Geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]**Sent:** June-22-12 10:00 AM**Subject:** Space Weather Bulletin – 2012-06-22

Space Weather Bulletin – June 22, 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>**Geomagnetic Activity:**

Current conditions at 13:45 UT

- polar cap zone: unsettled
- auroral zone: active
- sub-auroral zone: quiet

24 hour forecast

- polar cap zone: unsettled with stormy intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast  
energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. Two coronal holes are located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (300- 400 km/s). The interplanetary magnetic field has been primarily negative at very low ( $|B_z| < 5$  nT ) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level June 21, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** June-23-12 10:43 AM

**Subject:** Space Weather Bulletin – 2012-06-23

Space Weather Bulletin – June 23, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions at 14:00 UT

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: quiet intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (400- 500 km/s). The interplanetary magnetic field has been primarily negative at very low ( $|B_z| < 5$  nT ) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level June 22, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** June-24-12 9:13 AM

**Subject:** Space Weather Bulletin – 2012-06-24

Space Weather Bulletin – June 24, 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (09:30 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions at 13:00 UT

polar cap zone: active

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: quiet intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (400- 500 km/s). The interplanetary magnetic field has been primarily negative at very low ( $|B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level June 23, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** June-25-12 11:14 AM  
**Subject:** Space Weather Bulletin – 2012-06-25

Space Weather Bulletin – June 25, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions at 15:00 UT

polar cap zone: unsettled

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Space Environment:**

Current conditions (estimated)

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low.

**INTERPLANETARY:**

The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was above threshold level June 24, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** June-26-12 10:45 AM  
**Subject:** Space Weather Bulletin – 2012-06-26

Space Weather Bulletin – June 26, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions at 14:30 UT

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

Space Environment:

Current conditions (estimated)

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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DETAILED INFORMATION:

SOLAR:

Solar activity has been low.

INTERPLANETARY:

The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was below threshold level June 25, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** June-27-12 10:50 AM

**Subject:** Space Weather Bulletin – 2012-06-27

Space Weather Bulletin – June 27, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions at 15:00 UT

polar cap zone: unsettled

auroral zone: stormy

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet



Space Environment:

Current conditions (estimated)  
energetic electron fluence at geostationary orbit: Normal  
24 hour forecast  
energetic electron fluence at geostationary orbit: Normal

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DETAILED INFORMATION:

SOLAR:

Solar activity has been low.

INTERPLANETARY:

The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was below threshold level June 26, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** June-28-12 10:56 AM

**Subject:** Space Weather Bulletin – 2012-06-28

Space Weather Bulletin – June 28, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Conditions at 14:45 UT

polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

Space Environment:

Current conditions (estimated)  
energetic electron fluence at geostationary orbit: Normal  
24 hour forecast  
energetic electron fluence at geostationary orbit: Normal

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DETAILED INFORMATION:

SOLAR:

Solar activity has been low. One coronal hole is located near the centre of the solar disk.

INTERPLANETARY:

The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 27, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** June-29-12 12:10 PM

**Subject:** Space Weather Bulletin – 2012-06-29

Space Weather Bulletin – June 29, 2012 issued by the Canadian Space Weather Forecast Centre at 16:00 UT (12:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Conditions at 16:00 UT

polar cap zone: active

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: quiet

sub-auroral zone: quiet

**Space Environment:**

Current conditions (estimated)

energetic electron fluence at geostationary orbit: Normal

24 hour forecast

energetic electron fluence at geostationary orbit: Normal

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed is currently slow (400-500 km/s). The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 28, 2012 and is expected to be below threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Activity is forecast to be unsettled with stormy intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** June-30-12 10:56 AM  
**Subject:** Space Weather Bulletin – 2012-06-30

Space Weather Bulletin – June 30, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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**OVERVIEW:**

There is currently no major storm watch in effect. Stormy conditions are possible in the polar cap and auroral zone within the next 24 hours due to high speed streams from coronal holes observed earlier.

See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Conditions at 15:00 UT

polar cap zone: stormy

auroral zone: stormy

sub-auroral zone: active

24 hour forecast

polar cap zone: active with stormy intervals

auroral zone: active

sub-auroral zone: unsettled

**Space Environment:**

Current conditions (estimated)

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

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**DETAILED INFORMATION:**

**SOLAR:**

Solar activity has been low. One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

The solar wind speed has been increasing over the last 7 hours (currently ~ 700 km/s).

The interplanetary magnetic field has been fluctuating at moderate ( $|Bz| < 10$  nT) levels.

Increasing solar wind speed and magnetic field fluctuations are due to high speed streams from coronal holes observed earlier.

**NEAR-EARTH ENVIRONMENT:**

Energetic electron fluence at geostationary orbit was below threshold level June 29, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

Geomagnetic activity has been active with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, active in the auroral zone, and unsettled in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]  
**Sent:** July-01-12 10:53 AM  
**Subject:** Space Weather Bulletin – 2012-07-01

Space Weather Bulletin – July 01, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect.

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Conditions at 15:00 UT

polar cap zone: stormy

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: active with stormy intervals

auroral zone: active with stormy intervals

sub-auroral zone: unsettled with active intervals

Space Environment:

Current conditions (estimated)

energetic electron fluence at geostationary orbit: Moderate

24 hour forecast

energetic electron fluence at geostationary orbit: Moderate

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DETAILED INFORMATION:

SOLAR:

Solar activity has been low. One coronal hole is located near the centre of the solar disk.

INTERPLANETARY:

The solar wind speed is currently moderate (700 km/s).

The interplanetary magnetic field has been fluctuating at moderate ( $|B_z| < 10$  nT) levels.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was below threshold level June 30, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been stormy with major storm intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** July-02-12 10:38 AM

**Subject:** Space Weather Bulletin – 2012-07-02

Space Weather Bulletin – July 02, 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will be produced in both official languages.\*

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OVERVIEW:

There is currently no major storm watch in effect. Two medium solar x-ray flares have erupted over the past 24 hours. CMEs may be associated with these flares.

Polar cap absorption event is possible in the polar zone

See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Conditions at 15:00 UT

polar cap zone: active  
auroral zone: active  
sub-auroral zone: unsettled  
24 hour forecast  
polar cap zone: active with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled with active intervals

Space Environment:

Current conditions (estimated)  
energetic electron fluence at geostationary orbit: Moderate  
24 hour forecast  
energetic electron fluence at geostationary orbit: Moderate

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DETAILED INFORMATION:

SOLAR:

Solar activity has been moderate. There are several active regions visible on the solar disk. Two M solar x-ray flares have erupted over the past 24 hours. One coronal hole is located near the centre of the solar disk.

INTERPLANETARY:

The solar wind speed is currently moderate (650 km/s).  
The interplanetary magnetic field has been fluctuating at low ( $|Bz| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

Energetic electron fluence at geostationary orbit was above threshold level July 01, 2012 and is expected to be above threshold level today. Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

Geomagnetic activity has been active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Activity is forecast to be active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** July-03-12 11:52 AM

**Subject:** Space Weather Bulletin – 2012-07-03

Space Weather Bulletin – 03 July 2012 issued by the Canadian Space Weather Forecast Centre at 15:45 UT (11:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 15:45 UT)  
polar cap zone: Unsettled  
auroral zone: Unsettled  
sub-auroral zone: Quiet

24 hour forecast

polar cap zone: Unsettled with stormy intervals  
auroral zone: Active  
sub-auroral zone: Quiet with unsettled intervals

**Near-Earth Environment:**

Current conditions (estimate / at 15:45 UT)  
energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast  
energetic electron fluence at geostationary orbit: Moderate

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.
- The active region located near the central region of the solar disk has produced solar x-ray flare(s) and has the potential to produce subsequent solar eruptions.
- A CME erupted on 2 July 2012 at 8:36 UT. It is not yet known if the CME will impact the Earth.

**INTERPLANETARY:**

- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The interplanetary magnetic field currently has  $B_z = (+/-)5$  nT.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at levels 2 July 2012 and is expected to be at moderate levels today.
- The 5-minute integral energetic electron flux is currently high.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been Active with stormy intervals in the polar zone, Active with stormy intervals in the auroral zone, and Quiet with unsettled intervals in the subauroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be Unsettled with stormy intervals in the polar zone, Active in the auroral zone, and Quiet with unsettled intervals in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** July-04-12 9:16 AM

**Subject:** Space Weather Bulletin – 2012-07-04

Space Weather Bulletin – 04 July 2012 issued by the Canadian Space Weather Forecast Centre at 13:15 UT ( 09:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity :**

Current conditions (at 13:15 UT)

polar cap zone: Active  
auroral zone: Unsettled  
sub-auroral zone: Unsettled

24 hour forecast

polar cap zone: Unsettled with stormy intervals  
auroral zone: Unsettled with active intervals  
sub-auroral zone: Quiet with unsettled intervals

**Near-Earth Environment:**

Current conditions (estimate / at 13:15 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Moderate

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.

- The active region located near the central region of the solar disk has produced solar x-ray flare(s) and has the potential to produce subsequent solar eruptions.
- A non Earth-directed CME erupted on 2 July 2012 at 08:36 UT

**INTERPLANETARY:**

- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The interplanetary magnetic field currently has  $B_z=(+/-)5$  nT.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 3 July 2012 and is expected to be at moderate levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been Active with Stormy intervals in the polar zone, Active with Stormy intervals in the auroral zone, and Quiet with Active intervals in the subauroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be Unsettled with Stormy intervals in the polar zone, Active in the auroral zone, and Quiet with Unsettled intervals in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** July-05-12 11:48 AM

**Subject:** Space Weather Bulletin – 2012-07-05

Space Weather Bulletin – 05 July 2012 issued by the Canadian Space Weather Forecast Centre at 15:45 UT ( 11:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity :**

Current conditions (at 15:45 UT)

polar cap zone: Stormy  
auroral zone: Unsettled  
sub-auroral zone: Unsettled

24 hour forecast

polar cap zone: Unsettled with stormy intervals  
auroral zone: Quiet with unsettled intervals  
sub-auroral zone: Quiet with unsettled intervals

**Near-Earth Environment:**

Current conditions (estimate / at 15:45 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been high.
- The active regions located near the central region of the solar disk has produced solar x-ray flare(s) and has the potential to produce subsequent solar eruptions.

**INTERPLANETARY:**

- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 4 July 2012 and is expected to be at normal levels today.
- The 5-minute integral electron flux is currently high.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been Unsettled with Stormy intervals in the polar zone, Quiet with Active intervals in the auroral zone, and Quiet with Unsettled intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be Unsettled with Stormy intervals in the polar zone, Quiet with Unsettled intervals in the auroral zone, and Quiet with Unsettled intervals in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** July-06-12 9:59 AM

**Subject:** Space Weather Bulletin – 2012-07-06

Space Weather Bulletin – 06 July 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT ( 10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 7 July 2012 and 8 July 2012.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity :**

Current conditions (at 14:00 UT)

polar cap zone: Stormy  
auroral zone: Unsettled  
sub-auroral zone: Unsettled

24 hour forecast

polar cap zone: Active with stormy intervals  
auroral zone: Unsettled  
sub-auroral zone: Quiet with unsettled intervals

**Near-Earth Environment:**

Current conditions (estimate / at 14:00 UT)

electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been high.
- A CME was observed on 4 July 2012 and is expected to deliver a glancing blow to the Earth on 7-8 July 2012, resulting in unsettled to active geomagnetic conditions.

**INTERPLANETARY:**

- The solar wind speed is currently low ( 400- 500 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (  $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 5 July 2012 and is expected to be at normal levels today.
- The 5-minute integral electron flux is currently high.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.



## GEOMAGNETIC:

- Over the last 24 hours geomagnetic activity has been Active with Stormy intervals in the polar zone, Unsettled with Stormy intervals in the auroral zone, and Quiet with Active intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be Active with Stormy intervals in the polar zone, Unsettled in the auroral zone, and Quiet with Unsettled intervals in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** July-07-12 9:35 AM

**Subject:** Space Weather Bulletin – 2012-07-07

Space Weather Bulletin – 07 July 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT ( 9:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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## OVERVIEW:

- \* There is currently no major storm watch in effect.
- \* Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 7 July 2012 and 8 July 2012.
- \* See our website for current information: <http://www.spaceweather.gc.ca>

## Geomagnetic Activity :

Current conditions (at 13:30 UT)

polar cap zone: Quiet  
auroral zone: Unsettled  
sub-auroral zone: Quiet

24 hour forecast

polar cap zone: Unsettled with stormy intervals  
auroral zone: Unsettled with stormy intervals  
sub-auroral zone: Unsettled with stormy intervals

## Near-Earth Environment:

Current conditions (estimate / at 13:30 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

## DETAILED INFORMATION:

### SOLAR:

- \* Solar activity has been high.
- \* A CME was observed on 4 July 2012 and is expected to deliver a glancing blow to the Earth on 7-8 July 2012, resulting in unsettled to active geomagnetic conditions.
- \* An X (large) solar x-ray flare erupted 6 July 2012 23:08 UT near the edge of the solar disk.

### INTERPLANETARY:

- \* The solar wind speed is currently low ( 400- 500 km/s).
- \* The interplanetary magnetic field has been fluctuating at moderate (  $5 < |B_z| < 10$  nT) levels.

### NEAR-EARTH ENVIRONMENT:

- \* Energetic electron fluence at geostationary orbit was at moderate levels 6 July 2012 and is expected to be at normal levels today.
- \* The 5-minute integral electron flux is currently high.
- \* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

## GEOMAGNETIC:

- \* Over the last 24 hours geomagnetic activity has been Active with Stormy intervals in the polar zone, Unsettled with Active intervals in the auroral zone, and Quiet with Stormy intervals in the subauroral zone.
- \* Over the next 24 hours geomagnetic activity is forecast to be Unsettled with Stormy intervals in the polar zone, Unsettled with Stormy intervals in the auroral zone, and Unsettled with Stormy intervals in the subauroral zone.

\* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** July-08-12 9:38 AM  
**Subject:** Space Weather Bulletin – 2012-07-08

Space Weather Bulletin – 08 July 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT ( 9:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- \* There is currently no major storm watch in effect.
- \* Disturbed geomagnetic conditions due to solar activity are expected to be observed today.
- \* See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity :**

Current conditions (at 13:30 UT)

polar cap zone: Active  
auroral zone: Active  
sub-auroral zone: Quiet

24 hour forecast

polar cap zone: Unsettled with stormy intervals  
auroral zone: Unsettled  
sub-auroral zone: Quiet

**Near-Earth Environment:**

Current conditions (estimate / at 13:30 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- \* Solar activity has been moderate.
- \* A CME was observed on 4 July 2012 and is expected to deliver a glancing blow to the Earth on 8 July 2012, resulting in unsettled to active geomagnetic conditions.

**INTERPLANETARY:**

- \* A interplanetary shock has been observed on 8 July 2012 at 9:25 UT.
- \* The solar wind speed is currently low ( 400- 500 km/s).
- \* The interplanetary magnetic field has been fluctuating at moderate (  $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

\* Energetic electron fluence at geostationary orbit was at normal levels 7 July 2012 and is expected to be at normal levels today.

- \* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- \* Over the last 24 hours geomagnetic activity has been Unsettled with Stormy intervals in the polar zone, Quiet with Active intervals in the auroral zone, and Quiet with Unsettled intervals in the subauroral zone.
  - \* Over the next 24 hours geomagnetic activity is forecast to be Unsettled with Stormy intervals in the polar zone, Unsettled in the auroral zone, and Quiet in the subauroral zone.
  - \* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne <Lorne.McKee@NRCan-RNCan.gc.ca>  
**Sent:** Mon Jul 09 07:25:35 2012  
**Subject:** Space Weather Bulletin – 2012-07-09

Space Weather Bulletin – 09 July 2012 issued by the Canadian Space Weather Forecast Centre at 11:15 UT ( 7:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity are currently observed in the auroral zone.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity :**

Current conditions (at 11:15 UT)

polar cap zone: Active  
auroral zone: Major Storm  
sub-auroral zone: Unsettled

24 hour forecast

polar cap zone: Active with stormy intervals  
auroral zone: Active with stormy intervals  
sub-auroral zone: Unsettled

**Near-Earth Environment:**

Current conditions (estimate / at 11:15 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.
- A non Earth-directed CME erupted on 8 July 2012 at 16:48 UT.

**INTERPLANETARY:**

- The solar wind speed is currently low ( 400- 500 km/s).
- The interplanetary magnetic field currently has  $B_z = -7\text{nT}$
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at normal levels 8 July 2012 and is expected to be at normal levels today.
- The 5-minute integral electron flux is currently high.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been Active with Stormy intervals in the polar zone, Unsettled with Stormy intervals in the auroral zone, and Unsettled with Active intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be Active with Stormy intervals in the polar zone, Active with Stormy intervals in the auroral zone, and Unsettled in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** July-10-12 8:56 AM

**Subject:** Space Weather Bulletin – 2012-07-10

Space Weather Bulletin – 10 July 2012 issued by the Canadian Space Weather Forecast Centre at 12:45 UT ( 8:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity :**

Current conditions (at 12:45 UT)

polar cap zone: Unsettled

auroral zone: Active

sub-auroral zone: Unsettled

24 hour forecast

polar cap zone: Unsettled with stormy intervals

auroral zone: Active with stormy intervals

sub-auroral zone: Unsettled with active intervals

**Near-Earth Environment:**

Current conditions (estimate / at 12:45 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: High

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.
- The active regions located near the central region of the solar disk has produced solar x-ray flares and has the potential to produce subsequent solar eruptions.

**INTERPLANETARY:**

- The solar wind speed is currently low ( 400- 500 km/s).
- The interplanetary magnetic field currently has  $B_z = -5$  nT
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at normal levels 9 July 2012 and is expected to be at normal levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been Active with Stormy intervals in the polar zone, Active with Stormy intervals in the auroral zone, and Unsettled with Stormy intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be Unsettled with Stormy intervals in the polar zone, Active with Stormy intervals in the auroral zone, and Unsettled with Active intervals in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** July-11-12 8:52 AM

**Subject:** Space Weather Bulletin – 2012-07-11

Space Weather Bulletin – 11 July 2012 issued by the Canadian Space Weather Forecast Centre at 12:45 UT ( 8:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity :**

Current conditions (at 12:45 UT)

polar cap zone: Quiet

auroral zone: Quiet

sub-auroral zone: Quiet

24 hour forecast

polar cap zone: Unsettled with stormy intervals

auroral zone: Unsettled with active intervals

sub-auroral zone: Quiet with unsettled intervals

**Near-Earth Environment:**

Current conditions (estimate / at 12:45 UT)

energetic electron fluence at geostationary orbit: High

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Moderate

**DETAIL ED INFORMATION:****SOLAR:**

- Solar activity has been low.
- The active regions located near the central region of the solar disk has produced solar x-ray flares and has the potential to produce subsequent solar eruptions.

