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GEOLOGICAL SURVEY OF CANADA OPEN FILE 7656

Space Weather Bulletin - 2013

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

2014





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1. Introduction

Space weather refers to changes in the space environment resulting from solar phenomena like coronal mass ejections (CMEs), coronal holes, solar flares and energetic particles that can adversely affect human activities and technologies on Earth and in space. CMEs and coronal holes can trigger geomagnetic storms in the magnetosphere (the region surrounding the Earth where its magnetic field dominates). Such storms are especially strong in the auroral latitudinal zone around the Earth's magnetic poles. With Earth's northern magnetic pole located in the Arctic Ocean near the Canadian Arctic Archipelago, Canada is among the countries most affected by space weather. 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.

Government of Canada work on space weather and geomagnetic activity is undertaken by Natural Resources Canada scientists in the Canadian Space Weather Forecast Centre¹ who issue forecasts and reports on space weather events and contribute through research to reducing vulnerability of infrastructure.

The Space Weather Bulletin is generated by the Canadian Space Weather Forecast Centre and provides recipients with a daily description of the current conditions, 24-hour prediction and 24-hour review of solar, interplanetary, and geomagnetic conditions and observed events. The bulletin lists possible impacts to technology as well. The main users of the bulletin are Government of Canada Departments and Emergency Measures Organizations not trained in space physics. 2013 represents year three of the bulletin dissemination to these communities^{2,3}. It is worth mentioning that recently, a Guide to the Space Weather Bulletin⁴ was published in order to provide a basic understanding of the daily Space Weather Bulletin including general information about space weather to the users.

This report provides a description of the Space Weather Bulletin and documents the bulletins issued in 2013. A listing of typical bulletin statements is provided in Section 2 and possible impacts associated with varying levels of space weather activity are given in Section 3. Tables of values used to select descriptive statements used in the bulletin and summary of geomagnetic activity in 2013 are given in Sections 4 and 5, respectively. The collection of the daily bulletins is presented in Section 6.

¹http://www.spaceweather.gc.ca

²Fiori, R.A.D., Lam, H.-L., Trichtchenko, L., McKee, L., Danskin, D., Nikolic, L., 2012. Space Weather Bulletin - 2011, Geological Survey of Canada, Open File 7197. doi:10.4095/291896

³Fiori, R.A.D., Lam, H.-L., Trichtchenko, L., McKee, L., Danskin, D., Nikolic, L., 2013. Space Weather Bulletin – 2012, Geological Survey of Canada, Open File 7391. doi:10.4095/292881

⁴Fiori, R.A.D., 2014. Guide to the Space Weather Bulletin, Geological Survey of Canada, Open File 7422. doi:10.4095/293873

2. Statements used in the 2013 daily space weather bulletin

This section provides a summary of the most recent (as of December 31, 2013) version of the *Space Weather Bulletin* in tabular format in both English and French. Tables are used to separate statements into common groupings. The descriptions below represent a fill-in-the-blank style template completed by the duty forecaster (DF).

Symbolic text, hilighted in red, represents dates and times. For example:

DD MMM YYYY	day month year	26 JUN 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 hilighted 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 hilighted 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.

Note that in some situations the selection may be left blank.

2.1. Summary / Résumé

1 A major storm WATCH	in in offect for 1 I	Ino VEILLE d'anaga majour act an
1. A major storm WATCH		Une VEILLE d'orage majeur est en
the (auroral zone / polar		vigueur pour (la zone aurorale / les
and sub-auroral zones) f		zones de la calotte polaire, aurorale et
YYYY HH:MM UT to		sub-aurorale) du DD MMM YYYY
YYYY HH:MM UT.		HH:MM TU au DD MMM YYYY
jei		HH:MM TU.
2 . A major storm WATCH		Une VEILLE d'orage majeur est en
the (auroral zone / polar	-	vigueur pour (la zone aurorale / les
and sub-auroral zones),		zones de la calotte polaire, aurorale et
anticipated to end DD M		sub-aurorale), et devrait se terminer le
HH:MM UT.		DD MMM YYYY HH:MM TU.
3. The major storm WATC		La VEILLE d'orage majeur émise le
MMM YYYY HH:MM	UT for the I	DD MMM YYYY HH:MM TU pour
-g (auroral zone / polar cap	, auroral, and (la zone aurorale / les zones de la
sub-auroral zones) has b	een extended c	calotte polaire, aurorale et sub-
to DD MMM YYYY H	H:MM UT. a	urorale) a été prolongée jusqu'au DD
	Ν	MMM YYYY HH:MM TU.
$\frac{1}{2}$ 4. The major storm WATC	CH issued DD 4. I	La VEILLE d'orage majeur émise le
 2. A major storm WATCH the (auroral zone / polar and sub-auroral zones), anticipated to end DD M HH:MM UT. 3. The major storm WATC MMM YYYY HH:MM (auroral zone / polar cap sub-auroral zones) has b to DD MMM YYYY HI 4. The major storm WATC MMM YYYY HH:MM (auroral zone / polar cap sub-auroral zone) has b to DD MMM YYYY HI 	UT for the	DD MMM YYYY HH:MM TU pour
(auroral zone / polar cap	, auroral, and (la zone aurorale / les zones de la
sub-auroral zones) ende		calotte polaire, aurorale et sub-
YYYY HH:MM UT.		aurorale) s'est terminée le DD MMM
		YYYY HH:MM TU.
5. There is currently no ma	ajor storm 5. A	Actuellement, aucune veille d'orage
watch in effect.	r	najeur n'est pas en vigueur.
1. (Stormy / Major storm)	conditions are 1. I	Des conditions (orageuses / d'orage
possible in the (polar ca	p / auroral / and r	majeur) sont possibles dans (la zone /
sub-auroral) (zone / zon	es) within the	es zones) (de la calotte polaire /
next 24 hours.	8	urorale / et sub-aurorale) au cours des
 second second sec	2	24 prochaines heures.
2. (Stormy / Major storm)	<i>2</i> .	Des conditions (orageuses / d'orage
		najeur) sont (possibles / prévues) du
YYYY HH:MM UT to I		DD MMM YYYY HH:MM TU au DD
YYYY HH:MM for the	-	MMM YYYY HH:MM TU pour (la
auroral / and sub-aurora) zone(s).	
C0	2	zone / les zones) (de la calotte polaire /
\sim 3. (Stormy / Major storm)		zone / les zones) (de la calotte polaire /
currently observed in the	conditions are 3. I	zone / les zones) (de la calotte polaire / urorale / et sub-aurorale).
auroral / and sub-aurora	conditions are e (polar cap /	zone / les zones) (de la calotte polaire / nurorale / et sub-aurorale). Des conditions (orageuses / d'orage
	conditions are e (polar cap /	zone / les zones) (de la calotte polaire / nurorale / et sub-aurorale). Des conditions (orageuses / d'orage majeur) sont actuellement observées
zones).	conditions are e (polar cap / l) (zone /	zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale). Des conditions (orageuses / d'orage majeur) sont actuellement observées lans (la zone / les zones) (de la calotte
zones). 4. (Stormy / Major storm)	conditions are e (polar cap / l) (zone / conditions 4. I	zone / les zones) (de la calotte polaire / nurorale / et sub-aurorale). Des conditions (orageuses / d'orage majeur) sont actuellement observées lans (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale).
zones). 4. (Stormy / Major storm) expected from DD MMI	conditions are e (polar cap / l) (zone / conditions M YYYY 4. I	zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale). Des conditions (orageuses / d'orage majeur) sont actuellement observées dans (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale). Les conditions (orageuses / d'orage
 zones). 4. (Stormy / Major storm) expected from DD MMI HH:MM UT to DD MM 	conditions are e (polar cap / l) (zone / conditions M YYYY IM YYYY	zone / les zones) (de la calotte polaire / nurorale / et sub-aurorale). Des conditions (orageuses / d'orage majeur) sont actuellement observées lans (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale). Les conditions (orageuses / d'orage majeur) prévues du DD MMM YYYY
zones). 4. (Stormy / Major storm) expected from DD MMI	conditions are e (polar cap / l) (zone / conditions M YYYY IM YYYY IM YYYY	zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale). Des conditions (orageuses / d'orage majeur) sont actuellement observées dans (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale). Les conditions (orageuses / d'orage majeur) prévues du DD MMM YYYY HH:MM TU au DD MMM YYYY
 zones). 4. (Stormy / Major storm) expected from DD MMI HH:MM UT to DD MM HH:MM UT for the (au polar cap, auroral, and s 	conditions are e (polar cap / l) (zone / conditions M YYYY IM YYYY IM YYYY roral zone /	zone / les zones) (de la calotte polaire / nurorale / et sub-aurorale). Des conditions (orageuses / d'orage majeur) sont actuellement observées lans (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale). Les conditions (orageuses / d'orage majeur) prévues du DD MMM YYYY