**INTERPLANETARY:**

- The solar wind speed is currently moderate ( 500 - 700 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| > 5$ nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at normal levels 10 July 2012 and is expected to be at normal levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been Active with Stormy intervals in the polar zone, Unsettled with Stormy intervals in the auroral zone, and Quiet with Active intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be Unsettled with Stormy intervals in the polar zone, Unsettled with Active intervals in the auroral zone, and Quiet with Unsettled intervals in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** July-12-12 10:39 AM

**Subject:** Space Weather Bulletin – 2012-07-12

Space Weather Bulletin – 12 July 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT ( 10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity :**

Current conditions (at 14:30 UT)

polar cap zone: Stormy

auroral zone: Unsettled

sub-auroral zone: Unsettled

24 hour forecast

polar cap zone: Unsettled with stormy intervals

auroral zone: Active  
sub-auroral zone: Quiet with unsettled intervals

**Near-Earth Environment:**

Current conditions (estimate / at 14:30 UT)  
energetic electron fluence at geostationary orbit: Moderate  
Tomorrow's forecast  
energetic electron fluence at geostationary orbit: Moderate

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- The active regions located near the central region of the solar disk has produced solar x-ray flares and has the potential to produce subsequent solar eruptions.

**INTERPLANETARY:**

- The interplanetary activity has been low.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 11 July 2012 and is expected to be at moderate levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been Unsettled with Stormy intervals in the polar zone, Unsettled with Stormy intervals in the auroral zone, and Quiet with Active intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be Unsettled with Stormy intervals in the polar zone, Active in the auroral zone, and Quiet with Unsettled intervals in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** July-12-12 3:35 PM

**Subject:** Space Weather Bulletin – 2012-07-12- UPDATE

Space Weather Bulletin – 12 July 2012 UPDATE issued by the Canadian Space Weather Forecast Centre at 19:30 UT ( 15:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- A large long duration solar x-ray flare has erupted over the past 24 hours.
- An Earth-directed CME has erupted over the past 24 hours.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 13 July 2012 and 14 July 2012.
- A brief ionospheric absorption event associated with this flare has ended.
- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**INTERPLANETARY:**

- A solar energetic proton event started on 12 July 2012 at 18:00 UT. Current levels are moderate.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** July-13-12 1:12 PM

**Subject:** Space Weather Bulletin – 2012-07-13

Space Weather Bulletin – 13 July 2012 issued by the Canadian Space Weather Forecast Centre at 17:00 UT (13:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- A large long duration solar x-ray flare has erupted over the past 24 hours.
- An Earth-directed CME has erupted over the past 24 hours.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth 14 July 2012.
- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity :**

Current conditions (at 17:00 UT)

polar cap zone: Quiet

auroral zone: Quiet

sub-auroral zone: Quiet

24 hour forecast

polar cap zone: Unsettled with stormy intervals

auroral zone: Quiet with stormy intervals

sub-auroral zone: Quiet with stormy intervals

**Near-Earth Environment:**

Current conditions (at 17:00 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been high.
- An Earth-directed CME erupted on 12 July 2012 at 16:11 UT and is expected to arrive at the Earth on 14 July 2012.
- An X (large) solar x-ray flare erupted 12 July 2012 16:11 UT near the centre of the solar disk.
- The active regions located near the central region of the solar disk has produced solar x-ray flares and has the potential to produce subsequent solar eruptions.

**INTERPLANETARY:**

- The solar wind speed is currently slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |Bz| < 5$  nT) levels.
- A solar energetic proton event started on 12 July 2012 at 18:00 UT. Current levels are moderate.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 12 July 2012 and is expected to be at moderate levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been Quiet with Stormy intervals in the polar zone, Quiet with Unsettled intervals in the auroral zone, and Quiet with Unsettled intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be Unsettled with Stormy intervals in the polar zone, Quiet with Stormy intervals in the auroral zone, and Quiet with Stormy intervals in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** July-14-12 10:02 AM

**Subject:** Space Weather Bulletin – 2012-07-14

Space Weather Bulletin – 14 July 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- \* Disturbed geomagnetic conditions due to solar activity are expected today.
- \* There is currently no major storm watch in effect.
- \* See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity :

Current conditions (at 14:00 UT)

polar cap zone: Stormy

auroral zone: Unsettled

sub-auroral zone: Quiet

24 hour forecast

polar cap zone: Quiet with stormy intervals

auroral zone: Quiet with stormy intervals

sub-auroral zone: Quiet with stormy intervals

Near-Earth Environment:

Current conditions (at 14:00 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

DETAILED INFORMATION:

SOLAR:

- \* Solar activity has been low for the past 24 hours.
- \* An Earth-directed CME erupted on 12 July 2012 at 16:11 UT and is expected to arrive at the Earth on 14 July 2012.
- \* An X (large) solar x-ray flare erupted 12 July 2012 16:11 UT near the centre of the solar disk.
- \* The active regions located near the west limb of the solar disk has produced solar x-ray flares and has the potential to produce subsequent solar eruptions.

INTERPLANETARY:

- \* The solar wind speed is currently slow (<400 km/s).
- \* The interplanetary magnetic field has been fluctuating at moderate( $5 < |B_z| < 10$ nT) levels.

NEAR-EARTH ENVIRONMENT:

- \* Energetic electron fluence at geostationary orbit was at moderate levels 13 July 2012 and is expected to be at normal levels today.
- \* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- \* Over the last 24 hours geomagnetic activity has been Quiet with Unsettled intervals in the polar zone, Quiet with Unsettled intervals in the auroral zone, and Quiet in the subauroral zone.
  - \* Over the next 24 hours geomagnetic activity is forecast to be Quiet with Stormy intervals in the polar zone, Quiet with Stormy intervals in the auroral zone, and Quiet with Stormy intervals in the subauroral zone.
  - \* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** July-14-12 1:52 PM

**Subject:** Space Weather Bulletin – 2012-07-14 - UPDATE

Space Weather Bulletin – 14 July 2012 UPDATE issued by the Canadian Space Weather Forecast Centre at 17:45 UT (13:45 EDT)



\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- \* An interplanetary shock has been observed on 14 July 2012 at 17:30 UT.
- \* Disturbed geomagnetic conditions due to solar activity are expected today.
- \* There is currently no major storm watch in effect.
- \* See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity :

Current conditions (at 17:45 UT)

polar cap zone: Stormy  
auroral zone: Quiet  
sub-auroral zone: Quiet

24 hour forecast

polar cap zone: Unsettled with stormy intervals  
auroral zone: Quiet with stormy intervals  
sub-auroral zone: Quiet with stormy intervals

DETAILED INFORMATION:

INTERPLANETARY:

- \* An interplanetary shock has been observed on 14 July 2012 at 17:30 UT.
  - \* The solar wind speed is currently high ( $700 < v < 1000$  km/s).
  - \* The interplanetary magnetic field has been fluctuating at high ( $10 < |B_z| < 20$ nT) levels.
- 

**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** July-15-12 4:33 AM

**Subject:** Space Weather Bulletin – 2012-07-14 - UPDATE 2

Space Weather Bulletin – 14 July 2012 UPDATE 2 issued by the Canadian Space Weather Forecast Centre 15 July 2012 at 8:30 UT (4:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- \* A major storm watch is currently in effect for the auroral, polar cap and sub-auroral zones.
- \* Magnetic Storm Warning issued at 2012/07/15 5:01 UT. Major magnetic storm conditions are still expected. Anticipated end at 13:00 UT.
- \* See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity :

Current conditions (at 8:15 UT)

polar cap zone: Stormy  
auroral zone: Stormy  
sub-auroral zone: Stormy

24 hour forecast

polar cap zone: Stormy with major storm intervals  
auroral zone: Stormy with major storm intervals  
sub-auroral zone: Active with major storm intervals

DETAILED INFORMATION:

INTERPLANETARY:

- \* The solar wind speed is currently moderate ( $500 < v < 700$  km/s).
- \* The interplanetary magnetic field has primarily negative at high ( $10 < B_z < 20$ nT) levels.

\* Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

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**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** July-15-12 9:04 AM

**Subject:** Space Weather Bulletin – 2012-07-15

Space Weather Bulletin – 15 July 2012 issued by the Canadian Space Weather Forecast Centre at 12:45 UT (8:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

\* Major Storm Alert Extension issued at 15 July 2012 8:45 UT. Major storm conditions began on 15 July 2012 3:57 UT. Expected end: 15 July 2012 19:00 UT.

\* A major storm watch is currently in effect for the auroral, polar cap and sub-auroral zones.

\* See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity :**

Current conditions (at 13:00 UT)

polar cap zone: Unsettled

auroral zone: Stormy

sub-auroral zone: Stormy

24 hour forecast

polar cap zone: Active with major storm intervals

auroral zone: Stormy with major storm intervals

sub-auroral zone: Stormy with major storm intervals

**Near-Earth Environment:**

Current conditions (at 12:45 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

\* Solar activity has been low for the past 24 hours.

**INTERPLANETARY:**

\* The solar wind speed is currently moderate (500<v<700 km/s).

\* The interplanetary magnetic field has primarily negative at high (10<Bz<20nT) levels.

\* Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

**NEAR-EARTH ENVIRONMENT:**

\* Energetic electron fluence at geostationary orbit was at moderate levels 14 July 2012 and is expected to be at normal levels today.

\* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

\* Over the last 24 hours geomagnetic activity has been Stormy with major storm intervals in the polar zone, Active with major storm intervals in the auroral zone, and Active with stormy intervals in the sub-auroral zone.

\* Over the next 24 hours geomagnetic activity is forecast to be Stormy with major storm intervals in the polar zone, Stormy with major storm intervals in the auroral zone, and Active with major storm intervals in the sub-auroral zone.

\* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** July-15-12 11:51 AM  
**Subject:** Space Weather Bulletin – 2012-07-15 UPDATE

Space Weather Bulletin – 15 July 2012 UPDATE issued by the Canadian Space Weather Forecast Centre at 15:45 UT (11:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- \* The Major Storm watch issued at 15 July 2012 8:45 UT for the polar cap, auroral and sub-auroral zones ended 15 July 2012 13:45 UT.
- \* Stormy conditions are currently observed in the auroral zone.
- \* Stormy conditions are possible in the polar cap, auroral and sub-auroral zones within the next 24 hours.
- \* See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity :**

- Current conditions (at 15:45 UT)
  - polar cap zone: Active
  - auroral zone: Stormy
  - sub-auroral zone: Active
- 24 hour forecast
  - polar cap zone: Active with stormy intervals
  - auroral zone: Stormy
  - sub-auroral zone: Active with stormy intervals

**DETAILED INFORMATION:**

**INTERPLANETARY:**

- \* The solar wind speed is currently moderate ( $500 < v < 700$  km/s).
- \* The interplanetary magnetic field has primarily negative at high ( $10 < |B_z| < 20$  nT) levels.
- \* Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

**GEOMAGNETIC:**

- \* Over the last 24 hours geomagnetic activity has been Stormy with major storm intervals in the polar zone, Stormy with major storm intervals in the auroral zone, and Active with stormy intervals in the sub-auroral zone.
  - \* Over the next 24 hours geomagnetic activity is forecast to be Active with stormy intervals in the polar zone, Stormy in the auroral zone, and Active with stormy intervals in the sub-auroral zone.
  - \* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]  
**Sent:** July-15-12 8:18 PM  
**Subject:** Space Weather Bulletin – 2012-07-15 UPDATE 2

Space Weather Bulletin – 15 July 2012 UPDATE issued by the Canadian Space Weather Forecast Centre 16 July 2012 at 00:15 UT (8:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- \* Major storm conditions are possible in the polar cap, auroral and sub-auroral zones between 16 July 2012 2:00 and 16 July 2012 10:00.
- \* Stormy conditions are currently observed in the auroral zone.
- \* See our website for current information: <http://www.spaceweather.gc.ca>

DETAILED INFORMATION:

INTERPLANETARY:

- \* The solar wind speed is currently moderate ( $500 < v < 700$  km/s).
- \* The interplanetary magnetic field has primarily negative at high ( $10 < |B_z| < 20$  nT) levels.
- \* Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** July-16-12 8:07 AM

**Subject:** Space Weather Bulletin – 2012-07-16

Space Weather Bulletin – 16 July 2012 issued by the Canadian Space Weather Forecast Centre at 12:00 UT (8:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

OVERVIEW:

- \* Major storm conditions are possible in the auroral zone within the next 24 hours.
- \* Stormy conditions are currently observed in the auroral zone.
- \* See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 12:00 UT)

polar cap zone: Unsettled

auroral zone: Stormy

sub-auroral zone: Active

24 hour forecast

polar cap zone: Unsettled with stormy intervals

auroral zone: Stormy

sub-auroral zone: Active with stormy intervals

Near-Earth Environment:

Current conditions (estimate / at 12:00 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

DETAILED INFORMATION:

SOLAR:

- \* Solar activity has been low.

INTERPLANETARY:

- \* Data about interplanetary conditions are currently unavailable.

NEAR-EARTH ENVIRONMENT:

\* Energetic electron fluence at geostationary orbit was at normal levels 15 July 2012 and is expected to be at normal levels today.

- \* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

\* Over the last 24 hours geomagnetic activity has been Unsettled with stormy intervals in the polar zone, Stormy in the auroral zone, and Active with stormy intervals in the sub-auroral zone.

- \* Over the next 24 hours geomagnetic activity is forecast to be Unsettled with stormy intervals in the polar zone, Stormy in the auroral zone, and Active with stormy intervals in the sub-auroral zone.
  - \* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** July-17-12 10:26 AM  
**Subject:** Space Weather Bulletin – 2012-07-17

Space Weather Bulletin – 17 July 2012 issued by the Canadian Space Weather Forecast Centre at 14:20 UT (10:20 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:15 UT)

polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled

**Near-Earth Environment:**

Current conditions (estimate / at 14:05 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Moderate

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been very low.

**INTERPLANETARY:**

- Interplanetary activity has been low.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 16 Jul 2012 and is expected to be above threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** July-18-12 10:31 AM  
**Subject:** Space Weather Bulletin – 2012-07-18

Space Weather Bulletin – 18 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- A polar cap absorption event is currently in progress in the polar cap and auroral zones.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:15 UT)

polar cap zone: active  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: quiet with active intervals  
sub-auroral zone: quiet with active intervals

**Near-Earth Environment:**

Current conditions (estimate / at 14:20 UT)

energetic electron fluence at geostationary orbit: moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: moderate

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.
- The active region located near the west limb of the solar disk has produced a long duration solar x-ray flare and an associated CME.
- A non-Earth-directed CME erupted on 17 Jul 2012 at 13:48 UT.

**INTERPLANETARY:**

- Interplanetary activity has been low.
- The solar wind speed is currently slow (400-500 km/s)
- The interplanetary magnetic field has been primarily positive low ( $2 < |B_z| < 5$  nT) levels.
- A solar energetic proton event started on 17 Jul 2012 at 17:31 UT. Current levels are moderate.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 17 Jul 2012 and is expected to be above threshold level tomorrow.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** July-19-12 10:25 AM

**Subject:** Space Weather Bulletin – 2012-07-19

Space Weather Bulletin – 19 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 14:20 UT (10:20 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- A large long duration solar x-ray flare has erupted over the past 24 hours.
- A polar cap absorption event is currently in progress in the polar cap and auroral zones.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:15 UT)

polar cap zone: stormy

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: quiet with active intervals

sub-auroral zone: quiet with active intervals

**Near-Earth Environment:**

Current conditions (estimate / at 13:20 UT)

energetic electron fluence at geostationary orbit: High

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:****SOLAR:**

- Solar activity has been moderate.
- The active region located near the west limb of the solar disk has produced a long duration solar x-ray flare and an associated CME
- A non-Earth-directed CME erupted on 19 Jul 2012 at 06:06 UT.

**INTERPLANETARY:**

- Interplanetary activity has been low.
- A solar energetic proton event started on 19 Jul 2012 at 06:30 UT. Current levels are moderate.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 18 Jul 2012 and is expected to be at high levels today.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy in the polar zone, quiet with active in the auroral zone, and quiet with active in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** July-20-12 10:33 AM

**Subject:** Space Weather Bulletin – 2012-07-20

Space Weather Bulletin – 20 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- There is currently no major storm watch in effect.
- A polar cap absorption event is currently in progress in the polar cap and auroral zones.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:30 UT)

polar cap zone: active  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate / at 14:05 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- Interplanetary activity has been moderate.
- A solar energetic proton event started on 19 Jul 2012 at 06:30 UT. Current levels are moderate.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at high levels 19 Jul 2012 and is expected to be at high levels today.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been active with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** July-21-12 10:51 AM

**Subject:** Space Weather Bulletin – 2012-07-21

Space Weather Bulletin – 21 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 14:45 UT (10:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- The polar cap absorption event reported yesterday has ended.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:45 UT)

polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate / at 14:20 UT)



energetic electron fluence at geostationary orbit: Moderate  
Tomorrow's forecast  
energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been very low.

**INTERPLANETARY:**

- Interplanetary activity has been moderate.
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been at moderate ( $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 20 Jul 2012 and is expected to be at moderate levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** July-22-12 9:24 AM

**Subject:** Space Weather Bulletin – 2012-07-22

Space Weather Bulletin – 22 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 13:15 UT (09:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 13:15 UT)

polar cap zone: unsettled  
auroral zone: unsettled  
sub-auroral zone: unsettled

24 hour forecast

polar cap zone: active with stormy intervals  
auroral zone: unsettled  
sub-auroral zone: quiet with unsettled

**Near-Earth Environment:**

Current conditions (estimate / at 12:50 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been very low.
- One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

- Interplanetary activity has been moderate.

- The solar wind speed is currently slow (400-500 km/s) .
- The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at normal levels 21 Jul 2012 and is expected to be at normal levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been active with major storm intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be active with stormy intervals in the polar zone, unsettled in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** July-23-12 12:52 PM

**Subject:** Space Weather Bulletin – 2012-07-23

Space Weather Bulletin – 23 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 14:15 UT (10:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:00 UT)

polar cap zone: unsettled

auroral zone: active

sub-auroral zone: quiet

24 hour forecast

polar cap zone: active

auroral zone: unsettled

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate / at 13:50 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- Interplanetary activity has been moderate.
- The solar wind speed is currently slow (400-500 km/s)
- The interplanetary magnetic field has been at moderate ( $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at normal levels 22 Jul 2012 and is expected to be at normal levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.

Over the next 24 hours geomagnetic activity is forecast to be active in the polar zone, unsettled in the auroral zone, and quiet in the subauroral zone.

- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** July-24-12 10:31 AM

**Subject:** Space Weather Bulletin – 2012-07-24

Space Weather Bulletin – 24 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:15 UT)

polar cap zone: active  
auroral zone: active  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet with unsettled intervals

**Near-Earth Environment:**

Current conditions (at 13:50 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- Interplanetary activity has been moderate.
- The solar wind speed is currently moderate (500-700 km/s).
- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The interplanetary magnetic field has been primarily at moderate ( $5 < |B_z| < 10$  nT) levels.
- A solar energetic proton event started on 23 Jul 2012 at 12:00 UT. Current levels are moderate.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 23 Jul 2012 and is expected to be at moderate levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** July-25-12 10:31 AM  
**Subject:** Space Weather Bulletin – 2012-07-25

Space Weather Bulletin – 25 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:15 UT)  
polar cap zone: unsettled  
auroral zone: unsettled  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 14:05 UT)  
energetic electron fluence at geostationary orbit: Moderate  
Tomorrow's forecast  
energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- Interplanetary activity has been low.
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 24 Jul 2012 and is expected to be at moderate levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** July-26-12 10:34 AM  
**Subject:** Space Weather Bulletin – 2012-07-26

Space Weather Bulletin – 26 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:15 UT)

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 13:50 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- One medium coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

- Interplanetary activity has been low.
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 25 Jul 2012 and is expected to be at moderate levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** July-27-12 10:35 AM

**Subject:** Space Weather Bulletin – 2012-07-27

Space Weather Bulletin – 27 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT ( 10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*  
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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:30 UT)

polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 14:05 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

- Interplanetary activity has been low.
- The solar wind speed is currently very slow (<400 km/s)
- The interplanetary magnetic field has been primarily positive at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 26 Jul 2012 and is expected to be at moderate levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** July-28-12 11:24 AM

**Subject:** Space Weather Bulletin – 2012-07-28

Space Weather Bulletin – 28 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 15:15 UT (11:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 15:00 UT)

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: unsettled

24 hour forecast

polar cap zone: unsettled with stormy

auroral zone: quiet

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 14:50 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.
- One medium coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

- Interplanetary activity has been moderate.
- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been at moderate ( $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 27 Jul 2012 and is expected to be at moderate levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** July-29-12 9:23 AM

**Subject:** Space Weather Bulletin – 2012-07-29

Space Weather Bulletin – 29 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 13:15 UT (09:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- A medium solar x-ray flare has erupted over the past 24 hours.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 13:00 UT)

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: unsettled

24 hour forecast

polar cap zone: unsettled with active intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 12:50 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.
- One medium coronal hole is located near the centre of the solar disk.
- An M (medium) solar x-ray flare erupted 28 Jul 2012 21:00 UT.

**INTERPLANETARY:**

- Interplanetary activity has been moderate.
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been at moderate ( $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at moderate levels 28 Jul 2012 and is expected to be at normal levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** July-30-12 10:32 AM

**Subject:** Space Weather Bulletin – 2012-07-30

Space Weather Bulletin – 30 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:15 UT)

polar cap zone: active  
auroral zone: stormy  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 14:05 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.
- A non-Earth-directed CME erupted on 28 Jul 2012 at 21:00 UT.

**INTERPLANETARY:**

- Interplanetary activity has been low.
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been primarily negative at low ( $2 < |B_z| < 5$  nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at normal levels 29 Jul 2012 and is expected to be at normal levels today.



- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** July-31-12 10:40 AM

**Subject:** Space Weather Bulletin – 2012-07-31

Space Weather Bulletin – 31 Jul 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:15 UT)

polar cap zone: unsettled

auroral zone: unsettled

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet with active intervals

**Near-Earth Environment:**

Current conditions (at 14:05 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Moderate

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.
- A CME was observed on 28 Jul 2012, and is expected to deliver a glancing blow to the Earth on 1 Aug 2012, resulting in unsettled to active geomagnetic activity.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been primarily negative at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 30 Jul 2012 and is expected to be above threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** August-01-12 10:54 AM  
**Subject:** Space Weather Bulletin – 2012-08-01

Space Weather Bulletin – 1 Aug 2012 issued by the Canadian Space Weather Forecast Centre at 14:45 UT (10:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:30 UT)

polar cap zone: active  
auroral zone: active  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals  
auroral zone: unsettled  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 14:20 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 31 Jul 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, unsettled in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** August-02-12 10:43 AM  
**Subject:** Space Weather Bulletin – 2012-08-02

Space Weather Bulletin – 2 Aug 2012 issued by the Canadian Space Weather Forecast Centre at 14:40 UT (10:40 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- Disturbed geomagnetic conditions due to the slow CME of 28 Jul 2012 are expected today.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:30 UT)

polar cap zone: stormy  
auroral zone: stormy  
sub-auroral zone: stormy

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: quiet with active intervals  
sub-auroral zone: quiet with unsettled intervals

**Near-Earth Environment:**

Current conditions (at 14:20 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A CME was observed on 28 Jul 2012, and is expected to deliver a glancing blow to the Earth on 2 Aug 2012, resulting in disturbed geomagnetic conditions.

**INTERPLANETARY:**

- The solar wind speed has been increasing over the last hour (currently ~ 500 km/s).
- The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 1 Aug 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** August-03-12 10:55 AM

**Subject:** Space Weather Bulletin – 2012-08-03

Space Weather Bulletin – 3 Aug 2012 issued by the Canadian Space Weather Forecast Centre at 14:50 UT (10:50 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:45 UT)

polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: active  
sub-auroral zone: unsettled

**Near-Earth Environment:**

Current conditions (at 14:35 UT)  
energetic electron fluence at geostationary orbit: Normal  
Tomorrow's forecast  
energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 2 Aug 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with major stormy interval in the polar zone, quiet with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, active in the auroral zone, and unsettled in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** August-04-12 1:13 PM

**Subject:** Space Weather Bulletin – 2012-08-04

Space Weather Bulletin – 4 Aug 2012 issued by the Canadian Space Weather Forecast Centre at 17:10 UT (13:10 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 17:00 UT)  
polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 17:00 UT)  
energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast  
energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 3 Aug 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with active interval in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** August-05-12 2:02 PM

**Subject:** Space Weather Bulletin – 2012-08-05

Space Weather Bulletin – 5 Aug 2012 issued by the Canadian Space Weather Forecast Centre at 17:55 UT (13:55 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 17:45 UT)

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 17:50 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A CME was observed on 4 Aug 2012, and is expected to deliver a glancing blow to the Earth on 8 Aug 2012, resulting in unsettled to active geomagnetic activity.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 4 Aug 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with stormy interval in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** August-06-12 1:53 PM

**Subject:** Space Weather Bulletin – 2012-08-06

Space Weather Bulletin – 6 Aug 2012 issued by the Canadian Space Weather Forecast Centre at 17:50 UT (13:50 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 17:45 UT)

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 17:40 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:****SOLAR:**

- Solar activity has been moderate.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 5 Aug 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with active interval in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** August-07-12 10:30 AM  
**Subject:** Space Weather Bulletin – 2012-08-07

Space Weather Bulletin – 7 Aug 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:15 UT)

polar cap zone: active  
auroral zone: unsettled  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals  
auroral zone: unsettled  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 17:05 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- One small coronal hole is located near the center of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 6 Aug 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy interval in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, unsettled in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** August-08-12 10:25 AM  
**Subject:** Space Weather Bulletin – 2012-08-08

Space Weather Bulletin – 8 Aug 2012 issued by the Canadian Space Weather Forecast Centre at 14:25 UT (10:25 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:15 UT)

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 14:05 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- One small coronal hole is located near the center of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 7 Aug 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with active interval in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-09-12 7:51 AM

**Subject:** Space Weather Bulletin – 2012-08-09

Space Weather Bulletin – 09 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 11:50 UT (07:50 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**



Current conditions (at 11:45 UT)

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Moderate

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A non-Earth-directed CME erupted on 08 AUG 2012 at 06:12 UT.
- One small coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been primarily negative at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 08 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-10-12 7:20 AM

**Subject:** Space Weather Bulletin – 2012-08-10

Space Weather Bulletin – 10 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 11:20 UT (07:20 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:00 UT)

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 10:50 UT)  
energetic electron fluence at geostationary orbit: Normal  
Tomorrow's forecast  
energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:****SOLAR:**

- Solar activity has been low.
- One small coronal hole is located near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been primarily positive at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 09 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar cap zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-11-12 7:32 AM

**Subject:** Space Weather Bulletin – 2012-08-11

Space Weather Bulletin – 11 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 11:30 UT (07:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:15 UT)  
polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet  
24 hour forecast  
polar cap zone: quiet with unsettled intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 11:05 UT)  
energetic electron fluence at geostationary orbit: Normal  
Tomorrow's forecast  
energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:****SOLAR:**

- Solar activity has been low.
- One small coronal hole is located near the centre of the solar disk.

- One small coronal hole is located near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 10 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-12-12 6:32 AM

**Subject:** Space Weather Bulletin – 2012-08-12

Space Weather Bulletin – 12 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 10:30 UT (06:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- There is currently no major storm watch in effect.
- A medium long duration solar x-ray flare has erupted over the past 24 hours.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 10:15 UT)

polar cap zone: quiet  
auroral zone: active  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 10:00 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A CME erupted on 11 AUG 2012 at 12:21 UT. It is not yet known if the CME will impact the Earth.
- Two small coronal holes are located near the centre of the solar disk.
- A long duration M (medium) solar x-ray flare erupted at 12 AUG 2012 12:14 UT near the edge of the solar disk.
- Data about solar conditions are currently unavailable.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 11 AUG 2012 and is expected to be below threshold level tomorrow.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-13-12 7:51 AM

**Subject:** Space Weather Bulletin – 2012-08-13

Space Weather Bulletin – 13 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 11:50 UT (07:50 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:30 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 11:20 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:****SOLAR:**

- Solar activity has been low.
- Two coronal holes are located near the centre of the solar disk.
- One coronal hole is located near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been primarily positive at moderate ( $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 12 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-14-12 8:54 AM

**Subject:** Space Weather Bulletin – 2012-08-14

Space Weather Bulletin – 14 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 12:50 UT (08:50 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 12:30 UT)

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: active with stormy intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet with active intervals

**Near-Earth Environment:**

Current conditions (at 12:37 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A CME was observed on 13 AUG 2012, and is expected to deliver a glancing blow to the Earth on 15 AUG 2012, resulting in unsettled to active geomagnetic activity.
- Two coronal holes are located near the centre of the solar disk.
- Two coronal holes are located near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 13 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been active with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** August-15-12 7:59 AM  
**Subject:** Space Weather Bulletin – 2012-08-15

Space Weather Bulletin – 15 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 12:00 UT (08:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- Two Earth-directed CMEs have erupted over the past 24 hours.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 16 AUG 2012 and 17 AUG 2012.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:45 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 11:45 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- An Earth-directed CME erupted on 13 AUG 2012 at 13:25 UT.
- An Earth-directed CME erupted on 14 AUG 2012 at 00:31 UT.
- One coronal hole is located near the centre of the solar disk.
- Two coronal holes are located near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 14 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** August-16-12 8:37 AM  
**Subject:** Space Weather Bulletin – 2012-08-16

Space Weather Bulletin – 16 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 12:30 UT (08:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 16 AUG 2012 and 17 AUG 2012.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 12:15 UT)

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals  
auroral zone: unsettled  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 11:50 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- An Earth-directed CME erupted on 13 AUG 2012 at 13:25 UT.
- An Earth-directed CME erupted on 14 AUG 2012 at 00:31 UT.
- One coronal hole is located near the centre of the solar disk.
- One coronal hole is located near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 15 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, unsettled in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-17-12 7:42 AM

**Subject:** Space Weather Bulletin – 2012-08-17

Space Weather Bulletin – 17 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 11:40 UT (07:40 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- An Earth-directed CME has erupted over the past 24 hours.
- Disturbed geomagnetic conditions due to solar activity are expected today.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:30 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: active

sub-auroral zone: quiet with unsettled intervals

**Near-Earth Environment:**

Current conditions (at 11:20 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- An Earth-directed CME erupted on 14 AUG 2012 at 00:31 UT.
- A CME erupted on 16 AUG 2012 at 13:36 UT. It is not yet known if the CME will impact the Earth.
- One coronal hole is located near the centre of the solar disk.
- One coronal hole is located near the edge of the solar disk.
- A long duration C (low) solar x-ray flare erupted at 16 AUG 2012 13:16 UT near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been primarily negative at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 16 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, active in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-18-12 8:06 AM

**Subject:** Space Weather Bulletin – 2012-08-18

Space Weather Bulletin – 18 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 12:05 UT (08:05 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.



- Several medium solar x-ray flares have erupted over the past 24 hours.
- CMEs may be associated with these flares.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:45 UT)

polar cap zone: unsettled

auroral zone: stormy

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 11:35 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.
- A CME was observed on 16 AUG 2012, and is expected to deliver a glancing blow to the Earth on 20 AUG 2012, resulting in unsettled to active geomagnetic activity.
- A CME erupted on 17 AUG 2012 at 13:54 UT. It is not yet known if the CME will impact the Earth.
- Two coronal holes are located near the centre of the solar disk.
- Four M (medium) solar x-ray flares have erupted over the past 24 hours.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field currently has  $B_z = +5$  nT.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 17 AUG 2012 and is expected to be at threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-19-12 7:41 AM

**Subject:** Space Weather Bulletin – 2012-08-19

Space Weather Bulletin – 19 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 11:45 UT (07:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- Stormy conditions are currently observed in the auroral zone.
- There is currently no major storm watch in effect.
- Several medium solar x-ray flares have erupted over the past 24 hours.

- Disturbed geomagnetic conditions due to solar activity are currently observed in the polar and auroral zones.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:30 UT)

polar cap zone: active  
auroral zone: stormy  
sub-auroral zone: unsettled

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled with active intervals

**Near-Earth Environment:**

Current conditions (at 11:20 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been high.
- The active region located near the east limb of the solar disk has produced solar x-ray flares and associated CMEs and has the potential to produce subsequent solar eruptions.
- Several non-Earth-directed CMEs erupted on 17 AUG 2012 at 12:36 UT, 13:54 UT, 18:36, and 23:30 UT.
- Several non-Earth-directed CMEs erupted on 17 AUG 2012 at 00:12 UT and 01:02 UT.
- One coronal hole is located near the centre of the solar disk.
- One coronal hole is located near the edge of the solar disk.
- Five M (medium) solar x-ray flares have erupted over the past 24 hours.

**INTERPLANETARY:**

- The solar wind speed is currently moderate (500-700 km/s).
- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The interplanetary magnetic field has been primarily negative at moderate ( $5 < |B_z| < 10$  nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at threshold level 18 AUG 2012 and is expected to be at threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be active with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-20-12 8:06 AM

**Subject:** Space Weather Bulletin – 2012-08-20

Space Weather Bulletin – 20 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 12:05 UT (08:05 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- Stormy conditions are possible in the auroral zone within the next 24 hours.
- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:45 UT)

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: active with stormy intervals

sub-auroral zone: quiet with unsettled intervals

**Near-Earth Environment:**

Current conditions (at 11:35 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:****SOLAR:**

- Solar activity has been moderate.
- The active region located near the east limb of the solar disk has produced solar x-ray flares and associated CMEs and has the potential to produce subsequent solar eruptions.
- A non-Earth-directed CME erupted on 18 AUG 2012 at 23:24 UT.
- A non-Earth-directed CME erupted on 19 AUG 2012 at 18:48 UT.
- One coronal hole is located near the centre of the solar disk.
- Two coronal holes are located near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently moderate (500-700 km/s).
- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 18 AUG 2012 and is expected to be at threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been active with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, quiet with active intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, quiet with unsettled intervals in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-21-12 7:43 AM

**Subject:** Space Weather Bulletin – 2012-08-21

Space Weather Bulletin – 21 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 11:45 UT (07:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 22 AUG 2012 and 24 AUG 2012.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:30 UT)

polar cap zone: quiet  
auroral zone: unsettled  
sub-auroral zone: unsettled

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Moderate

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- The active region located near the east limb of the solar disk has produced solar x-ray flares and associated CMEs and has the potential to produce subsequent solar eruptions.
- Two coronal holes are located near the centre of the solar disk.
- One coronal hole is located near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 20 AUG 2012 and is expected to be at threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-22-12 7:47 AM

**Subject:** Space Weather Bulletin – 2012-08-22

Space Weather Bulletin – 22 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 11:45 UT (07:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:30 UT)

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 11:20 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A non-Earth-directed CME erupted on 20 AUG 2012 at 21:28 UT.
- Two coronal holes are located near the centre of the solar disk.
- One coronal hole is located near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was above threshold level 20 AUG 2012 and is expected to be below threshold level tomorrow.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-23-12 8:02 AM

**Subject:** Space Weather Bulletin – 2012-08-23

Space Weather Bulletin – 23 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 12:05 UT (08:05 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:45 UT)

polar cap zone: unsettled  
auroral zone: unsettled  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 11:50 UT)

energetic electron fluence at geostationary orbit: Moderate  
Tomorrow's forecast  
energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A CME erupted on 22 AUG 2012 at 12:48 UT. It is not yet known if the CME will impact the Earth.
- One coronal hole is located near the centre of the solar disk.
- One coronal hole is located near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was above threshold level 22 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-24-12 9:09 AM

**Subject:** Space Weather Bulletin – 2012-08-24

Space Weather Bulletin – 24 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 13:10 UT (09:10 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 13:00 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Moderate

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A non-Earth-directed CME erupted on 22 AUG 2012 at 12:48 UT.

- Two coronal holes are located near the centre of the solar disk.
- One coronal hole is located near the edge of the solar disk.

**INTERPLANETARY:**

- Interplanetary activity has been low.
- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 23 AUG 2012 and is expected to be above threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffi-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-25-12 7:34 AM

**Subject:** Space Weather Bulletin – 2012-08-25

Space Weather Bulletin – 25 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 11:40 UT (07:40 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:30 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 11:20 UT)

energetic electron fluence at geostationary orbit: Moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- Two coronal holes are located near the centre of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently moderate (500-700 km/s).
- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was above threshold level 24 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-26-12 7:26 AM

**Subject:** Space Weather Bulletin – 2012-08-26

Space Weather Bulletin – 26 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 11:30 UT (07:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 11:15 UT)

polar cap zone: active  
auroral zone: active  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 11:05 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A CME erupted on 25 AUG 2012 at 16:24 UT. It is not yet known if the CME will impact the Earth.
- One coronal hole is located near the edge of the solar disk.
- One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently moderate (500-700 km/s).
- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 25 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been active with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral



zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.

- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** August-27-12 6:34 AM

**Subject:** Space Weather Bulletin – 2012-08-27

Space Weather Bulletin – 27 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 10:35 UT (06:35 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 10:15 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (at 10:05 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A non-Earth-directed CME erupted on 25 AUG 2012 at 16:24 UT.
- One coronal hole is located near the centre of the solar disk.
- One coronal hole is located near the edge of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently moderate (500-700 km/s).
- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was **below** threshold level 26 AUG 2012 and is expected to be **below** threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been active with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
-

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** August-28-12 11:21 AM  
**Subject:** Space Weather Bulletin – 2012-08-28

Space Weather Bulletin – 28 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:30 UT)

polar cap zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate at 14:30 UT)

energetic electron fluence at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- The solar wind speed is currently slow (~ 450 km/s).
- The solar wind speed has been decreasing over last 24 hours.
- The interplanetary magnetic field has been fluctuating at moderate levels ( $5 < |B_z| < 10$  nT).