disturbed conditions / perturbations	 Disturbed geomagnet to solar activity observed 2. Disturbed geomagnet to solar activity are e observed on the Eart MMM YYYY and E Disturbed geomagnet to solar activity are e 	erved on DD MMM cted. etic conditions due expected to be th between DD DD MMM YYYY. etic conditions due expected today. etic conditions due currently observed uroral / and sub-	2. 3. 4.	On ne prévoit aucune perturbation géomagnétique résultant de l'activité solaire observée le DD MMM YYYY. Des perturbations géomagnétiques causées par l'activité solaire devraient être observées sur la Terre entre le DD MMM YYYY et le DD MMM YYYY. Des perturbations géomagnétiques causées par l'activité solaire sont prévues aujourd'hui. Des perturbations géomagnétiques causées par l'activité solaire sont observées actuellement dans (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale).
ionosphere / ionosphère	 (An ionospheric / A absorption event is a progress in the (pola and sub-auroral) (zo The (ionospheric / p absorption event rep has ended. (An ionospheric / A absorption event is a effect. (An ionospheric / A absorption event is a sorption event is a progress for the (po and sub-auroral) zo: MMM YYYY HH:: MMM YYYY HH:: An (ionospheric / pa absorption event is a progress for the (po and sub-auroral) zo: anticipated to end a YYYY HH:MM UT 	currently in ar cap / auroral / one / zones).polar cap) ported yesterdaya polar cap) ported yesterdaya polar cap) currently not ina polar cap) possible.olar cap) possible.olar cap) currently in olar cap / auroral / ne(s) from DD MM UT to DD MM UT.olar cap) currently in olar cap) currently in olar cap)olar cap) currently in olar cap / auroral / ne(s), and is t DD MMM	1. 2. 3. 4. 5.	Un épisode d'absorption (ionosphérique / dans la calotte polaire) est en cours dans (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale). L'épisode d'absorption (ionosphérique / dans la calotte polaire) signalé hier est terminé. Aucun épisode d'absorption (ionosphérique / dans la calotte polaire) n'est en cours actuellement. Un épisode d'absorption (ionosphérique / dans la calotte polaire) est possible. Un épisode d'absorption (ionosphérique / dans la calotte polaire) est possible. Un épisode d'absorption (ionosphérique / dans la calotte polaire) en cours est signalé pour (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale) du DD MMM YYYY HH:MM TU. Un épisode d'absorption (ionosphérique / dans la calotte polaire) en cours est signalé pour (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale) du DD MMM YYYY HH:MM TU. Un épisode d'absorption (ionosphérique / dans la calotte polaire) en cours est signalé pour (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale) et devrait se terminer le DD MMM YYYY HH:MM TU.

	 7. 8. 9. 	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. 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. 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.	 7. 8. 9. 	L'épisode d'absorption (ionosphérique / dans la calotte polaire) qui a commencé le DD MMM YYYY HH:MM TU dans (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale) est perdurer jusqu'au DD MMM YYYY HH:MM TU. L'épisode d'absorption (ionosphérique / dans la calotte polaire) qui a commencé le DD MMM YYYY HH:MM TU dans (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale) s'est terminé le DD MMM YYYY HH:MM TU. L'épisode d'absorption (ionosphérique / dans la calotte polaire) prévu du DD MMM YYYY HH:MM TU au DD MMM YYYY HH:MM TU pour (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale) ne s'est pas produit.
solar activity / activité solaire	 1. 2. 3. 4. 5. 	 (An / A) (slow / moderate / fast) Earth-directed CME has erupted over the past 24 hours. (Two / Three / Several) (slow / moderate / fast) Earth-directed CMEs have erupted over the past 24 hours. A (medium / large / medium to large) (long duration) solar x-ray flare has erupted over the past 24 hours. (Two / Three / Several) (medium / large / medium to large) (long duration) solar x-ray flares have erupted over the past 24 hours. CMEs may be associated with these flares. 	 1. 2. 3. 4. 5. 	dirigée vers la Terre a eu lieu au cours des 24 dernières heures. (Deux / Trois / Plusieurs) EMC (lents / modérés / rapides) dirigées vers la Terre ont eu lieu au cours des 24 dernières heures. Une éruption solaire (moyenne / forte / moyenne à forte) (de longue durée) avec émission de rayons X a eu lieu au cours des 24 dernières heures.

	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.	1.	La VEILLE d'orage majeur émise le DD MMM YYYY HH:MM TU pour (la zone aurorale / les zones de la calotte polaire, aurorale et sub- aurorale) s'est terminée le DD MMM YYYY HH:MM TU.
	2.	(Disturbed / Stormy / Major storm) conditions observed DD MMM YYYY in the (polar cap / auroral / and sub-auroral) (zone / zones) have	2.	Les conditions (perturbées / orageuses / d'orage majeur) observées le DD MMM YYYY dans (la zone / les zones) (de la calotte polaire / aurorale
mentaires	3.	ended. (An / A) (slow/moderate/fast) 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).	3.	 / et sub-aurorale) sont terminées. Une EMC (lente / modérée / rapide) en direction de la Terre a eu lieu le DD MMM YYYY à HH:MM TU (et devrait atteindre la Terre le DD MMM YYYY) (, provoquant une augmentation / perturbation de l'activité géomagnétique).
linking statements / énoncés complémentaires	4.	(Two / Three / Several) (slow / moderate / fast) 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).	4.	(Deux/Trois/Plusieurs) EMC (lents / modérés / rapides) en direction de la Terre ont eu lieu le DD MMM YYYY à HH:MM TU, HH:MM TU,, et HH:MM TU (et devraient atteindre la Terre le DD MMM YYYY) (, provoquant une augmentation / perturbation de l'activité géomagnétique).
linking state	5.	A (slow/moderate/fast) 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).	5.	Une EMC (lente / modérée / rapide) a été observée le DD MMM YYYY, et devrait toucher la Terre obliquement le DD MMM YYYY (, provoquant une augmentation/perturbation de l'activité géomagnétique).
	6.	(Two / Three / Several) (slow / moderate / fast) 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).	6.	(Deux/Trois/Plusieurs) EMC (lents / modérés / rapides) ont été observées le DD MMM YYYY, et devraient toucher la Terre obliquement le DD MMM YYYY (, provoquant une augmentation/perturbation de l'activité géomagnétique).
	7.	Disturbed geomagnetic conditions are expected DD MMM YYYY to DD MMM YYYY due to high speed streams from coronal holes.	7.	Des perturbations géomagnétiques sont prévues du DD MMM YYYY au DD MMM YYYY en raison de flux à grande vitesse provenant de trous coronaux.

autre	1.	Possibility of impacts to (power systems / radio systems / satellites / aeromagnetic surveys / and directional drilling.	1.	Possibilité de répercussions sur les (réseaux d'électricité / systèmes radio / satellites / levés aéromagnétiques / et forages dirigés).
other /	2.	See our website for current geomagnetic conditions: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)	2.	Veuillez consulter notre site Web pour connaître les conditions géomagnétiques actuelles : <u>http://www.spaceweather.gc.ca</u> (actualisées toutes les 15 minutes)

2.2. Current conditions (HH:MM UT) / Conditions actuelles (HH:MM TU)

Geomagnetic activity / activité géomagnétique

1.	polar cap zone: (quiet / unsettled / active /	1.	calotte polaire : (calme / agitée / active /
	stormy / major storm / unavailable)		orageuse / orage majeur / non disponible)
2.	auroral zone: (quiet / unsettled / active /	2.	zone aurorale : (calme / agitée / active /
	stormy / major storm / unavailable)		orageuse / orage majeur / non disponible)
3.	sub-auroral zone: (quiet / unsettled /	3.	zone sub-aurorale : (calme / agitée / active
	active / stormy / major storm /		/ orageuse / orage majeur / non
	unavailable)		disponible)

Environment at geostationary orbit / Environnement à l'orbite géostationnaire

1. ei	nergetic electron fluence at geostationary	1.	fluence des électrons énergétiques en
	rbit: (low / normal / moderate / high / ery high / unavailable)		orbite géostationnaire : (faible / normale / modérée / élevée / très élevée / non
			disponible)

Possible impacts on technology / Effets possibles sur la technologie

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).	1.	Réseaux d'électricité : (Possibilité de faibles variations de tension / Des courants induits géomagnétiquement peuvent entraîner un mauvais fonctionnement des relais de protection et un échauffement des transformateurs) dans (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale).
2.	HF radio: Ionospheric and polar cap absorption events may affect radio communications for transpolar flights and other arctic operations.	2.	Radiocommunications HF : Des épisodes d'absorption ionosphérique et dans la calotte glaciaire peuvent avoir des effets sur les radiocommunications pour les vols transpolaires et d'autres opérations dans l'Arctique.

3.	Geostationary satellites: (Moderate risk of internal charging / High risk of internal charging / Very high risk of internal charging).	3.	Satellites géostationnaires : (Risque modéré de charge électrostatique interne / Risque élevé de charge électrostatique interne / Risque très élevé de charge électrostatique interne).
4.	Aeromagnetic surveys: (Potential for disruptions / Potential for significant disruptions / Potential for severe disruptions) in the (polar cap / auroral / and sub-auroral) zone(s).	4.	Levés aéromagnétiques : (Possibilité de perturbations / Possibilité de perturbations importantes / Possibilité de graves perturbations) dans (la zone / les zones) (de la calotte polaire / aurorale / et sub-aurorale).
5.	Directional Drilling: (Potential for deviations / Potential for significant deviations / Potential for sever deviations) in the (polar cap / auroral / and sub-auroral) zone(s).	5.	Forages dirigés : (Possibilité de déviations / Possibilité de perturbations déviations / Possibilité de graves déviations) dans (la zone / les zones) (de la calotte polaire / aurorale / et sub- aurorale).
6.	Impacts are not expected.	6.	Aucune répercussion n'est prévue.

2.3. 24 hour forecast / Prévisions de 24 heures

Geomagnetic activity / activité géomagnétique

1.	polar cap zone: (quiet / unsettled / active / stormy / major storm / unavailable) (with quiet / unsettled / active / stormy / major storm intervals)	1.	zone de la calotte polaire : (calme / agitée / active / orageuse / orage majeur / non disponible) (avec des périodes calmes / agitées / actives / orageuses / d'orage majeur)
2.	auroral zone: (quiet / unsettled / active / stormy / major storm / unavailable) (with unsettled / active / stormy / major storm intervals)	2.	zone aurorale : (calme / agitée / active / orageuse / orage majeur / non disponible) (avec des périodes agitées / actives / orageuses / d'orage majeur)
3.	<pre>sub-auroral zone: (quiet / unsettled / active / stormy / major storm / unavailable) (with unsettled / active / stormy / major storm intervals)</pre>	3.	zone sub-aurorale : (calme / agitée / active / orageuse / orage majeur / non disponible) (avec des périodes agitées / actives / orageuses / d'orage majeur).

Environment at geostationary orbit / Environnement à l'orbite géostationnaire

Possible impacts on technology / Effets possibles sur la technologie

The choice of statements for the possible impacts on technology in the 24 hour forecast part of the bulletin are the same as in the section for the *current conditions* (see section 3.2).

2.4. Additional information / Information supplémentaire

1.	Additional information at	1.	Information supplémentaire à
	http://www.spaceweather.gc.ca		http://www.spaceweather.gc.ca
2.	Updated conditions and forecast;	2.	Conditions et prévisions actualisées;
	Background information; FAQ, Glossary		Renseignements généraux; FAQ,
	of terms, and potential impacts.		Glossaire et effets possibles.

2.5. Detailed information / Information détaillée

Solar / Solaire

general / généralités	 Solar activity has been (very low / low / moderate / high / very high). Data about solar conditions are currently unavailable. 	 L'activité solaire a été (très faible / faible / modérée / élevée / très élevée). Les données sur les conditions solaires ne sont pas disponibles à l'heure actuelle.
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active regions / régions actives	1. 2. 3.	(There is one active region / There are xx active regions / There are several 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 a (solar x-ray flare / long duration solar x-ray flare) (and an associated CME) (and has the potential to produce subsequent solar eruptions). 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).	1. 2. 3.	 (Il y a une région active / Il y a xx régions actives / Il y a plusieurs régions actives) (visible / visibles) sur le disque solaire. La région active située près (du bord est / de la région centrale / du bord ouest) du disque solaire a produit une (éruption solaire avec émission de rayons X / éruption solaire de longue durée avec émission de rayons X) (et une EMC associée) (et pourrait produire des éruptions solaires subséquentes). La région active située près (du bord est / de la région centrale / du bord ouest) du disque solaire a produit des (éruptions solaires avec émission de rayons X / éruptions solaires de longue durée avec émission de rayons X / éruptions solaires de longue durée avec émission de rayons X) (et une EMC associée / et des EMC associées) (et pourrait produire des éruptions solaires subséquentes).
CME / EMC	1. 2. 3.	 (An / A) (slow/moderate/fast) 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). (Two/Three/Several) (slow/moderate/fast) 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). A (slow/moderate/fast) 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). 	 1. 2. 3. 	Une EMC (lente / modérée / rapide) en direction de la Terre a eu lieu le DD MMM YYYY HH:MM TU (et devrait atteindre la Terre le DD MMM YYYY) (, provoquant une augmentation/perturbation de l'activité géomagnétique). (Deux/Trois/Plusieurs) EMC (lents / modérés / rapides) en direction de la Terre ont eu lieu le DD MMM YYYY à HH:MM TU, HH:MM TU,, et HH:MM TU (et devraient atteindre la Terre le DD MMM YYYY) (, provoquant une augmentation / perturbation de l'activité géomagnétique). Une EMC (lente / modérée / rapide) a été observée le DD MMM YYYY, et devrait toucher la Terre obliquement le DD MMM YYYY (, provoquant une augmentation/perturbation de l'activité géomagnétique).