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 27 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** August-29-12 10:02 AM  
**Subject:** Space Weather Bulletin – 2012-08-29

Space Weather Bulletin – 29 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 13:45 UT (09:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 13:45 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate at 13:45 UT)

energetic electron fluence at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:****SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- The solar wind speed is currently moderate (~500 km/s).
- The interplanetary magnetic field has been fluctuating at low levels ( $2 < |B_z| < 5$  nT).

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at threshold level 28 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** August-30-12 9:29 AM

**Subject:** Space Weather Bulletin – 2012-08-30

Space Weather Bulletin – 30 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 13:10 UT (09:10 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 13:10 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate at 13:10 UT)

energetic electron fluence at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-450 km/s).
- The interplanetary magnetic field has been fluctuating at very low levels ( $|B_z| < 2$  nT).

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was above threshold level 29 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** August-31-12 10:34 AM

**Subject:** Space Weather Bulletin – 2012-08-31

Space Weather Bulletin – 31 AUG 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (09:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 13:30 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate at 13:30 UT)

energetic electron fluence at geostationary orbit: moderate

Tomorrow's forecast

energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (300-350 km/s).
- The solar wind speed has been decreasing over last 24 hours.
- The interplanetary magnetic field has been fluctuating at low levels ( $2 < |B_z| < 5$  nT).

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was above threshold level 30 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** September-01-12 11:11 AM

**Subject:** Space Weather Bulletin – 2012-09-01

Space Weather Bulletin – 01 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:15 UT (10:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:15 UT)

polar cap zone: quiet  
auroral zone: unsettled  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate at 14:15 UT)

energetic electron fluence at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A CME erupted on 31 AUG 2012 at 20:24 UT. It is not yet known if the CME will impact the Earth.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (300-350 km/s).
- The interplanetary magnetic field has been fluctuating at low levels ( $2 < |B_z| < 5$  nT).

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was above threshold level 31 AUG 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** September-02-12 11:16 AM  
**Subject:** Space Weather Bulletin – 2012-09-02

Space Weather Bulletin – 02 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 03 SEP 2012 and 04 SEP 2012.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:30 UT)

polar cap zone: quiet  
auroral zone: active  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals  
auroral zone: unsettled with active intervals  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate at 14:30 UT)

energetic electron fluence at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- A CME was observed on 31 AUG 2012, and is expected to deliver a glancing blow to the Earth on 03-04 SEP 2012.
- Two coronal holes are located near the centre of the solar disk.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (300-350 km/s).
- The interplanetary magnetic field has been primarily negative at moderate ( $5 < |B_z| < 10$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 01 SEP 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** September-02-12 9:05 PM  
**Subject:** Space Weather Bulletin – 2012-09-02 - UPDATED

Space Weather Bulletin – 02 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 00:30 UT (20:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- Stormy conditions are possible within the next 24 hours.
- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**INTERPLANETARY:**

- The interplanetary magnetic field has been primarily negative at moderate ( $5 < |B_z| < 10$  nT) levels over the past 24h.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.
- A CME was observed on 31 AUG 2012, and is expected to deliver a glancing blow to the Earth on 03 SEP 2012.
- The solar wind speed is currently very slow (~300 km/s).

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** September-03-12 10:16 AM  
**Subject:** Space Weather Bulletin – 2012-09-03

Space Weather Bulletin – 03 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 13:15 UT (09:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- An interplanetary shock has been observed on 03 SEP 2012 at 11:20 UT.
- Disturbed geomagnetic conditions due to solar activity are expected today.
- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 13:15 UT)

polar cap zone: stormy

auroral zone: stormy

sub-auroral zone: stormy

24 hour forecast

polar cap zone: quiet with active intervals

auroral zone: active with stormy intervals

sub-auroral zone: unsettled with active intervals

**Near-Earth Environment:**

Current conditions (estimate at 13:15 UT)

energetic electron fluence at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:****SOLAR:**

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.

**INTERPLANETARY:**

- An interplanetary shock has been observed on 03 SEP 2012 at 11:20 UT.
- The solar wind speed is currently slow (400-450 km/s).
- The interplanetary magnetic field has been fluctuating at very high levels ( $|Bz| > 20$  nT).

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 02 SEP 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** September-04-12 11:24 AM

**Subject:** Space Weather Bulletin – 2012-09-04

Space Weather Bulletin – 04 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:00 UT)

polar cap zone: stormy  
auroral zone: unsettled  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: active with stormy intervals  
auroral zone: active with stormy intervals  
sub-auroral zone: unsettled with active intervals

**Near-Earth Environment:**

Current conditions (estimate at 14:00 UT)

energetic electron fluence at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:****SOLAR:**

- Solar activity has been low.
- Two CMEs erupted on 02 SEP 2012, and are expected to deliver a glancing blow to the Earth on 5-6 SEP 2012.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400 - 450 km/s).
- The interplanetary magnetic field has been fluctuating at moderate levels ( $5 < |Bz| < 10$  nT).



**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 03 SEP 2012 and is expected to be above threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been active with stormy intervals in the polar zone, active with major storm intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** September-05-12 10:50 AM

**Subject:** Space Weather Bulletin – 2012-09-05

Space Weather Bulletin – 05 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:00 UT)

polar cap zone: unsettled

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with stormy intervals

auroral zone: active with stormy intervals quiet

sub-auroral zone: unsettled with active intervals

**Near-Earth Environment:**

Current conditions (estimate at 14:00 UT)

energetic electron fluence at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- The solar wind speed is currently slow (~500 km/s).
- The interplanetary magnetic field has been fluctuating at low levels ( $2 < |Bz| < 5$  nT).

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 04 SEP 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** September-06-12 10:47 AM  
**Subject:** Space Weather Bulletin – 2012-09-06

Space Weather Bulletin – 06 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:00 UT)

polar cap zone: unsettled  
aurora zone: quiet  
sub-aurora zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals  
aurora zone: quiet with unsettled intervals  
sub-aurora zone: quiet

**Near-Earth Environment:**

Current conditions (estimate at 14:00 UT)

energetic electron fluency at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.
- An M solar x-ray flare erupted 06 SEP 2012 04:14 UT.

**INTERPLANETARY:**

- The solar wind speed is currently slow (~400 km/s).
- The interplanetary magnetic field has been primarily positive.
- The interplanetary magnetic field currently has  $B_e = 5$  not.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluency at geostationary orbit was below threshold level 05 SEP 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with active intervals in the aurora zone, and quiet with unsettled intervals in the subarea zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, quiet with unsettled intervals in the aurora zone, and quiet in the subarea zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** September-07-12 10:58 AM  
**Subject:** Space Weather Bulletin – 2012-09-07

Space Weather Bulletin – 07 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:30 UT)

polar cap zone: unsettled

auroral zone: active

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: unsettled with active intervals

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate at 14:30 UT)

energetic electron fluence at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.

**INTERPLANETARY:**

- The solar wind speed is currently slow (~380 km/s).
- The interplanetary magnetic field has been primarily negative at low levels ( $|B_z| < 5$  nT).

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was below threshold level 06 SEP 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** September-08-12 10:58 AM

**Subject:** Space Weather Bulletin – 2012-09-08 issued at 14:00 UT (10:00 EDT/EST)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm warning in effect.
- See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

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**CURRENT CONDITIONS (14:00 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet

- auroral zone: unsettled
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Aeromagnetic surveys: potential for disruption in the auroral zone
- 

**24 HOUR FORECAST**

**Geomagnetic Activity:**

- polar cap zone: quiet with active intervals
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

**Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Aeromagnetic surveys: potential for significant disruptions in the polar cap and auroral zones.
  - Directional Drilling: significant deviations possible in the polar cap and auroral zones.
- 

**ADDITIONAL INFORMATION** at <http://www.spaceweather.gc.ca>

Updated conditions and forecast; Background information; FAQ, Glossary of terms, and potential impacts.

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**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been low.

**INTERPLANETARY**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|Bz| < 5$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was below threshold level 07 SEP 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** September-09-12 11:14 AM

**Subject:** Space Weather Bulletin – 2012-09-09 issued at 14:30 UT (10:30 EDT/EST)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm warning in effect.
  - See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)
- 

**CURRENT CONDITIONS (14:30 UT)**

**Geomagnetic Activity:**

- polar cap zone: unsettled

- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Aeromagnetic surveys: potential for disruption in the polar cap zone
- 

**24 HOUR FORECAST**

**Geomagnetic Activity:**

- polar cap zone: quiet with active intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

**Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Aeromagnetic surveys: potential for significant disruptions in the polar cap zone and disruptions in the auroral zone.
  - Directional Drilling: significant deviations possible in the polar cap zone.
- 

**ADDITIONAL INFORMATION** at <http://www.spaceweather.gc.ca>

Updated conditions and forecast; Background information; FAQ, Glossary of terms, and potential impacts.

---

**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been moderate.
- An M solar x-ray flare erupted 08 SEP 2012 at 17:59 UT.

**INTERPLANETARY**

- The solar wind speed is currently very slow (~360 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|Bz| < 5$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was below threshold level 08 SEP 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** September-10-12 10:26 AM

**Subject:** Space Weather Bulletin – 2012-09-10 issued at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm warning in effect.
  - See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)
- 

**CURRENT CONDITIONS (14:00 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: moderate

**Possible Impact:**

- Geostationary satellites: Moderate risk of internal charging
- 

**24 HOUR FORECAST****Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet
- sub-auroral zone: quiet

**Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Aeromagnetic surveys: potential for disruptions in the polar cap zone.
- 

**ADDITIONAL INFORMATION** at <http://www.spaceweather.gc.ca>

Updated conditions and forecast; Background information; FAQ, Glossary of terms, and potential impacts.

---

**DETAILED INFORMATION:****SOLAR**

- Solar activity has been moderate.

**INTERPLANETARY**

- The solar wind speed is currently very slow (~350 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at threshold level 09 SEP 2012 and is expected to be below threshold level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-11-12 10:21 AM

**Subject:** Space Weather Bulletin – 2012-09-11

Space Weather Bulletin – 11 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\* This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- \* There is currently no major storm watch in effect.
- \* See our website for current information: <http://www.spaceweather.gc.ca> <<http://www.spaceweather.gc.ca>>

Geomagnetic Activity:

Current conditions (at 14:30 UT)

polar zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar zone: quiet with unsettled intervals  
aurora zone: quiet  
sub-auroral zone: quiet

Near-Earth Environment:

Current conditions (estimate at 14:30 UT)

energetic electron fluency at geostationary orbit: moderate

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

DETAILED INFORMATION:

SOLAR:

\* Solar activity has been low.

INTERPLANETARY:

\* The solar wind speed is currently slow (~ 300 km/s).  
\* The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

\* Energetic electron fluency at geostationary orbit was above threshold level 10 SEP 2012 and is expected to be above threshold level today.  
\* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> <<http://www.spaceweather.gc.ca/sffl-eng.php>> for the electron forecast.

GEOMAGNETIC:

\* Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone zone.  
\* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> <<http://www.spaceweather.gc.ca/sfst-1-eng.php>> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-12-12 1:19 PM

**Subject:** Space Weather Bulletin – 2012-09-12

Space Weather Bulletin – 12 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 17:30 UT (13:30 EDT)

\* This is for testing purposes. The final bulletin will also be produced in both official languages.\*  
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OVERVIEW:

\* There is currently no major storm watch in effect.  
\* See our website for current information: <http://www.spaceweather.gc.ca> <<http://www.spaceweather.gc.ca>>

Geomagnetic Activity:

Current conditions (at 17:30 UT)

polar zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar zone: quiet with unsettled intervals  
aurora zone: quiet

sub-auroral zone: quiet

Near-Earth Environment:

Current conditions (estimate at 17:30 UT)

energetic electron fluency at geostationary orbit: moderate

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

DETAILED INFORMATION:

SOLAR:

- \* Solar activity has been low.

INTERPLANETARY:

- \* The solar wind speed is currently slow (~ 300 km/s).
- \* The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- \* Energetic electron fluency at geostationary orbit was above threshold level 11 SEP 2012 and is expected to be below threshold level today.
- \* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> <<http://www.spaceweather.gc.ca/sffl-eng.php>> for the electron forecast.

GEOMAGNETIC:

- \* Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone zone.
- \* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> <<http://www.spaceweather.gc.ca/sfst-1-eng.php>> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** September-13-12 9:52 AM

**Subject:** Space Weather Bulletin – 2012-09-13

Space Weather Bulletin – 13 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:00 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate at 14:00 UT)

energetic electron fluency at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.



**INTERPLANETARY:**

- The solar wind speed is currently slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low  $|B_z| < 5$  nT levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluency at geostationary orbit was below threshold level 12 SEP 2012 and is expected to be below threshold level today .
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with active intervals in the aurora zone, and quiet with unsettled intervals in the subaroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subaroral zone
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** September-14-12 12:20 PM

**Subject:** Space Weather Bulletin – 2012-09-14

Space Weather Bulletin – 14 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 16:00 UT (12:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 16:00 UT)

polar cap zone: unsettled  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with active intervals  
auroral zone: quiet  
sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate at 16:00 UT)

energetic electron fluency at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

**DETAILED INFORMATION:****SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- The solar wind speed is currently slow (<450 km/s).
- The interplanetary magnetic field has been fluctuating at low  $|B_z| < 5$  nT levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluency at geostationary orbit was below threshold level 13 SEP 2012 and is expected to be below threshold level today .
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet with unsettled intervals in the subaroral zone. Over the next 24 hours geomagnetic

activity is forecast to be quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subaroral zone.

- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-15-12 10:02 AM

**Subject:** Space Weather Bulletin – 2012-09-15

Space Weather Bulletin – 15 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 14:00 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: quiet with unsettled intervals

auroral zone: quiet with unsettled intervals

sub-auroral zone: quiet

**Near-Earth Environment:**

Current conditions (estimate at 14:00 UT)

energetic electron fluency at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- The solar wind speed is currently slow (<450 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluency at geostationary orbit was below threshold level 14 SEP 2012 and is expected to be below threshold level today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subaroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subaroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-16-12 11:23 AM

**Subject:** Space Weather Bulletin – 2012-09-16

Space Weather Bulletin – 16 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 15:30 UT (11:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 15:30 UT)

polar zone: quiet  
auroral zone: quiet  
sub-auroral zone: quiet

24 hour forecast

polar zone: quiet with unsettled intervals  
auroral zone: quiet with unsettled intervals  
sub-auroral zone: quiet

Near-Earth Environment:

Current conditions (estimate at 15:30 UT)

energetic electron fluency at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

DETAILED INFORMATION:

SOLAR:

- Solar activity has been low.
- Several coronal holes are located near the centre of the solar disk.

INTERPLANETARY:

- The solar wind speed is currently slow (<450 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- Energetic electron fluency at geostationary orbit was below threshold level 15 SEP 2012 and is expected to be below threshold level today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subaroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subaroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-17-12 10:31 AM

**Subject:** Space Weather Bulletin – 2012-09-17

Space Weather Bulletin – 17 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

OVERVIEW:

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 14:30 UT)

- polar zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

24 hour forecast

- polar zone: quiet with unsettled intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

Near-Earth Environment:

Current conditions (estimate at 14:30 UT)

energetic electron fluency at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

DETAILED INFORMATION:

SOLAR:

- Solar activity has been low.
- One coronal hole is located near the center of the solar disk.

INTERPLANETARY:

- The solar wind speed is currently slow (<450 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- Energetic electron fluency at geostationary orbit was below threshold level 16 SEP 2012 and is expected to be below threshold level today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- Over the last 24 hours geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-18-12 9:02 AM

**Subject:** Space Weather Bulletin – 2012-09-18 issued at 13:00 UT (09:00 EDT)

Space Weather Bulletin – 18 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 13:00 UT (09:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 13:00 UT)

- polar zone: quiet
- auroral zone: active
- sub-auroral zone: unsettled

24 hour forecast

- polar zone: quiet with unsettled intervals
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

Near-Earth Environment:

- Current conditions (estimate at 13:00 UT)
  - energetic electron fluency at geostationary orbit: moderate
- Tomorrow's forecast
  - energetic electron fluency at geostationary orbit: normal

DETAILED INFORMATION:

SOLAR:

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.

INTERPLANETARY:

- The solar wind speed is currently slow (<450 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|Bz| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- Energetic electron fluency at geostationary orbit was above threshold level 17 SEP 2012 and is expected to be below threshold level today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subaroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subaroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-19-12 9:50 AM

**Subject:** Space Weather Bulletin – 2012-09-19 issued at 14:00 UT (10:00 EDT)

Space Weather Bulletin – 19 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 14:00 UT)

- polar zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

24 hour forecast

- polar zone: quiet with unsettled intervals
- auroral zone: unsettled intervals
- sub-auroral zone: quiet

Near-Earth Environment:

- Current conditions (estimate at 14:00 UT)
  - energetic electron fluency at geostationary orbit: normal
- Tomorrow's forecast

energetic electron fluency at geostationary orbit: moderate

DETAILED INFORMATION:

SOLAR:

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.

INTERPLANETARY:

- The solar wind speed is currently slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- Energetic electron fluency at geostationary orbit was below threshold level 18 SEP 2012 and is expected to be above threshold level today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- Over the last 24 hours geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-20-12 11:17 AM

**Subject:** Space Weather Bulletin – 2012-09-20 issued at 15:00 UT (11:00 EDT)

Space Weather Bulletin – 20 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- \* There is currently no major storm watch in effect.
- \* See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

CURRENT CONDITIONS (11:00 UT)

Geomagnetic Activity:

- \* polar cap zone: quiet
- \* auroral zone: quiet
- \* sub-auroral zone: quiet

Geostationary Satellite Environment:

- \* energetic electron fluence at geostationary orbit: Normal

Possible Impact:

- \* Impacts are not expected

24 HOUR FORECAST

Geomagnetic Activity:

- \* polar cap zone: quiet with active intervals
- \* auroral zone: unsettled with active intervals
- \* sub-auroral zone: quiet with unsettled intervals

Satellite Environment:

- \* energetic electron fluence at geostationary orbit: Normal

Possible Impact:

- \* Impacts are not expected.
-

ADDITIONAL INFORMATION at <http://www.spaceweather.gc.ca>

DETAILED INFORMATION:

SOLAR:

- \* Solar activity has been low
- \* One medium coronal hole is located near the centre of the solar disk.