Г

CME / EMC	5. 6.	(Two / Three / Several) (slow / moderate / fast) 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). A (slow/moderate/fast) non-Earth- directed CME erupted on DD MMM YYYY HH:MM UT. (Two / Three / Several) (slow / moderate / fast) non-Earth-directed CMEs erupted on DD MMM YYYY at HH:MM UT, HH:MM UT,, and HH:MM UT. A (slow / moderate / fast) CME erupted on DD MMM YYYY HH:MM UT. It is not yet known if the CME will impact the Earth. (Two / Three / Several) (slow / moderate / fast) CMEs erupted on DD MMM YYYY at HH:MM UT, It is not yet known if the CMEs will impact the Earth.	 4. 5. 6. 7. 8. 	(Deux/Trois/Plusieurs) EMC (lents / modérés / rapides) ont été observées le DD MMM YYYY, et devraient toucher la Terre obliquement le DD MMM YYYY (, provoquant une augmentation/perturbation de l'activité géomagnétique). Une EMC (lente / modérée / rapide) non dirigée vers la Terre a eu lieu le DD MMM YYYYHH:MM TU. (Deux/Trois/Plusieurs) EMC (lents / modérés / rapides) non dirigées vers la Terre ont eu lieu le DD MMM YYYY à HH:MM TU, HH:MM TU,, et HH:MM TU. Une EMC (lente / modérée / rapide) a eu lieu le DD MMM YYYY HH:MM TU. On ne sait pas encore si l'EMC touchera la Terre. (Deux/Trois/Plusieurs) EMC (lents / modérés / rapides) ont eu lieu le DD MMM YYYY à HH:MM TU, HH:MM TU,, et HH:MM TU. On ne sait pas encore si les EMC toucheront la Terre.
coronal hole / trou coronal		One (small / medium / large) coronal hole (elongated in longitude) is located near the (centre / edge) of the solar disk. (Two / Three / Four / Five / Six) (small / medium / large) coronal holes (elongated in longitude) are located near the (centre / edge) of the solar disk.	1.	Un (petit / moyen / grand) trou coronal (étendu en longitude) est situé près du (centre / bord) du disque solaire. (Deux / Trois / Quatre / Cinq / Six) (petits / moyens / grands) trous coronaux (étendus en longitude) sont situés près du (centre / bord) du disque solaire.

	4		4	
	1.	An (M (medium) / X (large)) solar x-	1.	Une éruption solaire (M (moyenne) / X
		ray flare erupted DD MMM YYYY		(forte)) avec émission de rayons X a eu
		HH:MM UT.		lieu le DD MMM YYYY HH:MM TU.
	2	An (M (medium) / X (large)) solar x-	2	Une éruption solaire (M (moyenne) / X
	۷.		2.	± · · · · · · · · · · · · · · · · · · ·
re		ray flare erupted DD MMM YYYY		(forte)) avec émission de rayons X a eu
solaire		HH:MM UT near the (centre / edge) of		lieu le DD MMM YYYY HH:MM TU
SO		the solar disk.		près du (centre / bord) du disque
n				solaire.
éruption	2	(Two / Three / Four / Five / Six /	3	(Deux / Trois / Quatre / Cinq / Six /
dn	5.		5.	
ér		Seven / Eight / Nine / Ten / Several)		Sept / Huit / Neuf / Dix / Plusieurs)
		(M (medium) / X (large)) solar x-ray		éruptions solaires (M (moyennes) / X
ıre		flares have erupted over the past 24		(fortes)) avec émission de rayons X ont
fla		hours.		eu lieu au cours des 24 dernières
solar flare /		nouis.		heures.
olí				
S	4.	A long duration (C (low) / M	4.	Une éruption solaire (C (faible) / M
		(medium) / X (large)) solar x-ray flare		(moyenne) / X (forte)) de longue durée
		erupted at DD MMM YYYY HH:MM		avec émission de rayons X a eu lieu le
		UT near the (centre / edge) of the solar		DD MMM YYYY HH:MM TU près
		disk.		du (centre / bord) du disque solaire.
		UI5K.		uu (centre / boru) uu uisque solalle.

Interplanetary / Interplanétaire

general/généralités	1.	Interplanetary activity has been (very low / low / moderate / high / very high). Data about interplanetary conditions are currently unavailable.	1.	L'activité interplanétaire a été (très faible / faible / modérée / élevée / très élevée). Les données sur les conditions interplanétaires ne sont pas disponibles à l'heure actuelle.
solar wind speed / vitesse du vent solaire	2.	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)). The solar wind speed has been (increasing / decreasing) over the last (hour / xx hours) (currently ~ xx km/s). (Moderate / fast) solar wind speeds are due to (high speed streams from coronal holes / a CME observed at DD MMM YYYY HH:MM UT). The solar wind speed has been at xx km/s since the passage of an interplanetary shock DD MMM YYYY at HH:MM UT.	1. 2. 3.	Le vent solaire est actuellement (très lent (<400 km/s) / lent (400 à 500 km/s) / modéré (500 à 700 km/s) / rapide (700 à 1000 km/s) / très rapide (>1000 km/s)). La vitesse du vent solaire a (augmenté / diminué) au cours (de la dernière heure / des xx dernières heures) (actuellement ~ xx km/s). Les vitesses de vent solaire (modéré / rapide) sont attribuables à (des flux à grande vitesse provenant de trous coronaux / une EMC observée le DD MMM YYYY HH:MM TU). La vitesse du vent solaire se situait à xx km/s depuis le passage d'un choc interplanétaire le DD MMM YYYY à HH:MM TU.

IMF / CMI	2.	The interplanetary magnetic field has been fluctuating at (very low ($ B_z < 2$ nT) / low ($ B_z < 5$ nT) / moderate ($ B_z < 10$ nT) / high ($ 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 $B_z = (+/-) xx$ nT. Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.	 1. 2. 3. 4. 	Le champ magnétique interplanétaire a fluctué à des niveaux (très faibles $(B_z < 2 nT) / faibles (B_z < 5 nT) /$ modérés $(B_z < 10 nT) / élevés$ $(B_z < 20 nT) / très élevés (B_z > 20 nT)).$ Le champ magnétique interplanétaire a été généralement (positif / négatif) à des niveaux (très faibles $(B_z < 2 nT) /$ faibles $(2 < B_z < 5 nT) /$ modérés $(5 < B_z < 10 nT) / élevés$ $(10 < B_z < 20 nT) /$ très élevés $(B_z > 20 nT)).$ Actuellement, le champ magnétique interplanétaire a une valeur de $B_z=(+/$ -) xx nT. Les périodes prolongées de champ magnétique interplanétaire négatif sont souvent associées à une activité géomagnétique accrue.
shock / choc	1.	An interplanetary shock has been observed on DD MMM YYYY HH:MM UT.	1.	Un choc interplanétaire a été observé le DD MMM YYYY HH:MM TU.
proton events / épisodes de protons solaires	1.	A solar energetic proton event started on DD MMM YYYY at HH:MM UT. Current levels are (normal / moderate / high / very high).	1.	Un épisode de protons solaires de grande énergie a débuté le DD MMM YYYY à HH:MM TU. Les niveaux actuels sont (normaux / modérés / élevés / très élevés).

Environment at geostationary orbit / Environnement à l'orbite géostationnaire

ités	1.	Energetic electron fluence at geostationary orbit was at a (low / normal / moderate / high / very high) level yesterday and is expected to be at a (low / normal / moderate / high / very high) level tomorrow.	1.	La fluence des électrons énergétiques en orbite stationnaire était à un niveau (faible / normale / modéré / élevée / très élevée) hiers et devrait être à un niveau (faible / normale / modéré / élevée / très élevée) demain.
généralités	2.	The 5-minute integral energetic electron flux is currently high.	2.	Actuellement, le flux intégral d'électrons énergétiques sur une
				période de cinq minutes est élevé.
general /	3.	Data about conditions in the	3.	Les données sur les conditions dans
ner		environment at geostationary orbit are		l'environnement à l'orbite
gei		currently unavailable.		géostationnaire ne sont pas
	4	X7 */	4	disponibles à l'heure actuelle.
	4.	Visit	4.	Consultez les prévisions sur la fluence
		http://www.spaceweather.gc.ca/sffl-		des électrons à l'adresse
		<u>eng.php</u> for the electron forecast.		http://www.spaceweather.gc.ca/sffl-
				<u>tra.php</u> .

Geomagnetic / Géomagnétique

general / généralités	 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. 	1. Au cours des 24 dernières heures, l'activité géomagnétique était (calme / agitée / active / orageuse / celle d'un orage majeur) (avec des périodes agitées / actives / orageuses / d'orage majeur) dans la zone polaire, (calme / agitée / active / orageuse / celle d'un orage majeur) (avec des périodes agitées / actives / orageuses / d'orage majeur) dans la zone aurorale, et (calme / agitée / active / orageuse / celle d'un orage majeur) (avec des périodes agitées / actives / orageuses / d'orage majeur) dans la zone sub- aurorale.
-----------------------	---	---

	S	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.	2.	Au cours des 24 prochaines heures, l'activité géomagnétique devrait être (calme / agitée / active / orageuse / celle d'un orage majeur) (avec des périodes agitées / actives / orageuses / d'orage majeur) dans la zone polaire, (calme / agitée / active / orageuse / celle d'un orage majeur) (avec des périodes agitées / actives / orageuses / d'orage majeur) dans la zone aurorale, et (calme / agitée / active / orageuse / celle d'un orage majeur) (avec des périodes agitées / active / orageuse / celle d'un orage majeur) (avec des périodes agitées / actives / orageuses / d'orage majeur) dans la zone sub- aurorale.
2771	general / generalites	3.	Enhanced geomagnetic activity (is / was) likely associated with the arrival of a CME from DD MMM YYYY HH:MM UT which arrived at the Earth at DD MMM YYYY HH:MM UT.	3.	L'augmentation de l'activité géomagnétique (est / était) probablement liée à l'arrivée d'un EMC qui a fait éruption le DD MMM YYYY à HH:MM TU et atteint la Terre le DD MMM YYYY à HH:MM TU.
	gen	4.	Enhanced geomagnetic activity (is/was) likely due to the arrival of a high speed stream associated with coronal holes.	4.	L'augmentation de l'activité géomagnétique (est / était) due à l'arrivée d'un flux à grande vitesse associée à des trous coronaux.
		5.	Visit <u>http://www.spaceweather.gc.ca/sfst-1-</u> <u>eng.php</u> for the magnetic forecast.	5.	
		6.	Data about geomagnetic conditions are currently unavailable.	6.	
		7.	Data about geomagnetic conditions in the (polar cap / auroral / and sub- auroral) (zone / zones) are currently unavailable.	7.	-
	impuise / impuision	1.	A geomagnetic sudden impulse due to a shock in the solar wind was observed on DD MMM YYYY HH:MM UT.	1.	Une impulsion géomagnétique brusque attribuable à une onde de choc du vent solaire a été observée le DD MMM YYYY HH:MM TU.

2.6. Signature

Space weather scientist	Spécialiste en météorologie spatiale
Name	Nom
Canadian Space Weather Forecast Centre	Centre canadien de météo spatiale
Canadian Hazard Information Service	Service canadien d'information sur les risques
Natural Resources Canada	Ressources naturelles Canada
2617 Anderson Road, Ottawa ON K1A 0E7	2617, chemin Anderson, Ottawa (Ontario)
email address (preferred method of contact)	K1A 0E7
Telephone: (613) 837-xxxx	adresse courriel (méthode préférée de contact)
Government of Canada	Téléphone : 613-837-xxxx
	Gouvernement du Canada

3. Possible impacts on technology

Space weather may impact various ground-based and space-based technologies and infrastructure. This section lists possible impacts based on geomagnetic activity level, ionospheric conditions, and the geostationary satellite environment.

It is important to acknowledge that although impacts are possible, they are not guaranteed. Possible impacts listed in the tables below represent reasonable expectations based on current and forecasted conditions. However, system impacts may be felt at times other than those listed in the bulletin due to, for example, other system limitations unknown to the duty forecaster or spontaneous activity.

3.1. Geomagnetic activity level

Table 1: Possible impacts to power systems, aeromagnetic surveys, and directional drilling based on geomagnetic activity levels.

Activity Level	System	Possible Impact		
	Power Systems:	Impacts are not expected		
Quiet	Aeromagnetic surveys:	Impacts are not expected		
0	Directional Drilling:	Impacts are not expected		
p	Power Systems:	Impacts are not expected		
Unsettled	Aeromagnetic surveys:	Impacts are not expected		
Uns	Directional Drilling:	Impacts are not expected		
0	Power Systems:	Impacts are not expected		
Active	Aeromagnetic surveys:	Potential for disruptions		
A	Directional Drilling:	Potential for deviations		
x	Power Systems:	Possibility of weak voltage fluctuations ¹		
Stormy	Aeromagnetic surveys:	Potential for significant disruptions		
St	Directional Drilling:	Potential for significant deviations		
• -	Power Systems:	Geomagnetically induced currents may cause misoperation of protective relays and		
Major Storm		transformer heating		
St M	Aeromagnetic surveys:	Potential for severe disruptions		
	Directional Drilling:	Potential for severe deviations		

¹ Although these fluctuations are likely to be observed, they are in general within normal operating parameters and do not cause problems with the proper operation of the power system. However, it is possible that for some isolated cases, specific locations, or specific systems, fluctuations might move out of the range of what is acceptable.

3.2. Ionosphere

Activity Level	GOES 10 MeV protons	Possible Impacts		
minor PCA	above 10 pfu	(Statement used at discretion of DF)		
event		Ionospheric and polar cap absorption		
		events may affect radio		
		communications for transpolar flights		
		and other arctic operations.		
PCA event	above 100 pfu	Ionospheric and polar cap absorption		
		events may affect radio		
		communications for transpolar flights		
		and other arctic operations.		

Table 2: Possible impacts to HF radio communication based on ionospheric conditions.

3.3. Environment at geostationary orbit

Table 3: Possible impacts to geostationary satellites based on the geostationary satellite environment.

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

4. Tables of values – 2013

Various descriptive terms are used in the daily space weather bulletin to describe geomagnetic activity level, the environment at geostationary orbit, solar activity, and interplanetary conditions. This section describes these descriptive terms and the thresholds used to determine them.

4.1. Geomagnetic activity level

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.

Geomagnetic activity levels described in *Current Conditions* and 24 Hour Forecast are listed in Table 4.

Table 4: Terminology and quantitative description of geomagnetic activity level.

Geomagnetic	Quiet	Unsettled	Active	Stormy	Major Storm
Activity Level					
Kr index	0-3	3-4	4-5	5-7	7+

4.2. Environment at geostationary orbit

Descriptors for the environment at geostationary orbit are based on 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/cm²-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 5.0×10^7 electrons/cm²-sr-day is considered as a threshold level for possible adverse space weather conditions hazardous to geostationary satellites.

Descriptors for the environment at geostationary orbit provided in *Current Conditions* and 24 Hour Forecast are listed in Table 5.

Space Environment	Low	Normal	Moderate	High	Very High
Electron Fluence (electrons / cm ² -sr-day)	$10^5 < f < 10^6$	$10^6 < f < 5 \times 10^7$	$5 \times 10^7 < f < 5 \times 10^8$	$5 \times 10^8 < f < 5 \times 10^9$	5×10 ⁹ < f

Table 5: Terminology and quantitative description of the environment at geostationary orbit.

4.3. Solar activity

Under the *Solar* section of *Detailed Information* descriptors are used to characterize solar activity as *very low, low, moderate, high*, or *very high*. These descriptors are based on three kinds of solar phenomenon: coronal mass ejections, coronal holes, and solar flares (see Table 6).

Coronal mass ejections (CMEs) are ejections of plasma from the outermost region of the Sun's atmosphere called the corona. Their arrival at the Earth is the main cause for large geomagnetic disturbances. CMEs travel at speeds from ~400 to 2000 km/s, taking 1 to 4 days to reach the Earth. Although CMEs are an indicator of solar activity and can be ejected from any part of the Sun, only those directed toward the Earth will affect the Earth. Earth-directed CMEs (also called halo CMEs) have the largest influence on the Earth. Partially Earth-directed CMEs deliver a partial or 'glancing' blow to the Earth and have a lesser affect. The speed of a CME is a rough indicator of how strong the effects on the Earth will be; a slow-moving CME moving close to the background solar wind speed (300-400 km/s) will have less influence than a fast moving CME (>700 km/s).

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

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.

Very low	Low	Moderate	High	Very high
no coronal	coronal holes	coronal holes	coronal holes	coronal holes
holes, flares, or				
CMEs detected	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	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 6: Criteria for describing solar activity level.