INTERPLANETARY:

- \* The solar wind speed is currently slow (400-500 km/s)
- \* The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- \* Energetic electron fluence at geostationary orbit was at threshold level 19 September and is expected to be at threshold level today.
- \* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- \* Over the last 24 hours geomagnetic activity has been quiet with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with active intervals in the subauroral zone.
- \* Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
- \* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-21-12 4:34 PM

**Subject:** Space Weather Bulletin – 2012-09-20 issued at 21:00 UT (17:00 EDT)

Space Weather Bulletin – 20 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 21:00 UT (17:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 17:00 UT)

- polar zone: unsettled
- auroral zone: quiet
- sub-auroral zone: quiet

24 hour forecast

- polar zone: quiet with active intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

Near-Earth Environment:

Current conditions (estimate at 14:00 UT)

energetic electron fluency at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

DETAILED INFORMATION:

SOLAR:

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.

INTERPLANETARY:

- The solar wind speed is currently moderate (<600 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- Energetic electron fluency at geostationary orbit was below threshold level 19 SEP 2012 and is expected to be at threshold level today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subaroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subaroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** September-22-12 11:06 AM

**Subject:** Space Weather Bulletin – 2012-09-22 issued at 15:00 UT (11:00 EDT)

Space Weather Bulletin – 22 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

OVERVIEW:

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 15:00 UT)

- polar zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

24 hour forecast

- polar zone: quiet with unsettled intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

Near-Earth Environment:

Current conditions (estimate at 15:00 UT)

energetic electron fluency at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

DETAILED INFORMATION:

SOLAR:

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.

INTERPLANETARY:

- The solar wind speed is currently moderate (<600 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- Energetic electron fluency at geostationary orbit was below threshold level 21 SEP 2012 and is expected to be at threshold level today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:



- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subaroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subaroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-23-12 9:36 AM

**Subject:** Space Weather Bulletin – 2012-09-23 issued at 14:00 UT (10:00 EDT)

Space Weather Bulletin – 23 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 14:00 UT)

- polar zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

24 hour forecast

- polar zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

Near-Earth Environment:

Current conditions (estimate at 14:00 UT)

energetic electron fluency at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

DETAILED INFORMATION:

SOLAR:

- Solar activity has been low.

INTERPLANETARY:

- The solar wind speed is currently slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- Energetic electron fluency at geostationary orbit was below threshold level 22 SEP 2012 and is expected to be at threshold level today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subaroral zone.

Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subaroral zone.

- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-24-12 8:57 AM

**Subject:** Space Weather Bulletin – 2012-09-24 issued at 13:00 UT (09:00 EDT)

Space Weather Bulletin – 24 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 13:00 UT (09:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 13:00 UT)

- polar zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

24 hour forecast

- polar zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

Near-Earth Environment:

Current conditions (estimate at 13:00 UT)

energetic electron fluency at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

DETAILED INFORMATION:

SOLAR:

- Solar activity has been low.

INTERPLANETARY:

- The solar wind speed is currently slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- Energetic electron fluency at geostationary orbit was below threshold level 23 SEP 2012 and is expected to be below threshold level today.

- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subaroral zone.

Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subaroral zone.

- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-25-12 9:15 AM

**Subject:** Space Weather Bulletin – 2012-09-25 issued at 13:30 UT (09:30 EDT)

Space Weather Bulletin – 25 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 13:30 UT (09:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 13:30 UT)

- polar zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

24 hour forecast

- polar zone: quiet with unsettled intervals
- auroral zone: quiet
- sub-auroral zone: quiet

Near-Earth Environment:

Current conditions (estimate at 13:30 UT)

energetic electron fluency at geostationary orbit: normal

Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

DETAILED INFORMATION:

SOLAR:

- Solar activity has been low.

INTERPLANETARY:

- The solar wind speed is currently slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- Energetic electron fluency at geostationary orbit was below threshold level 24 SEP 2012 and is expected to be below threshold level today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subaroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subaroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-26-12 8:43 AM

**Subject:** Space Weather Bulletin – 2012-09-26 issued at 13:00 UT (09:00 EDT)

Space Weather Bulletin – 26 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 13:00 UT (09:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*  
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OVERVIEW:

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 13:00 UT)

- polar zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

24 hour forecast

- polar zone: quiet

- auroral zone: quiet
- sub-auroral zone: quiet

Near-Earth Environment:

Current conditions (estimate at 13:00 UT)  
energetic electron fluency at geostationary orbit: normal  
Tomorrow's forecast  
energetic electron fluency at geostationary orbit: normal

DETAILED INFORMATION:

SOLAR:

- Solar activity has been low.

INTERPLANETARY:

- The solar wind speed is currently slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- Energetic electron fluency at geostationary orbit was below threshold level 25 SEP 2012 and is expected to be below threshold level today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subaroral zone.

Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subaroral zone.

- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** September-27-12 9:13 AM

**Subject:** Space Weather Bulletin – 2012-09-27 issued at 13:00 UT (09:00 EDT)

Space Weather Bulletin – 27 SEP 2012 issued by the Canadian Space Weather Forecast Centre at 13:00 UT (09:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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OVERVIEW:

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 13:00 UT)

- polar zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

24 hour forecast

- polar zone: quiet with active intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

Near-Earth Environment:

Current conditions (estimate at 13:00 UT)  
energetic electron fluency at geostationary orbit: normal  
Tomorrow's forecast

energetic electron fluency at geostationary orbit: normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been low.

**INTERPLANETARY:**

- The solar wind speed is currently slow (<450 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluency at geostationary orbit was below threshold level 26 SEP 2012 and is expected to be below threshold level today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subaroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subaroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** September-28-12 11:49 AM

**Subject:** Space Weather Bulletin – 2012-09-28

Space Weather Bulletin – 28 Sep 2012 issued by the Canadian Space Weather Forecast Centre at 15:45 UT (11:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- There is currently no major storm watch in effect.
- An Earth-directed CME has erupted over the past 24 hours.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 29 Sep 2012 and 30 Sep 2012.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 15:45 UT)

polar cap zone: (quiet )  
auroral zone: (quiet )  
sub-auroral zone: (quiet )

24 hour forecast

polar cap zone: (quiet with stormy intervals)  
auroral zone: (quiet with stormy intervals)  
sub-auroral zone: (quiet with stormy intervals)

**Near-Earth Environment:**

Current conditions (estimate / at 15:35 UT)

energetic electron fluence at geostationary orbit: (Normal)

Tomorrow's forecast

energetic electron fluence at geostationary orbit: (Normal)

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been moderate.
- An Earth-directed CME erupted on 28 Sep 2012 at 00:00 UT.

- The active region located near the central region of the solar disk has produced a small solar x-ray flare and an associated CME.

**INTERPLANETARY:**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at normal levels 27 Sep 2012 and is expected to be at normal levels today.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** September-29-12 2:40 PM

**Subject:** Space Weather Bulletin – 2012-09-29

Space Weather Bulletin – 29 Sep 2012 issued by the Canadian Space Weather Forecast Centre at 18:30 UT (14:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

**OVERVIEW:**

- \* There is currently no major storm watch in effect.
- \* An Earth-directed CME has erupted on 28 Sep 2012 at 00:00 UT and is expected to reach the Earth on 30 Sep 2012 resulting in increased geomagnetic activity
- \* See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 18:15 UT)

polar cap zone: (quiet )

auroral zone: (quiet )

sub-auroral zone: (quiet )

24 hour forecast

polar cap zone: (quiet with stormy intervals)

auroral zone: (quiet with stormy intervals)

sub-auroral zone: (quiet with stormy intervals)

**Near-Earth Environment:**

Current conditions (estimate / at 18:15 UT)

energetic electron fluence at geostationary orbit: (Normal)

Tomorrow's forecast

energetic electron fluence at geostationary orbit: (Normal)

**DETAILED INFORMATION:**

**SOLAR:**

- \* Solar activity has been moderate.
- \* An Earth-directed CME erupted on 28 Sep 2012 at 00:00 UT.

**INTERPLANETARY:**

- \* The solar wind speed is currently slow (400-500 km/s).
- \* The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- \* Energetic electron fluence at geostationary orbit was at normal levels 28 Sep 2012 and is expected to be at normal levels today.
- \* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

GEOMAGNETIC:

- \* Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone.
- \* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** McKee, Lorne [<mailto:Lorne.McKee@NRCan-RNCan.gc.ca>]

**Sent:** September-30-12 10:56 AM

**Subject:** Space Weather Bulletin – 2012-09-30

Space Weather Bulletin – 30 Sep 2012 issued by the Canadian Space Weather Forecast Centre at 14:45 UT (10:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

OVERVIEW:

- \* There is currently no major storm watch in effect.
- \* An Earth-directed CME has erupted on 28 Sep 2012 at 00:00 UT and is expected to reach the Earth on 30 Sep 2012 resulting in increased geomagnetic activity
- \* See our website for current information: <http://www.spaceweather.gc.ca>

Geomagnetic Activity:

Current conditions (at 14:45 UT)  
 polar cap zone: (quiet )  
 auroral zone: (unsettled )  
 sub-auroral zone: (unsettled )  
 24 hour forecast  
 polar cap zone: (quiet with stormy intervals)  
 auroral zone: (quiet with stormy intervals)  
 sub-auroral zone: (quiet with stormy intervals)

Near-Earth Environment:

Current conditions (estimate / at 14:45 UT)  
 energetic electron fluence at geostationary orbit: (Normal)  
 Tomorrow's forecast  
 energetic electron fluence at geostationary orbit: (Normal)

DETAILED INFORMATION:

SOLAR:

- \* Solar activity has been low.
- \* An Earth-directed CME erupted on 28 Sep 2012 at 00:00 UT.

INTERPLANETARY:

- \* The solar wind speed is currently very low ( $< 400$  km/s).
- \* The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

NEAR-EARTH ENVIRONMENT:

- \* Energetic electron fluence at geostationary orbit was at normal levels 29 Sep 2012 and is expected to be at normal levels today.

\* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

\* Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be quiet with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with stormy intervals in the subauroral zone.

\* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** October-01-12 11:27 AM

**Subject:** Space Weather Bulletin – 2012-10-01

Space Weather Bulletin – 01 Oct 2012 issued by the Canadian Space Weather Forecast Centre at 15:15 UT (11:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**OVERVIEW:**

- The major storm watch issued 01 Oct 2012 01:45 UT for the polar cap, auroral zone and sub-auroral zones ended 01 Oct 2012 07:00 UT.
- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity are possible today.
- See our website for current information: <http://www.spaceweather.gc.ca>

**Geomagnetic Activity:**

Current conditions (at 15:15 UT)

polar cap zone: quiet

auroral zone: quiet

sub-auroral zone: quiet

24 hour forecast

polar cap zone: unsettled with active intervals

auroral zone: active with stormy intervals

sub-auroral zone: unsettled with active intervals

**Near-Earth Environment:**

Current conditions (estimate / at 15:05 UT)

energetic electron fluence at geostationary orbit: Normal

Tomorrow's forecast

energetic electron fluence at geostationary orbit: Normal

**DETAILED INFORMATION:**

**SOLAR:**

- Solar activity has been very low.

**INTERPLANETARY:**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at high ( $10 < |B_z| < 20$  nT) levels.
- The interplanetary magnetic field currently has  $B_z = +8$  nT.
- An interplanetary shock has been observed on 30 Sep 2012 at 22:15 UT. The interplanetary magnetic field increased from moderate (7nT) to high (15nT) levels and the solar wind speed increased from very slow (310 km/s) to slow (395 km/s).
- Following the interplanetary shock, the interplanetary magnetic field reached very high ( $|B_z| = 20$ nT) levels and the solar wind reached a maximum of a slow speed (450 km/s).
- Prolonged periods of negative interplanetary magnetic field between 30 Sep 2012 22:15 and 01 Oct 2012 03:30 resulted in the issuance of a major storm watch for the polar cap, auroral zone and sub-auroral zones from 01 Oct 2012 01:45 UT to 01 Oct 2012 07:00 UT.

**NEAR-EARTH ENVIRONMENT:**

- Energetic electron fluence at geostationary orbit was at normal levels 30 Sep 2012 and is expected to be at normal levels today.



- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC:**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the subauroral zone. Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the subauroral zone.
  - A geomagnetic sudden impulse due to a shock in the solar wind was observed on 30 Sep 2012 at 23:07 UT.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** October-02-12 10:23 AM

**Subject:** Space Weather Bulletin – 2012-10-02 issued at 14:15 UT (10:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm watch in effect.
  - See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)
- 

**CURRENT CONDITIONS (14:00 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

**Possible Impact:**

- Impacts are not expected.
- 

**24 HOUR FORECAST**

**Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

**Possible Impact:**

- Impacts are not expected.
- 

**ADDITIONAL INFORMATION** at <http://www.spaceweather.gc.ca>

Updated conditions and forecast; Background information; FAQ, Glossary of terms, and potential impacts.

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**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been low.

**INTERPLANETARY**

- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at normal levels 01 Oct 2012 and is expected to be at moderate levels tomorrow.

- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

## GEOMAGNETIC

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** October-03-12 10:19 AM

**Subject:** Space Weather Bulletin – 2012-10-03 issued at 14:15 UT (10:15 EDT)

**\*This is for testing purposes. The final bulletin will also be produced in both official languages.\***

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### Summary

- There is currently no major storm warning in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (14:15)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: low

#### Possible Impact:

- Impacts are not expected.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet with quiet intervals
- sub-auroral zone: quiet with quiet intervals

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: moderate

#### Possible Impact:

- Impacts are not expected.

### Detailed information

#### Solar

- Solar activity has been low.

#### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

#### Near-Earth Environment

- Energetic electron fluence at geostationary orbit was at a low normal level 02 Oct 2012 and is expected to be at a moderate level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
-

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]  
**Sent:** October-04-12 9:54 AM  
**Subject:** Space Weather Bulletin - 2012-10-04 issued at 13:45 UT (09:45 EDT)

**\*This is for testing purposes. The final bulletin will also be produced in both official languages.\***

**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (13:45 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.
- One medium coronal hole is located near the centre of the solar disk.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a low level at 03 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]  
**Sent:** October-05-12 8:41 AM  
**Subject:** Space Weather Bulletin - 2012-10-05 issued at 14:30 UT (08:30 EDT)

**\*This is for testing purposes. The final bulletin will also be produced in both official languages.\***

**Summary**

- The is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (12:15 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.
- One medium coronal hole is located near the centre of the solar disk.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |Bz| < 5$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 04 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** October-06-12 10:35 AM

**Subject:** Space Weather Bulletin - 2012-10-06 issued at 14:30 UT (10:30 EDT)

**\*This is for testing purposes. The final bulletin will also be produced in both official languages.\***

**Summary**

- The is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (14:15 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: active
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.
- An Earth-directed CME erupted on 05 OCT 2012 00:24 and is expected to reach the Earth on 09 OCT 2012, resulting in increased geomagnetic activity.
- One medium coronal hole is located near the centre of the solar disk.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 05 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** October-07-12 9:00 AM

**Subject:** Space Weather Bulletin - 2012-10-07 issued at 13:00 UT (09:00 EDT)

**\*This is for testing purposes. The final bulletin will also be produced in both official languages.\***

**Summary**

- The is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 08 OCT 2012 and 09 OCT 2012.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (12:45 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet with active intervals
- auroral zone: quiet with active intervals
- sub-auroral zone: quiet with active intervals

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Impacts are not expected.

**Detailed Information****Solar**

- Solar activity has been moderate.
- An Earth-directed CME erupted on 05 OCT 2012 02:48 and is expected to reach the Earth between 08 OCT 2012 and 09 OCT 2012, resulting in increased geomagnetic activity.
- One medium coronal hole is located near the centre of the solar disk.
- An Earth-directed CME erupted on 07 OCT 2012 at approximately 08:09 and is expected to reach the Earth on 10 OCT 2012, resulting in increased geomagnetic activity.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 06 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** October-08-12 9:13 AM

**Subject:** Space Weather Bulletin - 2012-10-08 issued at 13:00 UT (09:00 EDT)

**\*This is for testing purposes. The final bulletin will also be produced in both official languages.\***

**Summary**

- There is currently no major storm watch in effect.
- The major storm WATCH issued 08 OCT 2012 09:02 for the polar cap, auroral, and sub-auroral zones ended 08 OCT 2012 11:08.
- Stormy conditions are currently observed in the auroral zone.
- Stormy conditions are possible in the auroral and sub-auroral zones within the next 24 hours.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (13:00 UT)****Geomagnetic Activity:**

- polar cap zone: unsettled
- auroral zone: stormy
- sub-auroral zone: active

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Power Systems: possibility of weak voltage fluctuations in the auroral and sub-auroral zones.

- HF radio: Ionospheric and polar cap absorptions events may affect radio communications for transpolar flights and other arctic operations.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: quiet with active intervals
- auroral zone: stormy
- sub-auroral zone: unsettled with active intervals

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impact:**

- Power Systems: possibility of weak voltage fluctuations in the auroral and sub-auroral zones.
- HF radio: Ionospheric and polar cap absorptions events may affect radio communications for transpolar flights and other arctic operations.
- Aeromagnetic surveys: Potential for disruption in the auroral and sub-auroral zones.

#### **Detailed Information**

##### **Solar**

- Solar activity has been moderate.
- An M (medium) solar x-ray flare erupted 08 OCT 2012 12:00 near the edge of the solar disk.
- An Earth-directed CME erupted on 05 OCT 2012 02:48 UT, resulting in disturbed geomagnetic activity.

##### **Interplanetary**

- An interplanetary shock has been observed on 08 OCT 2012 04:00 UT.
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 07 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with stormy intervals in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, stormy in the auroral zone, and unsettled with active intervals in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** October-08-12 9:42 PM

**Subject:** Space Weather Bulletin - 2012-10-08 UPDATE issued at 2012-10-09 01:15 UT (2012-10-08 21:15 EDT)

**\*This is for testing purposes. The final bulletin will also be produced in both official languages.\***

##### **Summary**

- A major storm WATCH is in effect for the polar cap, auroral, and sub-auroral zones from 09 OCT 2012 00:42 to 09 OCT 2012 03:22 UT.
- The major storm WATCH could be extended until 09 OCT 2012 09:00 depending on Interplanetary Magnetic Field conditions.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

##### **Current Conditions (01:15 UT )**

##### **Geomagnetic Activity:**

- polar cap zone: stormy
- auroral zone: major storm
- sub-auroral zone: major storm

**Possible Impact:**

- Power Systems: possibility of weak voltage fluctuations in the auroral and sub-auroral zones.
- HF radio: Ionospheric and polar cap absorptions events may affect radio communications for transpolar flights and other arctic operations.

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: active with major storm intervals
- auroral zone: stormy with major storm intervals
- sub-auroral zone: active with major storm intervals

**Possible Impact:**

- Power Systems: possibility of weak voltage fluctuations in the auroral and sub-auroral zones.
- HF radio: Ionospheric and polar cap absorptions events may affect radio communications for transpolar flights and other arctic operations.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the auroral and sub-auroral zones.