4.4. Interplanetary conditions

Under the *Interplanetary* section of *Detailed Information* descriptors are used to characterize both the solar wind speed (v_{sw}) and the interplanetary magnetic field (IMF) *z*-component (B_z) as very low, low, moderate, high, or very high. These descriptors are based on the magnitude of v_{sw} and IMF B_z .

Table 7 provides criteria for determining which descriptor to use for interplanetary conditions.

	Very low	Low	Moderate	High	Very high
V _{sw}	$v_{sw} < 400$	$400 < v_{sw} < 500$	$500 < v_{sw} < 700$	$700 < v_{sw} <$	$v_{sw} > 1000$
(km/s)				1000	
$B_{z}(nT)$	$ \mathbf{B}_z < 2$	$2 < B_z < 5$	$5 < B_z < 10$	$10 < B_z < 20$	$ B_z > 20$

 Table 7: Criteria for describing interplanetary conditions.

5. Summary of activity

In this section we present summary of observed geomagnetic activity in 2013. In figure 1, we show the percent occurrence of quiet, unsettled, active and stormy geomagnetic activity levels in the polar cap, auroral and sub-auroral zone as reported by current conditions in 2013.

In figure 2, we display daily averaged geomagnetic activity levels for the polar cap, auroral and subauroral zone (black symbols) and maximal activity level for the day reported by current conditions (blue symbols).

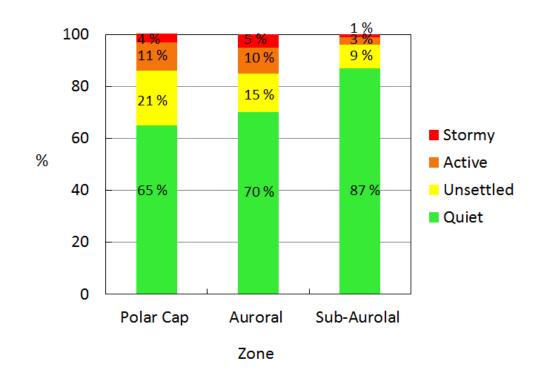


Figure 1: Observed geomagnetic activity for the polar cap, auroral and sub-auroral zone in 2013. The percent occurrence of quiet, unsettled, active, stormy geomagnetic activity levels are shown.

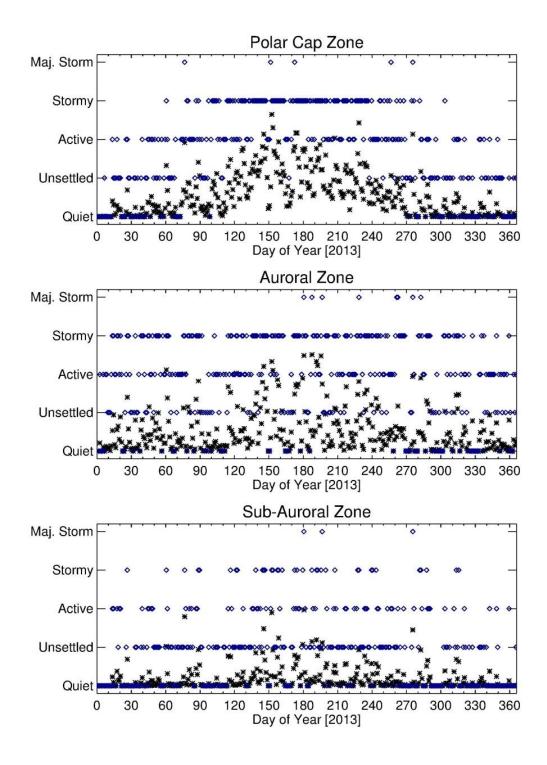


Figure 2: Observed geomagnetic activity for the polar cap, auroral and sub-auroral zone in 2013. The black symbols represent daily averaged geomagnetic activity while the blue symbols indicate maximum activity level for the day, as reported by current conditions.

6. Daily Bulletins

This section provides a chronological listing of the daily space weather bulletin issued in 2013. Alterations made to the original bulletins include (1) removing the list of email recipients, (2) altering the font to be consistent with this document, (3) removing the email signature to limit the length of the document. To limit the length of the document, only the English version of the bulletin has been included.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] **Sent:** January-01-13 10:01 AM **Subject:** Space Weather Bulletin - 2013-01-01 issued at 15:00 UT (10:00 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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 (2 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 31 DEC 2012 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] **Sent:** January-02-13 8:21 AM **Subject:** Space Weather Bulletin - 2013-01-02 issued at 13:20 UT (08:20 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

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 01 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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: January-03-13 11:07 AM Subject: Space Weather Bulletin - 2013-01-03 issued at 16:05 UT (11:05 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

- 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 02 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: January-04-13 10:47 AM Subject: Space Weather Bulletin - 2013-01-04 issued at 15:45 UT (10:45 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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.
- Three 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a low level at 03 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: January-05-13 1:50 PM Subject: Space Weather Bulletin - 2013-01-05 issued at 18:45 UT (13:45 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 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.
- Three 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a low level at 04 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: January-06-13 1:57 PM Subject: Space Weather Bulletin - 2013-01-06 issued at 18:55 UT (13:55 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 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.
- Three 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 05 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: January 7, 2013 11:02 Subject: Space Weather Bulletin - 2013-01-07 issued at 16:00 UT (11:00 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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
- 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 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 06 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: January-08-13 10:25 AM Subject: Space Weather Bulletin - 2013-01-08 issued at 15:22 UT (10:22 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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.
- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a low level at 07 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: January-09-13 10:43 AM Subject: Space Weather Bulletin - 2013-01-09 issued at 15:40 UT (10:40 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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.
- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a low level at 08 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: January-10-13 10:34 AM Subject: Space Weather Bulletin - 2013-01-10 issued at 15:32 UT (10:32 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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.
- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 09 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: January-11-13 11:24 AM Subject: FW: Space Weather Bulletin - 2013-01-11 issued at 16:21 UT (11:21 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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: 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 moderate.
- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 10 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: January-12-13 1:22 PM Subject: Space Weather Bulletin - 2013-01-12 issued at 18:19 UT (13:19 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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: 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.
- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 11 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] **Sent:** January-13-13 1:12 PM **Subject:** Space Weather Bulletin - 2013-01-13 issued at 18:09 UT (13:09 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 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:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

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 moderate.
- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 12 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: January-14-13 1:50 PM Subject: Space Weather Bulletin - 2013-01-14 issued at 18:48 UT (13:48 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 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 Impacts:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

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 Impacts:

• Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.

Detailed Information

Solar

- Solar activity has been low.
- One coronal hole is 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 13 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: January-15-13 10:54 AM Subject: FW: Space Weather Bulletin - 2013-01-15 issued at 15:52 UT (10:52 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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 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 edge of the solar disk.
- 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 low (2 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 14 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: January-16-13 11:12 AM Subject: Space Weather Bulletin - 2013-01-16 issued at 16:08 UT (11:08 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 15 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] **Sent:** January-17-13 10:51 AM **Subject:** Space Weather Bulletin - 2013-01-17 issued at 15:49 UT (10:49 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (15:30 UT)

Geomagnetic Activity:

- polar cap zone: active
- auroral zone: active
- sub-auroral zone: active

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.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: quiet with unsettled intervals
- auroral zone: quiet with unsettled intervals
- sub-auroral zone: quiet with active 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.
- One coronal hole is located near the centre of the solar disk.

Interplanetary

- Interplanetary activity has been high.
- 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.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 16 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: January-18-13 10:54 AM Subject: Space Weather Bulletin - 2013-01-18 issued at 15:53 UT (10:53 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 16 Jan 2013, and is expected to deliver a glancing blow to the Earth on 19 Jan 2013, resulting in increased geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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 with active intervals
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet with active 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.
- A CME was observed on 16 Jan 2013, and is expected to deliver a glancing blow to the Earth on 19 Jan 2013, resulting in increased geomagnetic activity.

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 < |Bz| < 10 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 17 JAN 2013 and is expected to be at a normal level tomorrow.

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

- Over the last 24 hours 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 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 active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] **Sent:** January-19-13 1:21 PM **Subject:** Space Weather Bulletin - 2013-01-19 issued at 18:19 UT (13:19 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 16 Jan 2013, and is expected to deliver a glancing blow to the Earth on 19 Jan 2013, resulting in increased geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 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 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.
- A CME was observed on 16 Jan 2013, and is expected to deliver a glancing blow to the Earth on 19 Jan 2013, resulting in increased geomagnetic activity.

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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 18 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] **Sent:** January-20-13 3:00 PM **Subject:** Space Weather Bulletin - 2013-01-20 issued at 19:59 UT (14:59 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Stormy conditions observed 20 Jan 2013 in the auroral zone have ended.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 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 with unsettled intervals
- 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.
- 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.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 19 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours 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 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 <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: January-21-13 11:20 AM Subject: Space Weather Bulletin - 2013-01-21 issued at 16:19 UT (11:19 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 20 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] **Sent:** January-22-13 7:18 AM **Subject:** Space Weather Bulletin - 2013-01-22 issued at 12:17 UT (07:17 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (12:00 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.
- 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 21 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] **Sent:** January-23-13 7:19 AM **Subject:** Space Weather Bulletin - 2013-01-23 issued at 12:18 UT (07:18 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (12:00 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.
- 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 22 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] **Sent:** January-24-13 10:46 AM **Subject:** Space Weather Bulletin - 2013-01-24 issued at 15:45 UT (10:45 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

- 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 (|Bz|<2 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 23 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: January-25-13 11:30 AM Subject: Space Weather Bulletin - 2013-01-25 issued at 16:29 UT (11:29 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

• Impacts are not expected.

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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 24 JAN 2013 and is expected to be at a normal level tomorrow.

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

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: January-26-13 11:49 AM Subject: Space Weather Bulletin - 2013-01-26 issued at 16:48 UT (11:48 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:30 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:

• Aeromagnetic surveys: Potential for significant disruptions in the polar cap and auroral zones.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: unsettled with active intervals
- auroral zone: unsettled 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 disruption in the polar cap and auroral zones.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

- Interplanetary activity has been high.
- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at high (10 < |Bz| < 20 nT) levels.
- 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 normal level at 25 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 unsettled with active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: January-27-13 1:50 PM Subject: Space Weather Bulletin - 2013-01-27 issued at 18:48 UT (13:48 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 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 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.
- 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.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 26 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: January-28-13 11:34 AM Subject: Space Weather Bulletin - 2013-01-28 issued at 16:33 UT (11:33 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 27 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] **Sent:** January 29, 2013 10:34 **Subject:** Space Weather Bulletin - 2013-01-29 issued at 15:33 UT (10:33 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 28 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] **Sent:** January-30-13 12:49 PM **Subject:** Space Weather Bulletin - 2013-01-30 issued at 17:46 UT (12:46 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

• See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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: 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 (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 29 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] **Sent:** January-31-13 11:35 AM **Subject:** Space Weather Bulletin - 2013-01-31 issued at 16:31 UT (11:31 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

- 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 30 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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:** February-01-13 12:03 PM **Subject:** Space Weather Bulletin - 2013-02-01 issued at 16:59 UT (11:59 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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: 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 (|Bz|<5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 31 JAN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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:** February-02-13 11:03 AM **Subject:** Space Weather Bulletin - 2013-02-02 issued at 15:59 UT (10:59 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (15:45 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 with unsettled intervals
- 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 polar cap and auroral zones.

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 (|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 01 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] **Sent:** February-03-13 10:40 AM **Subject:** Space Weather Bulletin - 2013-02-03 issued at 15:37 UT (10:37 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (15:15 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: 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 low (|Bz|<5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 02 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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:** February-04-13 11:02 AM **Subject:** Space Weather Bulletin - 2013-02-04 issued at 16:00 UT (11:00 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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
- 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 (|Bz|<5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 03 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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:** February-05-13 10:37 AM **Subject:** Space Weather Bulletin - 2013-02-05 issued at 15:34 UT (10:34 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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 (|Bz|<5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 04 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] **Sent:** February-06-13 10:59 AM **Subject:** Space Weather Bulletin - 2013-02-06 issued at 15:45 UT (10:45 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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.
- A CME erupted on 06 Feb 2013 00:13 UT. It is not yet known if the CME will impact the Earth.

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 05 FEB 2013 and is expected to be at a normal level tomorrow.

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

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] **Sent:** February-07-13 11:20 AM **Subject:** Space Weather Bulletin - 2013-02-07 issued at 16:17 UT (11:17 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- Two CMEs were observed on 06 Feb 2013, and are expected to deliver a glancing blow to the Earth on 08-09 Feb 2013, resulting in increased geomagnetic activity.
- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:00 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 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 moderate.
- Two CMEs were observed on 06 Feb 2013, and are expected to deliver a glancing blow to the Earth on 08-09 Feb 2013, 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 moderate (|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 06 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: February-08-13 12:47 PM Subject: Space Weather Bulletin - 2013-02-08 issued at 17:33 UT (12:33 EST)

This is for testing purposes

La version française du bulletin suit.

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 08 Feb 2013 and 09 Feb 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: low

Possible Impacts:

• Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: quiet with active intervals
- auroral zone: unsettled 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 slow (400-500 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 low level at 07 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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, unsettled with active intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] **Sent:** February-09-13 11:11 AM **Subject:** Space Weather Bulletin - 2013-02-09 issued at 16:06 UT (11:06 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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 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 km/s).
- The interplanetary magnetic field has been fluctuating at very low (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 08 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] **Sent:** February-10-13 10:17 AM **Subject:** Space Weather Bulletin - 2013-02-10 issued at 15:15 UT (10:15 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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 (|Bz|<5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 09 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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:** February-11-13 10:56 AM **Subject:** Space Weather Bulletin - 2013-02-11 issued at 15:54 UT (10:54 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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
- 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 (|Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 10 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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: February-12-13 10:21 AM Subject: Space Weather Bulletin - 2013-02-12 issued at 15:18 UT (10:18 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 11 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] **Sent:** February-13-13 9:39 AM **Subject:** Space Weather Bulletin - 2013-02-13 issued at 14:37 UT (09:37 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

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 very low.

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 12 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] **Sent:** February-14-13 12:44 PM **Subject:** Space Weather Bulletin - 2013-02-14 issued at 17:43 UT (12:43 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

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

- Aeromagnetic surveys: Potential for disruption in the polar cap zone.
- 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 very low.

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 low level at 13 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] **Sent:** February-15-13 1:46 PM **Subject:** Space Weather Bulletin - 2013-02-15 issued at 18:43 UT (13:43 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 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:

• Aeromagnetic surveys: Potential for disruption in the auroral zone.

Detailed Information

Solar

- Solar activity has been low.
 - Two non-Earth-directed CMEs erupted on 14 FEB 2013 at 19:36 UT and 21:38 UT.

Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low (|Bz| < 2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 14 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] **Sent:** February-16-13 1:45 PM **Subject:** Space Weather Bulletin - 2013-02-16 issued at 18:43 UT (13:43 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 UT)

Geomagnetic Activity:

- polar cap zone: active
- 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 sub-auroral zone.

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 Impacts:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.
- A CME erupted on 15 FEB 2013 17:36 UT. It is not yet known if the CME will impact the Earth.

Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (5<|Bz|<10 nT) levels.
- An interplanetary shock has been observed on 16 FEB 2013 11:10 UT.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 15 FEB 2013 and is expected to be at a normal level tomorrow.

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

- 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 active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- A geomagnetic sudden impulse due to a shock in the solar wind was observed on 16 FEB 2013 12:10 UT.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] **Sent:** February-17-13 12:27 PM **Subject:** Space Weather Bulletin - 2013-02-17 issued at 17:25 UT (12:25 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 15 FEB 2013, and is expected to deliver a glancing blow to the Earth on 20 FEB 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 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:

• Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.