**Detailed Information****Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
  - The interplanetary magnetic field has been primarily negative at high ( $10 < |B_z| < 20$  nT) levels.
  - Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** October-09-12 7:31 AM

**Subject:** Space Weather Bulletin - 2012-10-09 issued at 11:30 UT (7:30 EDT)

**\*This is for testing purposes. The final bulletin will also be produced in both official languages.\***

**Summary**

- The major storm WATCH issued 09 OCT 2012 00:42 for the polar cap, auroral, and sub-auroral zones ended 09 OCT 2012 09:37.
- There is currently no major storm watch in effect.
- Stormy conditions are possible in the polar cap, auroral, and sub-auroral zones within the next 24 hours.
- A CME was observed on 07 OCT 2012, and is expected to deliver a glancing blow to the Earth on 10 OCT 2012, resulting in increased geomagnetic activity.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (11:15 UT)****Geomagnetic Activity:**

- polar cap zone: active
- auroral zone: stormy
- sub-auroral zone: active

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impact:**

- Impacts are not expected.

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: unsettled with stormy intervals
- auroral zone: stormy
- sub-auroral zone: active with stormy intervals

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: high

**Possible Impact:**



- Impacts are not expected.

#### **Detailed Information**

##### **Solar**

- Solar activity has been moderate.
- A CME was observed on 07 OCT 2012, and is expected to deliver a glancing blow to the Earth on 10 OCT 2012, resulting in increased geomagnetic activity.
- An non-Earth-directed CME erupted on 08 OCT 2012 11:39.

##### **Interplanetary**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at high ( $10 < |B_z| < 20$  nT) levels.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a low level at 08 OCT 2012 and is expected to be at a high level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, stormy with major storm intervals in the auroral zone, and active with major storm intervals in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, stormy in the auroral zone, and active with stormy intervals in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** October-10-12 11:30 AM

**Subject:** Space Weather Bulletin – 2012-10-10 issued at 15:15 UT (11:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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#### **SUMMARY:**

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity observed on 07 Oct 2012 are not expected.
- See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

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#### **CURRENT CONDITIONS (15:15 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: unsettled
- auroral zone: quiet
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: High

##### **Possible Impact:**

- Geostationary satellites: Moderate risk of internal charging

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#### **24 HOUR FORECAST**

##### **Geomagnetic Activity:**

- polar cap zone: unsettled with active intervals
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Moderate

##### **Possible Impact:**

- Impacts are not expected.

**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been low.

**INTERPLANETARY**

- Interplanetary activity has been moderate.
- The solar wind speed is currently moderate (500-700 km/s).
- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The interplanetary magnetic field has been at moderate ( $5 < |B_z| < 10$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at normal levels 09 Oct 2012 and is expected to be at high levels tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled with stormy intervals) in the auroral zone, and quiet with active intervals in the subauroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** October-11-12 11:05 AM

**Subject:** Space Weather Bulletin – 2012-10-11 issued at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm watch in effect.
- See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

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**CURRENT CONDITIONS (HH:MM UT)**

**Geomagnetic Activity:**

- polar cap zone: active
- auroral zone: active
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Moderate

**Possible Impact:**

- Impacts are not expected.

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**24 HOUR FORECAST**

**Geomagnetic Activity:**

- polar cap zone: quiet with active intervals
- auroral zone: unsettled
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

**Possible Impact:**

- Impacts are not expected.

**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been low.
- One large coronal hole elongated in longitude is located near the centre of the solar disk.

#### **INTERPLANETARY**

- Interplanetary activity has been low / moderate / high / very high).
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

#### **GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at high levels 10 Oct 2012 and is expected to be at normal levels tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, unsettled in the auroral zone, and quiet with active intervals in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** October-12-12 10:52 AM

**Subject:** Space Weather Bulletin – 2012-10-12 issued at 14:45 UT (10:45 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

#### **SUMMARY:**

- There is currently no major storm watch in effect.
- See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **CURRENT CONDITIONS (14:30 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: active
- auroral zone: unsettled
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: High

##### **Possible Impact:**

- Geostationary satellites: Moderate risk of internal charging

#### **24 HOUR FORECAST**

##### **Geomagnetic Activity:**

- polar cap zone: unsettled with active intervals
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

##### **Possible Impact:**

- Impacts are not expected.

#### **DETAILED INFORMATION:**

##### **SOLAR**

- Solar activity has been low.
- One large coronal hole elongated in longitude is located near the centre of the solar disk.

##### **INTERPLANETARY**

- Interplanetary activity has been low.
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

#### **GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at moderate levels 11 Oct 2012 and is expected to be at normal levels tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the subauroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be : unsettled with active intervals in the polar zone, : unsettled with active intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** October-13-12 8:55 AM

**Subject:** Space Weather Bulletin - 2012-10-13 issued at 12:50 UT (08:50 EDT)

**\*This is for testing purposes. The final bulletin will also be produced in both official languages.\***

#### **Summary**

- There is currently no major storm watch in effect.
- The major storm WATCH issued 13 OCT 2012 04:17 UT for the polar cap, auroral, and sub-auroral zones ended 13 OCT 2012 10:43 UT.
- Stormy conditions are currently observed in the auroral and sub-auroral zones.
- Stormy conditions are possible in the polar cap, auroral, and sub-auroral zones within the next 24 hours.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (12:45 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: active
- auroral zone: stormy
- sub-auroral zone: stormy

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: moderate

##### **Possible Impact:**

- Directional Drilling: Significant deviations possible in the auroral and sub-auroral zones.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: unsettled with active intervals
- auroral zone: stormy
- sub-auroral zone: active with stormy intervals

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: moderate

##### **Possible Impact:**

- Aeromagnetic surveys: Potential for disruption in the auroral and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the auroral and sub-auroral zones.

#### **Detailed Information**

##### **Solar**

- One medium coronal hole elongated in longitude is located near the centre of the solar disk.
- Solar activity has been low.

##### **Interplanetary**

- The solar wind speed is currently moderate (500-700 km/s).
- Moderate solar wind speeds are due to high speed streams from coronal holes.

- The interplanetary magnetic field has been fluctuating at high ( $10 < |B_z| < 20$  nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

#### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a moderate level at 12 OCT 2012 and is expected to be at a moderate level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and quiet with stormy intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, stormy in the auroral zone, and active with stormy intervals in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** October-14-12 8:25 AM

**Subject:** Space Weather Bulletin - 2012-10-14 issued at 12:25 UT (08:25 EDT)

**\*This is for testing purposes. The final bulletin will also be produced in both official languages.\***

#### **Summary**

- There is currently no major storm watch in effect.
- Stormy conditions are currently observed in the auroral zone.
- Stormy conditions are possible in the polar cap, auroral, and sub-auroral zones within the next 24 hours.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (12:15 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: unsettled
- auroral zone: stormy
- sub-auroral zone: active

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: moderate

##### **Possible Impact:**

- Geostationary satellites: moderate risk of internal charging.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: unsettled with stormy intervals
- auroral zone: stormy
- sub-auroral zone: active

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: high

##### **Possible Impact:**

- Geostationary satellites: moderate risk of internal charging.
- Directional Drilling: Significant deviations possible in the auroral zone.

#### **Detailed Information**

##### **Solar**

- One medium coronal hole is located near the centre of the solar disk.
- Solar activity has been low.

##### **Interplanetary**

- The solar wind speed is currently moderate (500-700 km/s).
- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a moderate level at 13 OCT 2012 and is expected to be at a high level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, stormy in the auroral zone, and active in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** October-15-12 10:14 AM

**Subject:** Space Weather Bulletin - 2012-10-15 issued at 14:10 UT (10:10 EDT)

**\*This is for testing purposes. The final bulletin will also be produced in both official languages.\***

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#### Summary

- There is currently no major storm watch in effect.
- Stormy conditions observed 14 OCT 2012 in the polar cap, auroral, and sub-auroral zones have ended.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### Current Conditions (14:00 UT)

##### Geomagnetic Activity:

- polar cap zone: unsettled
- auroral zone: unsettled
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: moderate

##### Possible Impacts:

- Geostationary satellites: moderate risk of internal charging.

#### 24 Hour Forecast

##### Geomagnetic Activity:

- polar cap zone: quiet with unsettled intervals
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: moderate

##### Possible Impacts:

- Geostationary satellites: moderate risk of internal charging.

#### Detailed Information

##### Solar

- Solar activity has been low.
- An non-Earth-directed CME erupted on 14 OCT 2012 00:42 UT.

##### Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

##### Geostationary Satellite Environment

- The 5-minute integral energetic electron flux is currently high.
- Energetic electron fluence at geostationary orbit was at a moderate level at 14 OCT 2012 and is expected to be at a moderate level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** October-16-12 10:32 AM  
**Subject:** Space Weather Bulletin – 2012-10-16 issued at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm watch in effect.
  - See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)
- 

**CURRENT CONDITIONS (14:15 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Moderate

**Possible Impact:**

- Impacts are not expected.
- 

**24 HOUR FORECAST**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

**Possible Impact:**

- Impacts are not expected.
- 

**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been low.

**INTERPLANETARY**

- Interplanetary activity has been low.
- The solar wind speed is currently slow (400-500 km/s) .
- The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at moderate levels 15 Oct 2012 and is expected to be at normal levels tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.

- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** October-17-12 11:31 AM

**Subject:** Space Weather Bulletin – 2012-10-17 issued at 15:30 UT (11:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm watch in effect.
  - See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)
- 

**CURRENT CONDITIONS (15:15 UT)**

**Geomagnetic Activity:**

- polar cap zone: unsettled
- auroral zone: unsettled
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Moderate

**Possible Impact:**

- Impacts are not expected.
- 

**24 HOUR FORECAST**

**Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

**Possible Impact:**

- Impacts are not expected.
- 

**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been low.

**INTERPLANETARY**

- Interplanetary activity has been low.
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at moderate levels 16 Oct 2012 and is expected to be at normal levels tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the subauroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.



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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** October-18-12 10:00 AM  
**Subject:** Space Weather Bulletin – 2012-10-18 issued at 14:00 UT (10:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm watch in effect.
- See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

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**CURRENT CONDITIONS (13:45 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: High

**Possible Impact:**

- Geostationary satellites: High risk of internal charging

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**24 HOUR FORECAST**

**Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

**Possible Impact:**

- Impacts are not expected.

---

**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been low.

**INTERPLANETARY**

- Interplanetary activity has been moderate.
- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at moderate levels 17 Oct 2012 and is expected to be at normal levels tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
-

**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** October-19-12 10:41 AM  
**Subject:** Space Weather Bulletin – 2012-10-19 issued at 14:30 UT (10:30 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm watch in effect.
- See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

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**CURRENT CONDITIONS (14:15 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: High

**Possible Impact:**

- Geostationary satellites: High risk of internal charging

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**24 HOUR FORECAST**

**Geomagnetic Activity:**

- polar cap zone: quiet with active intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

**Possible Impact:**

- Impacts are not expected.

---

**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been low.

**INTERPLANETARY**

- Interplanetary activity has been low.
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at moderate levels 18 Oct 2012 and is expected to be at normal levels tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]  
**Sent:** October-20-12 1:16 PM  
**Subject:** Space Weather Bulletin – 2012-10-20 issued at 17:15 UT (13:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm watch in effect.
- See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

---

**CURRENT CONDITIONS (17:00 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: High

**Possible Impact:**

- Geostationary satellites: High risk of internal charging

---

**24 HOUR FORECAST**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

**Possible Impact:**

- Impacts are not expected.

---

**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been low.

**INTERPLANETARY**

- Interplanetary activity has been low .
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at high levels 19 Oct 2012 and is expected to be at normal levels tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** October-21-12 1:09 PM

**Subject:** Space Weather Bulletin – 2012-10-21 issued at 17:00 UT (13:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm watch in effect.
- See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

---

### **CURRENT CONDITIONS (16:45 UT)**

#### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Moderate

#### **Possible Impact:**

- Geostationary satellites: Moderate risk of internal charging.

---

### **24 HOUR FORECAST**

#### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

#### **Possible Impact:**

- Impacts are not expected.

---

### **DETAILED INFORMATION:**

#### **SOLAR**

- Solar activity has been moderate.
- A M (medium) solar x-ray flare erupted 20 Oct 2012 at 18:14 UT near the edge of the solar disk.

#### **INTERPLANETARY**

- Interplanetary activity has been low.
- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

#### **GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at high levels 20 Oct 2012 and is expected to be at normal levels tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** October-22-12 11:18 AM

**Subject:** Space Weather Bulletin – 2012-10-22 issued at 15:15 UT (11:15 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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### **SUMMARY:**

- There is currently no major storm watch in effect.
- See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**CURRENT CONDITIONS (15:00 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Moderate

**Possible Impact:**

- Geostationary satellites: Moderate risk of internal charging
- 

**24 HOUR FORECAST**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

**Possible Impact:**

---

**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been low.

**INTERPLANETARY**

- Interplanetary activity has been low.
- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at moderate levels 21 Oct 2012 and is expected to be at normal levels tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]

**Sent:** October-23-12 11:02 AM

**Subject:** Space Weather Bulletin – 2012-10-23 issued at 15:00 UT (11:00 EDT)

\*This is for testing purposes. The final bulletin will also be produced in both official languages.\*

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**SUMMARY:**

- There is currently no major storm watch in effect.
  - See our website for current geomagnetic conditions: <http://www.spaceweather.gc.ca> (updated every 15 minutes)
- 

**CURRENT CONDITIONS (HH:MM UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet

- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Moderate

**Possible Impact:**

- Geostationary satellites: Moderate risk of internal charging.
- 

**24 HOUR FORECAST**

**Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: Normal

**Possible Impact:**

- Impacts are not expected.
- 

**DETAILED INFORMATION:**

**SOLAR**

- Solar activity has been moderate.
- The active region located near the east limb of the solar disk has produced several solar x-ray flares and has the potential to produce subsequent solar eruptions.

**INTERPLANETARY**

- Interplanetary activity has been low.
- The solar wind speed is currently very slow (<400 km/s).
- The interplanetary magnetic field has been at low ( $2 < |B_z| < 5$  nT) levels.

**GEOSTATIONARY SATELLITE ENVIRONMENT**

- Energetic electron fluence at geostationary orbit was at moderate levels 22 Oct 2012 and is expected to be at normal levels tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**GEOMAGNETIC**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the subauroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the subauroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** October-23-12 11:03 AM

**Subject:** Space Weather Bulletin – 2012-10-23 issued at 15:00 UT (11:00 EDT)

**\*This is for testing purposes\***

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (14:45 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: moderate

**Possible Impacts:**

- Geostationary satellites: moderate risk of internal charging.

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Detailed Information****Solar**

- Solar activity has been moderate.
- An X (large) solar x-ray flare erupted 24 Oct 2012 03:17 UT near the edge of the solar disk.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a moderate level at 22 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** October-24-12 10:33 AM

**Subject:** Space Weather Bulletin – 2012-10-24 issued at 14:30 UT (10:30 EDT)

\*This is for testing purposes\*

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (14:15 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: moderate

**Possible Impacts:**

- Geostationary satellites: moderate risk of internal charging.

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Detailed Information****Solar**

- Solar activity has been low.
- Two small coronal holes are located near the centre of the solar disk.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a moderate level at 23 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** October-25-12 10:42 AM

**Subject:** Space Weather Bulletin – 2012-10-25 issued at 14:40 UT (10:40 EDT)

\*This is for testing purposes\*

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (14:30 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: moderate

**Possible Impacts:**

- Geostationary satellites: moderate risk of internal charging.

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Detailed Information****Solar**

- Solar activity has been low.
- Two small coronal holes are located near the centre of the solar disk.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).



- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

#### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a moderate level at 24 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** October-26-12 10:57 AM

**Subject:** Space Weather Bulletin – 2012-10-26 issued at 14:55 UT (10:55 EDT)

\*This is for testing purposes\*

La version française du bulletin suit.

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#### **Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (14:45 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: moderate

##### **Possible Impacts:**

- Geostationary satellites: moderate risk of internal charging.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

#### **Detailed Information**

##### **Solar**

- Solar activity has been low.
- Two small coronal holes are located near the centre of the solar disk.

##### **Interplanetary**

- The solar wind speed is currently very slow ( $< 400$  km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a moderate level at 25 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.

- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** October-27-12 1:29 PM  
**Subject:** Space Weather Bulletin – 2012-10-27 issued at 17:25 UT (13:25 EDT)

\*This is for testing purposes\*  
La version française du bulletin suit.

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#### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### Current Conditions (17:15UT)

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### 24 Hour Forecast

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Detailed Information

##### Solar

- Solar activity has been low.
- Two small coronal holes are located near the centre of the solar disk.

##### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

##### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 26 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** October-28-12 2:36 PM  
**Subject:** Space Weather Bulletin – 2012-10-28 issued at 18:55 UT (14:35 EDT)

\*This is for testing purposes\*

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (18:15 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Detailed Information****Solar**

- Solar activity has been low.
- Two small coronal holes are located near the edge of the solar disk.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 27 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** October-29-12 10:59 AM

**Subject:** Space Weather Bulletin – 2012-10-29 issued at 14:55 UT (10:55 EDT)

\*This is for testing purposes\*

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (14:45 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Detailed Information****Solar**

- Solar activity has been low.
- Four small coronal holes are located near the edge of the solar disk.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 28 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** October-30-12 11:02 AM

**Subject:** Space Weather Bulletin – 2012-10-30 issued at 15:00 UT (11:00 EDT)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- An Earth-directed CME erupted on 27 OCT 2012 16:00 UT and is expected to reach the Earth on 01 NOV 2012, resulting in increased geomagnetic activity.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (14:45 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

#### Detailed Information

##### Solar

- Solar activity has been very low.
- Two small coronal holes are located near the edge of the solar disk.

##### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

##### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 29 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** October-31-12 10:55 AM

**Subject:** Space Weather Bulletin – 2012-10-31 issued at 14:55 UT (10:55 EDT)

**\*This is for testing purposes\***

La version française du bulletin suit.

#### Summary

- There is currently no major storm watch in effect.
- An Earth-directed CME erupted on 27 NOV 2012 16:00 UT and is expected to reach the Earth on 01 NOV 2012, resulting in increased geomagnetic activity.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### Current Conditions (14:45 UT)

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### 24 Hour Forecast

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Detailed Information

##### Solar

- Solar activity has been very low.
- One small coronal hole is located near the centre of the solar disk.
- One small coronal hole is located near the edge of the solar disk.

##### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).

- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

#### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 30 OCT 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** November-01-12 12:14 PM

**Subject:** Space Weather Bulletin – 2012-11-01 issued at 16:05 UT (12:05 EDT)

\*This is for testing purposes\*

La version française du bulletin suit.

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#### **Summary**

- There is currently no major storm watch in effect.
- Stormy conditions are currently observed in the auroral zone.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (15:45 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: unsettled
- auroral zone: stormy
- sub-auroral zone: active

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the auroral zone.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: active with stormy intervals
- sub-auroral zone: unsettled with active intervals

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

#### **Detailed Information**

##### **Solar**

- Solar activity has been very low.
- One medium coronal hole is located near the centre of the solar disk.

##### **Interplanetary**

- The solar wind speed is currently very slow ( $< 400$  km/s).
- The interplanetary magnetic field has been primarily negative at moderate ( $5 < |B_z| < 10$  nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 31 OCT 2012 and is expected to be at a normal level tomorrow.

- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** November-02-12 10:55 AM

**Subject:** Space Weather Bulletin – 2012-11-02 issued at 14:55 UT (10:55 EDT)

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### **Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### **Current Conditions (14:45 UT)**

#### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

### **24 Hour Forecast**

#### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

#### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: moderate

### **Detailed Information**

#### **Solar**

- Solar activity has been very low.
- One small coronal hole is located near the centre of the solar disk.

#### **Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been primarily positive at low ( $2 < |B_z| < 5$  nT) levels.

#### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 01 NOV 2012 and is expected to be at a moderate level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with major storm intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** November-03-12 1:31 PM  
**Subject:** Space Weather Bulletin – 2012-11-03 issued at 17:25 UT (13:25 EDT)

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (17:15 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Detailed Information****Solar**

- Solar activity has been very low.
- One small coronal hole is located near the centre of the solar disk.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 02 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]  
**Sent:** November-04-12 1:14 PM  
**Subject:** Space Weather Bulletin – 2012-11-04 issued at 18:10 UT (13:10 EST)

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)



**Current Conditions (18:00 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Detailed Information****Solar**

- Solar activity has been very low.
- One small coronal hole is located near the edge of the solar disk.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 03 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]

**Sent:** November-05-12 11:08 AM

**Subject:** Space Weather Bulletin – 2012-11-05 issued at 16:05 UT (11:05 EST)

\*This is for testing purposes\*

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (15:45 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet

- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Detailed Information**

**Solar**

- Solar activity has been very low.
- One small coronal hole is located near the edge of the solar disk.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 04 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-06-12 7:29 AM

**Subject:** Space Weather Bulletin - 2012-11-06 issued at 12:30 UT (7:30 EST)

\*This is for testing purposes\*

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (12:15 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.
- Two coronal holes are located near the edge of the solar disk.

#### **Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

#### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 05 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-07-12 7:45 AM

**Subject:** Space Weather Bulletin - 2012-11-07 issued at 12:45 UT (07:45 EST)

\*This is for testing purposes\*

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#### **Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (12:30 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: unsettled
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Aeromagnetic surveys: Potential for disruption in the auroral zone.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Aeromagnetic surveys: Potential for disruption in the auroral zone.

#### **Detailed Information**

##### **Solar**

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.

##### **Interplanetary**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 06 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-08-12 8:04 AM

**Subject:** Space Weather Bulletin - 2012-11-08 issued at 13:05 UT (08:05 EST)

\*This is for testing purposes\*

La version française du bulletin suit.

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### **Summary**

- There is currently no major storm watch in effect.
- A medium solar x-ray flare has erupted over the past 24 hours.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### **Current Conditions (12:45 UT)**

#### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

#### **Possible Impacts:**

- Impacts are not expected.

### **24 Hour Forecast**

#### **Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

#### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

#### **Possible Impacts:**

- Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.

### **Detailed Information**

#### **Solar**

- Solar activity has been low.
- An non-Earth-directed CME erupted on 08 NOV 2012 02:20 UT.
- One coronal hole is located near the centre of the solar disk.
- One coronal hole is located near the edge of the solar disk.
- An M (medium) solar x-ray flare erupted 08 NOV 2012 02:18 UT near the edge of the solar disk.

#### **Interplanetary**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

#### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 07 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-09-12 7:41 AM

**Subject:** Space Weather Bulletin - 2012-11-08 issued at 12:40 UT (07:40 EST)

**\*This is for testing purposes\***

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#### **Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (12:30 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Impacts are not expected.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Impacts are not expected.

#### **Detailed Information**

##### **Solar**

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.

##### **Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 08 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.

- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]  
**Sent:** November-10-12 8:47 AM  
**Subject:** Space Weather Bulletin - 2012-11-08 issued at 13:50 UT (08:50 EST)

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#### Summary

- There is currently no major storm watch in effect.
- A CME was observed on 09 NOV 2012, and is expected to deliver a glancing blow to the Earth on 12-13 NOV 2012, resulting in disturbed geomagnetic activity.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### Current Conditions (13:30 UT)

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Impacts are not expected.

#### 24 Hour Forecast

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Impacts are not expected.

#### Detailed Information

##### Solar

- Solar activity has been low.
- A CME was observed on 09 NOV 2012, and is expected to deliver a glancing blow to the Earth on 12-13 NOV 2012, resulting in disturbed geomagnetic activity.
- One small coronal hole is located near the centre of the solar disk.

##### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

##### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 09 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.

- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-11-12 8:34 AM

**Subject:** Space Weather Bulletin - 2012-11-08 issued at 13:35 UT (08:35 EST)

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### Summary

- There is currently no major storm watch in effect.
- Two CMEs were observed on 09-11 NOV 2012, and are expected to deliver a glancing blow to the Earth on 12-13 NOV 2012, resulting in disturbed geomagnetic activity.
- A medium solar x-ray flare has erupted over the past 24 hours.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (13:15 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### Detailed Information

#### Solar

- Solar activity has been low.
- A CME was observed on 09 NOV 2012, and is expected to deliver a glancing blow to the Earth on 12-13 NOV 2012, resulting in disturbed geomagnetic activity.
- A CME was observed on 11 NOV 2012, and is expected to deliver a glancing blow to the Earth on 12-13 NOV 2012, resulting in disturbed geomagnetic activity.
- One small coronal hole is located near the centre of the solar disk.
- An M (medium) solar x-ray flare erupted 11 NOV 2012 02:24 UT near the centre of the solar disk.

#### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

#### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 10 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-12-12 7:29 AM

**Subject:** Space Weather Bulletin - 2012-11-12 issued at 12:30 UT (07:30 EST)

\*This is for testing purposes\*

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### Summary

- There is currently no major storm watch in effect.
- Two CMEs were observed on 09-11 NOV 2012, and are expected to deliver a glancing blow to the Earth on 12-13 NOV 2012, resulting in disturbed geomagnetic activity.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (12:15 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: quiet with active intervals
- auroral zone: quiet with active intervals
- sub-auroral zone: quiet with active intervals

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap, auroral, and sub-auroral zones.

### Detailed Information

#### Solar

- Solar activity has been low.
- A CME was observed on 09 NOV 2012, and is expected to deliver a glancing blow to the Earth on 12-13 NOV 2012, resulting in disturbed geomagnetic activity.
- A CME was observed on 11 NOV 2012, and is expected to deliver a glancing blow to the Earth on 12-13 NOV 2012, resulting in disturbed geomagnetic activity.
- One small coronal hole is located near the centre of the solar disk.

#### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

#### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 11 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.



## Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-13-12 9:51 AM

**Subject:** Space Weather Bulletin - 2012-11-13 issued at 14:50 UT (09:50 EST)

\*This is for testing purposes\*

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## Summary

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity are currently observed in the auroral zone.
- Three medium solar x-ray flares have erupted over the past 24 hours.
- CMEs may be associated with these flares.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

## Current Conditions (14:30 UT)

### Geomagnetic Activity:

- polar cap zone: unsettled
- auroral zone: active
- sub-auroral zone: unsettled

### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

### Possible Impacts:

- Aeromagnetic surveys: Potential for disruption in the polar cap and sub-auroral zones.
- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Directional Drilling: Significant deviations possible in the auroral zone.

## 24 Hour Forecast

### Geomagnetic Activity:

- polar cap zone: quiet with active intervals
- auroral zone: quiet with active intervals
- sub-auroral zone: quiet with active intervals

### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

### Possible Impacts:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap, auroral, and sub-auroral zones.

## Detailed Information

### Solar

- Solar activity has been moderate.
- Two coronal holes are located near the centre of the solar disk.
- One coronal hole is located near the edge of the solar disk.
- Three M (medium) solar x-ray flares have erupted over the past 24 hours.

### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.
- An interplanetary shock has been observed on 12 NOV 2012 22:15 UT.

### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 12 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
  - A geomagnetic sudden impulse due to a shock in the solar wind was observed on 12 NOV 2012 23:16 UT.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-14-12 12:57 AM

**Subject:** Space Weather Bulletin - 2012-11-14 issued at 06:00 UT (01:00 EST) - UPDATE

\*This is for testing purposes\*

La version française du bulletin suit.

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#### **Summary**

- Major storm conditions are possible from 14 NOV 2012 00:00 UT to 14 NOV 2012 12:00 UT for the polar cap, auroral, and sub-auroral zones.
- Disturbed geomagnetic conditions due to solar activity are currently observed in the polar cap, auroral, and sub-auroral zones.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (05:30 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: stormy
- sub-auroral zone: active

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: low

##### **Possible Impacts:**

- Power Systems: possibility of weak voltage fluctuations in the auroral zone.
- Aeromagnetic surveys: Potential for severe disruptions in the auroral zone.
- Aeromagnetic surveys: Potential for significant disruptions in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the auroral and sub-auroral zones.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: active with stormy intervals
- sub-auroral zone: unsettled with active intervals

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Power Systems: possibility of weak voltage fluctuations in the auroral zone.
- Aeromagnetic surveys: Potential for severe disruptions in the auroral zone.
- Aeromagnetic surveys: Potential for significant disruptions in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the auroral and sub-auroral zones.

#### **Detailed Information**

##### **Interplanetary**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at high ( $10 < |Bz| < 20$  nT) levels.

- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

#### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a low level at 13 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with stormy intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-14-12 6:41 AM

**Subject:** Space Weather Bulletin - 2012-11-14 issued at 11:45 UT (06:45 EST)

\*This is for testing purposes\*

La version française du bulletin suit.

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#### **Summary**

- There is currently no major storm watch in effect.
- Stormy conditions observed 13-14 NOV 2012 in the auroral and sub-auroral zones have ended.
- Major storm conditions expected from 14 NOV 2012 00:00 UT to 14 NOV 2012 12:00 UT for the polar cap, auroral, and sub-auroral zones did not occur.
- Disturbed geomagnetic conditions due to solar activity are currently observed in the auroral and sub-auroral zones.
- Stormy conditions are possible from 14 NOV 2012 11:30 UT to 15 NOV 2012 11:30 UT for the auroral zone.
- Two medium solar x-ray flare have erupted over the past 24 hours.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (11:15 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: unsettled
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Aeromagnetic surveys: Potential for disruption in the auroral zone.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: unsettled
- auroral zone: active with stormy intervals
- sub-auroral zone: unsettled with active intervals

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Power Systems: possibility of weak voltage fluctuations in the auroral zone.
- Aeromagnetic surveys: Potential for severe disruptions in the auroral zone.
- Aeromagnetic surveys: Potential for significant disruptions in the sub-auroral zone.

- Directional Drilling: Significant deviations possible in the auroral zone.

#### **Detailed Information**

##### **Solar**

- Solar activity has been moderate.
- Two coronal holes are located near the centre of the solar disk.
- Two M (medium) solar x-ray flares have erupted over the past 24 hours.

##### **Interplanetary**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at high ( $10 < |B_z| < 20$  nT) levels.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a low level at 13 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been unsettled with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and unsettled with stormy intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be unsettled in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active intervals in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-15-12 7:31 AM

**Subject:** Space Weather Bulletin - 2012-11-15 issued at 12:30 UT (07:30 EST)

\*This is for testing purposes\*

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#### **Summary**

- There is currently no major storm watch in effect.
- Stormy conditions expected from 15 NOV 2012 00:00 UT to 15 NOV 2012 15:00 UT for the auroral zone did not occur.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (12:15 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Impacts are not expected.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: moderate

##### **Possible Impacts:**

- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Geostationary satellites: moderate risk of internal charging.

## Detailed Information

### Solar

- Solar activity has been low.
- Two coronal holes are located near the centre of the solar disk.

### Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 14 NOV 2012 and is expected to be at a moderate level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-16-12 7:59 AM

**Subject:** Space Weather Bulletin - 2012-11-16 issued at 13:00 UT (08:00 EST)

\*This is for testing purposes\*

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## Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (12:45 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

## Detailed Information

### Solar

- Solar activity has been low.
- One small coronal hole is located near the centre of the solar disk.
- One small coronal hole is located near the edge of the solar disk.

### Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT ) levels.

#### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 15 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-17-12 8:42 AM

**Subject:** Space Weather Bulletin - 2012-11-17 issued at 13:45 UT (08:45 EST)

\*This is for testing purposes\*

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#### **Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (13:30 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: moderate

##### **Possible Impacts:**

- Geostationary satellites: moderate risk of internal charging.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Impacts are not expected.

#### **Detailed Information**

##### **Solar**

- Solar activity has been low.
- Two small coronal holes are located near the centre of the solar disk.
- A long duration C (low) solar x-ray flare erupted at 16 NOV 2012 07:51 UT near the edge of the solar disk.

##### **Interplanetary**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT ) levels.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 16 NOV 2012 and is expected to be at a normal level tomorrow.

- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-18-12 8:31 AM

**Subject:** Space Weather Bulletin - 2012-11-18 issued at 13:30 UT (08:30 EST)

\*This is for testing purposes\*

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### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (13:15 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: moderate

#### Possible Impacts:

- Geostationary satellites: moderate risk of internal charging.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.

### Detailed Information

#### Solar

- Solar activity has been low.
- Three small coronal holes are located near the edge of the solar disk.

#### Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

#### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 17 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.

- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

**Sent:** November-19-12 9:45 AM

**Subject:** Space Weather Bulletin - 2012-11-19 issued at 14:45 UT (09:45 EST)

\*This is for testing purposes\*

La version française du bulletin suit.

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### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (14:15 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: moderate

#### Possible Impacts:

- Geostationary satellites: moderate risk of internal charging.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Aeromagnetic surveys: Potential for disruption in the auroral zone.

### Detailed Information

#### Solar

- Solar activity has been low.
- Two small coronal holes are located near the edge of the solar disk.

#### Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

#### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 18 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
-



**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** November-20-12 10:08 AM  
**Subject:** Space Weather Bulletin - 2012-11-20 issued at 14:15 UT (09:15 EST)

**\*This is for testing purposes\***

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#### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### Current Conditions (14:15 UT)

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: active
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Directional Drilling: Significant deviations possible in the auroral zone.

#### 24 Hour Forecast

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Directional Drilling: Significant deviations possible in the auroral zone.

#### Detailed Information

##### Solar

- Solar activity has been low.
- There are several active regions visible on the solar disk.

##### Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been primarily negative at low ( $|B_z| < 5$  nT) levels.

##### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 19 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** November-21-12 11:24 AM  
**Subject:** Space Weather Bulletin - 2012-11-21 issued at 15:15 UT (10:15 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- Several medium solar x-ray flare have erupted over the past 24 hours.
- An Earth-directed CME erupted on 20 NOV 2012 12:09 UT and is expected to reach the Earth on 23 NOV 2012.
- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (15:15 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Directional Drilling: Significant deviations possible in the auroral zone.

**Detailed Information**

**Solar**

- Solar activity has been moderate.
- There are several active regions visible on the solar disk.
- Several M (medium) solar x-ray flares have erupted over the past 24 hours.
- An Earth-directed CME erupted on 20 NOV 2012 12:09 UT and is expected to reach the Earth on 23 NOV 2012.

**Interplanetary**

- The solar wind speed is currently slow (~400 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT ) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 20 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
-

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** November-22-12 12:45 PM  
**Subject:** Space Weather Bulletin - 2012-11-22 issued at 17:30 UT (12:30 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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### Summary

- Stormy conditions are possible from 23 NOV 2012 to 24 NOV 2012 for the polar cap, auroral, and sub-auroral zones.
- Several medium solar x-ray flares have erupted over the past 24 hours.
- An Earth-directed CME has erupted over the past 24 hours.
- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (17:30 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: moderate

#### Possible Impacts:

- Geostationary satellites: moderate risk of internal charging.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: quiet with stormy intervals
- auroral zone: quiet with stormy intervals
- sub-auroral zone: quiet with stormy intervals

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Power Systems: possibility of weak voltage fluctuations in the polar cap, auroral, and sub-auroral zones.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap, auroral, and sub-auroral zones.

### Detailed Information

#### Solar

- Solar activity has been moderate.
- There are several active regions visible on the solar disk.
- An Earth-directed CME erupted on 21 NOV 2012 16:12 UT and is expected to reach the Earth on 23-24 NOV 2012, resulting in increased geomagnetic activity.

#### Interplanetary

- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.
- The solar wind speed is currently very slow ( $< 400$  km/s).

#### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 21 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with stormy intervals in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** November-23-12 12:20 PM  
**Subject:** Space Weather Bulletin - 2012-11-23 issued at 17:00 UT (12:00 EST)

**\*This is for testing purposes\***

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### Summary

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 23 NOV 2012 and 24 NOV 2012.
- An Earth-directed CME erupted on 22 NOV 2012 09:30 UT and is expected to reach the Earth on 25 NOV 2012, resulting in increased geomagnetic activity.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (16:45 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: moderate

#### Possible Impacts:

- Geostationary satellites: moderate risk of internal charging.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: quiet with stormy intervals
- auroral zone: quiet with stormy intervals
- sub-auroral zone: quiet with stormy intervals

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Power Systems: possibility of weak voltage fluctuations in the polar cap and auroral zones.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap and auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.

### Detailed Information

#### Solar

- Solar activity has been moderate.
- An Earth-directed CME erupted on 22 NOV 2012 09:30 UT and is expected to reach the Earth on 25 NOV 2012, resulting in increased geomagnetic activity.

#### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been primarily negative at low ( $B_z < 5$  nT) levels.

#### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 22 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet with stormy intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with stormy intervals in the sub-auroral zone.

- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** November-24-12 1:44 PM  
**Subject:** Space Weather Bulletin - 2012-11-24 issued at 18:30 UT (13:30 EST)

**\*This is for testing purposes\***  
La version française du bulletin suit.

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#### **Summary**

- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 24 NOV 2012 and 25 NOV 2012.
- An Earth-directed CME erupted on 23 NOV 2012 14:00 UT and is expected to reach the Earth on 26-27 NOV 2012, resulting in increased geomagnetic activity.
- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (18:15 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Impacts are not expected.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: unsettled with stormy intervals
- auroral zone: unsettled with stormy intervals
- sub-auroral zone: unsettled with stormy intervals

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Power Systems: possibility of weak voltage fluctuations in the polar cap, auroral, and sub-auroral zones.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap, auroral, and sub-auroral zones.

#### **Detailed Information**

##### **Solar**

- Solar activity has been low.
- An Earth-directed CME erupted on 23 NOV 2012 14:00 UT and is expected to reach the Earth on 26-27 NOV 2012, resulting in increased geomagnetic activity.

##### **Interplanetary**

- The solar wind speed is currently very slow (~400 km/s).
- The interplanetary magnetic field has been primarily positive at moderate ( $5 < |B_z| < 10$  nT) levels.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a moderate level at 23 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.

- Over the next 24 hours geomagnetic activity is forecast to be unsettled with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and unsettled with stormy intervals in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** November-25-12 12:00 PM

**Subject:** Space Weather Bulletin - 2012-11-25 issued at 17:00 UT (12:00 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (16:45 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: unsettled with active intervals
- auroral zone: unsettled with active intervals
- sub-auroral zone: unsettled with active intervals

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap, auroral, and sub-auroral zones.

### Detailed Information

#### Solar

- Solar activity has been low.

#### Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been primarily positive at low ( $2 < |B_z| < 5$  nT) levels.

#### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 24 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and unsettled with active intervals in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** November-26-12 11:08 AM  
**Subject:** Space Weather Bulletin - 2012-11-26 issued at 16:00 UT (11:00 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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#### **Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (15:45 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Impacts are not expected.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet with unsettled intervals

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Aeromagnetic surveys: Potential for disruption in the polar cap, auroral, and sub-auroral zones.

#### **Detailed Information**

##### **Solar**

- Solar activity has been low.

##### **Interplanetary**

- The solar wind speed is currently slow (~480 km/s).
- The interplanetary magnetic field has been primarily positive at low ( $|B_z| < 5$  nT) levels.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 25 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** November-27-12 11:14 AM  
**Subject:** Space Weather Bulletin - 2012-11-27 issued at 16:00 UT (11:00 EST)

**\*This is for testing purposes\***

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#### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### Current Conditions (15:45 UT)

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Impacts are not expected.

#### 24 Hour Forecast

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Aeromagnetic surveys: Potential for disruption in the auroral zone.

#### Detailed Information

##### Solar

- Solar activity has been low.

##### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

##### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 26 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** November-28-12 11:16 AM

**Subject:** Space Weather Bulletin - 2012-11-28 issued at 16:00 UT (11:00 EST)

**\*This is for testing purposes\***

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#### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### Current Conditions (15:30 UT)

##### Geomagnetic Activity:



- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 27 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** November-29-12 11:28 AM

**Subject:** Space Weather Bulletin - 2012-11-29 issued at 16:00 UT (11:00 EST)

**\*This is for testing purposes\***

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (16:15 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

## 24 Hour Forecast

### Geomagnetic Activity:

- polar cap zone: quiet with active intervals
- auroral zone: quiet with active intervals
- sub-auroral zone: quiet with active intervals

### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

### Possible Impacts:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap, auroral, and sub-auroral zones.

### Detailed Information

#### Solar

- Solar activity has been low.

#### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|Bz| < 5$  nT) levels.

### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 28 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** November-30-12 10:56 AM

**Subject:** Space Weather Bulletin - 2012-11-29 issued at 15:45 UT (10:45 EST)

**\*This is for testing purposes\***

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### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (15:30 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 29 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** December-01-12 10:09 AM

**Subject:** Space Weather Bulletin - 2012-12-01 issued at 15:00 UT (10:00 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (14:45 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

#### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 30 NOV 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** December-02-12 11:26 AM

**Subject:** Space Weather Bulletin - 2012-12-02 issued at 15:15 UT (10:15 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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#### **Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (16:00 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Impacts are not expected.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Directional Drilling: Significant deviations possible in the auroral zone.

#### **Detailed Information**

##### **Solar**

- Solar activity has been low.

##### **Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 01 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

## Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]

**Sent:** December-03-12 10:50 AM

**Subject:** Space Weather Bulletin - 2012-12-03 issued at 15:45 UT (10:45 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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## Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

## Current Conditions (15:30 UT)

### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

### Possible Impacts:

- Impacts are not expected.

## 24 Hour Forecast

### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

### Possible Impacts:

- Impacts are not expected.

## Detailed Information

### Solar

- Solar activity has been low.

### Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|B_z| < 5$  nT) levels.

### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 02 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

## Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
-

**From:** Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]  
**Sent:** December-04-12 11:05 AM  
**Subject:** Space Weather Bulletin - 2012-12-04 issued at 16:00 UT (11:00 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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#### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### Current Conditions (15:45 UT)

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Impacts are not expected.

#### 24 Hour Forecast

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Aeromagnetic surveys: Potential for disruption in the auroral zone.

#### Detailed Information

##### Solar

- Solar activity has been low.

##### Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at very low ( $|B_z| < 2$  nT) levels.

##### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 03 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

##### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** December-05-12 11:29 AM  
**Subject:** Space Weather Bulletin - 2012-12-02 issued at 16:00 UT (11:00 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (16:00 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Directional Drilling: Significant deviations possible in the auroral zone.

**Detailed Information****Solar**

- Solar activity has been low.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $|Bz| < 5$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 01 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** December-06-12 12:40 PM

**Subject:** Space Weather Bulletin - 2012-12-06 issued at 17:15 UT (12:15 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (17:15 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.

**Interplanetary**

- Interplanetary activity has been very low.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 05 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** December-07-12 10:54 AM

**Subject:** Space Weather Bulletin - 2012-12-07 issued at 15:30 UT (10:30 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (15:30 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**



**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information****Solar**

- Solar activity has been very low.

**Interplanetary**

- Interplanetary activity has been very low.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 06 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** December-08-12 11:49 AM

**Subject:** Space Weather Bulletin - 2012-12-08 issued at 16:30 UT (11:30 EST)

\*This is for testing purposes\*

La version française du bulletin suit.

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**Summary**

- \* There is currently no major storm watch in effect.
- \* See our website for current information: **Error! Hyperlink reference not valid.** (updated every 15 minutes)

**Current Conditions (16:30 UT)****Geomagnetic Activity:**

- \* polar cap zone: quiet
- \* auroral zone: quiet
- \* sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- \* energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- \* Impacts are not expected.

**24 Hour Forecast****Geomagnetic Activity:**

- \* polar cap zone: quiet
- \* auroral zone: quiet
- \* sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- \* energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- \* Impacts are not expected.

## Detailed Information

### Solar

- \* Solar activity has been very low.

### Interplanetary

- \* Interplanetary activity has been very low.

### Geostationary Satellite Environment

\* Energetic electron fluence at geostationary orbit was at a normal level at 07 DEC 2012 and is expected **to be at a normal level tomorrow.**

- \* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

### Geomagnetic

\* Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.

\* Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.

- \* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** December-09-12 11:36 AM

**Subject:** Space Weather Bulletin - 2012-12-09 issued at 16:15 UT (11:15 EST)

\*This is for testing purposes\*

La version française du bulletin suit.

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## Summary

- \* There is currently no major storm watch in effect.

- \* See our website for current information: **Error! Hyperlink reference not valid.** (updated every 15 minutes)

## Current Conditions (16:15 UT)

### Geomagnetic Activity:

- \* polar cap zone: quiet
- \* auroral zone: quiet
- \* sub-auroral zone: quiet

### Geostationary Satellite Environment:

- \* energetic electron fluence at geostationary orbit: normal

### Possible Impacts:

- \* Impacts are not expected.

## 24 Hour Forecast

### Geomagnetic Activity:

- \* polar cap zone: quiet
- \* auroral zone: quiet
- \* sub-auroral zone: quiet

### Geostationary Satellite Environment:

- \* energetic electron fluence at geostationary orbit: normal

### Possible Impacts:

- \* Impacts are not expected.

## Detailed Information

### Solar

- \* Solar activity has been very low.

### Interplanetary

- \* Interplanetary activity has been very low.

### Geostationary Satellite Environment

\* Energetic electron fluence at geostationary orbit was at a normal level at 08 DEC 2012 and is expected to be at a normal level tomorrow.

- \* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

### Geomagnetic

- \* Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - \* Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - \* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** December-10-12 11:13 AM  
**Subject:** Space Weather Bulletin - 2012-12-10 issued at 15:45 UT (10:45 EST)

**\*This is for testing purposes\***  
La version française du bulletin suit.

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#### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### Current Conditions (15:45 UT)

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: low

##### Possible Impacts:

- Impacts are not expected.

#### 24 Hour Forecast

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Impacts are not expected.

#### Detailed Information

##### Solar

- Solar activity has been low.

##### Interplanetary

- Interplanetary activity has been low.

##### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 09 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** December-11-12 8:55 AM  
**Subject:** Space Weather Bulletin - 2012-12-11 issued at 13:30 UT (08:30 EST)

\*This is for testing purposes\*  
La version française du bulletin suit.

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**Summary**

- \* There is currently no major storm watch in effect.
- \* See our website for current information: **Error! Hyperlink reference not valid.** (updated every 15 minutes)

**Current Conditions (13:30 UT)****Geomagnetic Activity:**

- \* polar cap zone: quiet
- \* auroral zone: quiet
- \* sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- \* energetic electron fluence at geostationary orbit: low

**Possible Impacts:**

- \* Impacts are not expected.

**24 Hour Forecast****Geomagnetic Activity:**

- \* polar cap zone: quiet
- \* auroral zone: quiet
- \* sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- \* energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- \* Impacts are not expected.

**Detailed Information****Solar**

- \* Solar activity has been low.

**Interplanetary**

- \* Interplanetary activity has been low.

**Geostationary Satellite Environment**

\* Energetic electron fluence at geostationary orbit was at a normal level at 10 DEC 2012 and is expected to be at a normal level tomorrow.

- \* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

\* Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.

\* Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.

- \* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [<mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca>]

**Sent:** December-12-12 10:40 AM

**Subject:** Space Weather Bulletin - 2012-12-12 issued at 15:15 UT (20:15 EST)

\*This is for testing purposes\*  
La version française du bulletin suit.

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**Summary**

- \* There is currently no major storm watch in effect.
- \* See our website for current information: **Error! Hyperlink reference not valid.** (updated every 15 minutes)

**Current Conditions (15:15 UT)**

**Geomagnetic Activity:**

- \* polar cap zone: quiet
- \* auroral zone: quiet
- \* sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- \* energetic electron fluence at geostationary orbit: low

**Possible Impacts:**

- \* Impacts are not expected.

**24 Hour Forecast****Geomagnetic Activity:**

- \* polar cap zone: quiet
- \* auroral zone: quiet
- \* sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- \* energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- \* Impacts are not expected.

**Detailed Information****Solar**

- \* Solar activity has been low.

**Interplanetary**

- \* Interplanetary activity has been low.

**Geostationary Satellite Environment**

\* Energetic electron fluence at geostationary orbit was at a normal level at 11 DEC 2012 and is expected to be at a normal level tomorrow.

- \* Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

\* Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.

\* Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.

- \* Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** December-13-12 3:50 PM

**Subject:** Space Weather Bulletin - 2012-12-13 issued at 20:30 UT (15:30 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (20:30 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: low

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information****Solar**

- Solar activity has been low.

**Interplanetary**

- Interplanetary activity has been low.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a low level at 12 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** December-14-12 10:48 AM

**Subject:** Space Weather Bulletin - 2012-12-14 issued at 15:30 UT (10:30 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (15:30 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: low

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

#### **Detailed Information**

##### **Solar**

- Solar activity has been low.

##### **Interplanetary**

- Interplanetary activity has been low.

##### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a low level at 13 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

##### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** December-15-12 10:44 AM

**Subject:** Space Weather Bulletin - 2012-12-15 issued at 15:00 UT (10:00 EST)

**\*This is for testing purposes\***

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#### **Summary**

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions are expected 15 DEC 2012 to 16 DEC 2012 due to high speed streams from coronal holes.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### **Current Conditions (15:00 UT)**

##### **Geomagnetic Activity:**

- polar cap zone: unsettled
- auroral zone: unsettled
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Impacts are not expected.

#### **24 Hour Forecast**

##### **Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: unsettled
- sub-auroral zone: quiet

##### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

##### **Possible Impacts:**

- Impacts are not expected.

#### **Detailed Information**

##### **Solar**

- Solar activity has been low.

##### **Interplanetary**

- Interplanetary activity has been low.
- Moderate solar wind speeds are due to high speed streams from coronal holes.

### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a low level at 14 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, unsettled in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** December-16-12 11:37 AM

**Subject:** Space Weather Bulletin - 2012-12-16 issued at 16:15 UT (11:15 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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### **Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### **Current Conditions (16:15 UT)**

#### **Geomagnetic Activity:**

- polar cap zone: unsettled
- auroral zone: quiet
- sub-auroral zone: quiet

#### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: low

#### **Possible Impacts:**

- Impacts are not expected.

### **24 Hour Forecast**

#### **Geomagnetic Activity:**

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

#### **Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

#### **Possible Impacts:**

- Impacts are not expected.

### **Detailed Information**

#### **Solar**

- Solar activity has been low.

#### **Interplanetary**

- Interplanetary activity has been low.

### **Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 15 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

### **Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.



- Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]

**Sent:** December-17-12 12:51 PM

**Subject:** Space Weather Bulletin - 2012-12-17 issued at 17:30 UT (12:30 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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### Summary

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions are expected 17 Dec 2012 to 18 Dec 2012 due to high speed streams from coronal holes.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (17:30 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: unsettled
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### Detailed Information

#### Solar

- Solar activity has been low.

#### Interplanetary

- Interplanetary activity has been low.

#### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 16 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet with stormy intervals in the polar zone, unsettled with stormy intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be unsettled in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
-

**From:** Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]  
**Sent:** December-18-12 10:48 AM  
**Subject:** Space Weather Bulletin - 2012-12-18 issued at 15:30 UT (10:30 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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#### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### Current Conditions (15:30 UT)

##### Geomagnetic Activity:

- polar cap zone: unsettled
- auroral zone: unsettled
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Impacts are not expected.

#### 24 Hour Forecast

##### Geomagnetic Activity:

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Impacts are not expected.

#### Detailed Information

##### Solar

- Solar activity has been low.

##### Interplanetary

- Interplanetary activity has been low.

##### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 17 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with active intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]  
**Sent:** December-19-12 10:38 AM  
**Subject:** Space Weather Bulletin - 2012-12-19 issued at 15:35 UT (10:35 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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#### Summary

- There is currently no major storm watch in effect.

- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (15:30 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.

**Interplanetary**

- Interplanetary activity has been low.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 18 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** December-20-12 11:17 AM

**Subject:** Space Weather Bulletin - 2012-12-20 issued at 16:10 UT (11:10 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- Disturbed geomagnetic conditions are expected 20 DEC 2012 to 21 DEC 2012 due to high speed streams from coronal holes.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (16:00 UT)**

**Geomagnetic Activity:**

- polar cap zone: active
- auroral zone: stormy
- sub-auroral zone: unsettled

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet with active intervals
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet with unsettled intervals

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.

**Interplanetary**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 19 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** December-21-12 10:53 AM

**Subject:** Space Weather Bulletin - 2012-12-21 issued at 15:50 UT (10:50 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (15:45 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet with unsettled intervals

- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information****Solar**

- Solar activity has been low.

**Interplanetary**

- Interplanetary activity has been low.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 20 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with active intervals in the polar zone, quiet with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** December-22-12 10:22 AM

**Subject:** Space Weather Bulletin - 2012-12-22 issued at 15:20 UT (10:20 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (15:15 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information****Solar**

- Solar activity has been low.

### Interplanetary

- Interplanetary activity has been low.

### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 21 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** December-23-12 9:38 AM

**Subject:** Space Weather Bulletin - 2012-12-23 issued at 14:35 UT (09:35 EST)

**\*This is for testing purposes\***

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### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (14:30 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### Detailed Information

#### Solar

- Solar activity has been low.

#### Interplanetary

- Interplanetary activity has been low.

#### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 22 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** December-24-12 8:52 AM

**Subject:** Space Weather Bulletin - 2012-12-24 issued at 13:50 UT (08:50 EST)

**\*This is for testing purposes\***

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### Summary

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions are expected 25 DEC 2012 to 26 DEC 2012 due to high speed streams from coronal holes.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

### Current Conditions (13:45 UT)

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### 24 Hour Forecast

#### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

#### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

#### Possible Impacts:

- Impacts are not expected.

### Detailed Information

#### Solar

- Solar activity has been low.
- One small coronal hole is located near the centre of the solar disk.

#### Interplanetary

- Interplanetary activity has been low.

#### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 23 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]  
**Sent:** December-25-12 8:41 AM  
**Subject:** Space Weather Bulletin - 2012-12-25 issued at 13:40 UT (08:40 EST)

**\*This is for testing purposes\***  
La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (13:30 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.

**Interplanetary**

- Interplanetary activity has been low.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 24 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.

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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]  
**Sent:** December-26-12 9:40 AM  
**Subject:** Space Weather Bulletin - 2012-12-26 issued at 14:39 UT (09:39 EST)

**\*This is for testing purposes\***  
La version française du bulletin suit.



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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (14:30 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information****Solar**

- Solar activity has been low.

**Interplanetary**

- Interplanetary activity has been low.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 25 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** December-27-12 9:10 AM

**Subject:** Space Weather Bulletin - 2012-12-27 issued at 14:08 UT (09:08 EST)

**\*This is for testing purposes\***

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (14:00 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet

- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information**

**Solar**

- Solar activity has been low.

**Interplanetary**

- Interplanetary activity has been low.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 26 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sfll-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** December-28-12 10:09 AM

**Subject:** Space Weather Bulletin - 2012-12-28 issued at 15:06 UT (10:06 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (15:00 UT)**

**Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast**

**Geomagnetic Activity:**

- polar cap zone: quiet

- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information****Solar**

- Solar activity has been low.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 27 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** December-29-12 11:07 AM

**Subject:** Space Weather Bulletin - 2012-12-29 issued at 16:06 UT (11:06 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (16:00 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information****Solar**

- Solar activity has been low.

**Interplanetary**

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a normal level at 28 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

**Geomagnetic**

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with active intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
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**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** December-30-12 9:16 AM

**Subject:** Space Weather Bulletin - 2012-12-30 issued at 14:15 UT (09:15 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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**Summary**

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

**Current Conditions (14:00 UT)****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**24 Hour Forecast****Geomagnetic Activity:**

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

**Geostationary Satellite Environment:**

- energetic electron fluence at geostationary orbit: normal

**Possible Impacts:**

- Impacts are not expected.

**Detailed Information****Solar**

- Solar activity has been low.

**Interplanetary**

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at moderate ( $5 < |B_z| < 10$  nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

**Geostationary Satellite Environment**

- Energetic electron fluence at geostationary orbit was at a low level at 29 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

#### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
  - Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
  - Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.
- 

**From:** McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]

**Sent:** December-31-12 9:01 AM

**Subject:** Space Weather Bulletin - 2012-12-31 issued at 13:58 UT (08:58 EST)

**\*This is for testing purposes\***

La version française du bulletin suit.

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#### Summary

- There is currently no major storm watch in effect.
- See our website for current information: <http://www.spaceweather.gc.ca> (updated every 15 minutes)

#### Current Conditions (13:45 UT)

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Impacts are not expected.

#### 24 Hour Forecast

##### Geomagnetic Activity:

- polar cap zone: quiet
- auroral zone: quiet
- sub-auroral zone: quiet

##### Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: normal

##### Possible Impacts:

- Impacts are not expected.

#### Detailed Information

##### Solar

- Solar activity has been low.

##### Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low ( $2 < |B_z| < 5$  nT) levels.

##### Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 30 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <http://www.spaceweather.gc.ca/sffl-eng.php> for the electron forecast.

##### Geomagnetic

- Over the last 24 hours geomagnetic activity has been quiet with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be quiet in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <http://www.spaceweather.gc.ca/sfst-1-eng.php> for the magnetic forecast.