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 Impacts:

- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Directional Drilling: Significant deviations possible in the auroral zone.
- Aeromagnetic surveys: Potential for disruption in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 15 FEB 2013, and is expected to deliver a glancing blow to the Earth on 20 FEB 2013.
- One coronal hole is located near the centre of the solar disk.
- An M (medium) solar x-ray flare erupted 17 FEB 2013 15:49 UT.

Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been primarily negative at low (2<|Bz|<5 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 16 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 with unsettled intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] **Sent:** February-18-13 1:08 PM **Subject:** Space Weather Bulletin - 2013-02-18 issued at 18:05 UT (13:05 EST)

This is for testing purposes

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 15 FEB 2013, and is expected to deliver a glancing blow to the Earth on 20 FEB 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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: low

- Possible Impacts on Technology:
 - 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 on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 15 FEB 2013, and is expected to deliver a glancing blow to the Earth on 20 FEB 2013.

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 low level at 17 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] **Sent:** February-19-13 3:16 PM **Subject:** Space Weather Bulletin - 2013-02-19 issued at 20:14 UT (15:14 EST)

This is for testing purposes

Space Weather Bulletin - 2013-02-19 issued at 20:14 UT (15:14 EST) / Bulletin de météorologie spatiale – 2013-02-19 diffusé à 20:14 TU (15:14 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A slow CME was observed on 15 FEB 2013, and is expected to deliver a glancing blow to the Earth on 20 FEB 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:00 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 on Technology:**
 - 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 on Technology:

• 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 18 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] **Sent:** February-20-13 1:27 PM **Subject:** Space Weather Bulletin - 2013-02-20 issued at 18:25 UT (13:25 EST)

This is for testing purposes

Space Weather Bulletin - 2013-02-20 issued at 18:25 UT (13:25 EST) / Bulletin de météorologie spatiale – 2013-02-20 diffusé à 18:25 TU (13:25 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 19 FEB 2013, and is expected to deliver a glancing blow to the Earth on 23 FEB 2013, resulting in increased geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 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 on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

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 Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the auroral zone.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 19 FEB 2013, and is expected to deliver a glancing blow to the Earth on 23 FEB 2013, resulting in increased geomagnetic activity.
- 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 low (2 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 19 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours 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 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.
- Enhanced geomagnetic activity was likely due to the arrival of a high speed stream associated with coronal holes.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] **Sent:** February-21-13 2:08 PM **Subject:** Space Weather Bulletin - 2013-02-21 issued at 19:06 UT (14:06 EST)

This is for testing purposes

Space Weather Bulletin - 2013-02-21 issued at 19:06 UT (14:06 EST) / Bulletin de météorologie spatiale – 2013-02-21 diffusé à 19:06 TU (14:06 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 19 FEB 2013, and is expected to deliver a glancing blow to the Earth on 23 FEB 2013, resulting in increased geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 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 on Technology:**
 - 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 on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 19 FEB 2013, and is expected to deliver a glancing blow to the Earth on 23 FEB 2013, resulting in increased geomagnetic activity.
- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 20 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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:** February-22-13 1:29 PM **Subject:** Space Weather Bulletin - 2013-02-22 issued at 18:27 UT (13:27 EST)

This is for testing purposes

Space Weather Bulletin - 2013-02-22 issued at 18:27 UT (13:27 EST) / Bulletin de météorologie spatiale – 2013-02-22 diffusé à 18:27 TU (13:27 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 19 FEB 2013, and is expected to deliver a glancing blow to the Earth on 22-23 FEB 2013, resulting in increased geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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 on Technology:**
 - 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 Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Directional Drilling: Significant deviations possible in the auroral zone.
- Aeromagnetic surveys: Potential for disruption in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 19 FEB 2013, and is expected to deliver a glancing blow to the Earth on 22-23 FEB 2013, resulting in increased geomagnetic activity.
- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 21 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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.
- Enhanced geomagnetic activity was likely due to the arrival of a high speed stream associated with coronal holes.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] **Sent:** February-23-13 3:48 PM **Subject:** Space Weather Bulletin - 2013-02-23 issued at 20:47 UT (15:47 EST)

This is for testing purposes

Space Weather Bulletin - 2013-02-23 issued at 20:47 UT (15:47 EST) / Bulletin de météorologie spatiale – 2013-02-23 diffusé à 20:47 TU (15:47 HNE) La version française du bulletin suit.

Summary

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

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 on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.

Detailed Information

Solar

- Solar activity has been low.
- 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 negative at low (2 < |Bz| < 5 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 22 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] **Sent:** February-24-13 1:44 PM **Subject:** Space Weather Bulletin - 2013-02-24 issued at 18:43 UT (13:43 EST)

This is for testing purposes

Space Weather Bulletin - 2013-02-24 issued at 18:43 UT (13:43 EST) / Bulletin de météorologie spatiale – 2013-02-24 diffusé à 18:43 TU (13:43 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 23 Feb 2013, and is expected to deliver a glancing blow to the Earth on 27 Feb 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 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 on Technology:

• 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 on Technology:

• Aeromagnetic surveys: Potential for disruption in the auroral zone.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 23 Feb 2013, and is expected to deliver a glancing blow to the Earth on 27 Feb 2013.
- 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 primarily negative at very low (|Bz|<2 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 23 FEB 2013 and is expected to be at a normal level tomorrow.

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

- 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 with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] **Sent:** February-25-13 1:21 PM **Subject:** Space Weather Bulletin - 2013-02-25 issued at 18:20 UT (13:20 EST)

This is for testing purposes

Space Weather Bulletin - 2013-02-25 issued at 18:20 UT (13:20 EST) / Bulletin de météorologie spatiale – 2013-02-25 diffusé à 18:20 TU (13:20 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 23 FEB 2013, and is expected to deliver a glancing blow to the Earth on 27 FEB 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.

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 Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 23 FEB 2013, and is expected to deliver a glancing blow to the Earth on 27 FEB 2013.
- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 24 FEB 2013 and is expected to be at a normal level tomorrow.

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

- 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 unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] **Sent:** February-26-13 4:36 PM **Subject:** Space Weather Bulletin - 2013-02-26 issued at 21:32 UT (16:32 EST)

This is for testing purposes

Space Weather Bulletin - 2013-02-26 issued at 21:32 UT (16:32 EST) / Bulletin de météorologie spatiale – 2013-02-26 diffusé à 21:32 TU (16:32 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:00 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 on Technology:

• 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 on Technology:

• 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 FEB 2013 and is expected to be at a normal level tomorrow.

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

- 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 with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] **Sent:** February 27, 2013 14:48 **Subject:** Space Weather Bulletin - 2013-02-27 issued at 19:47 UT (14:47 EST)

This is for testing purposes

Space Weather Bulletin - 2013-02-27 issued at 19:47 UT (14:47 EST) / Bulletin de météorologie spatiale – 2013-02-27 diffusé à 19:47 TU (14:47 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 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 on Technology:

• 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 on Technology:

• 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

• Interplanetary activity has been low.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 26 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] **Sent:** February-28-13 3:27 PM **Subject:** Space Weather Bulletin - 2013-02-28 issued at 20:25 UT (15:25 EST)

This is for testing purposes

Space Weather Bulletin - 2013-02-28 issued at 20:25 UT (15:25 EST) / Bulletin de météorologie spatiale – 2013-02-28 diffusé à 20:25 TU (15:25 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:15 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 on Technology:

• 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 on Technology:

• 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

• Interplanetary activity has been low.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 27 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: March-01-13 4:10 PM Subject: Space Weather Bulletin - 2013-03-01 issued at 21:09 UT (16:09 EST) / Bulletin de météorologie spatiale - 2013-03-01 diffusé à 21:09 TU (16:09 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-01 issued at 21:09 UT (16:09 EST) / Bulletin de météorologie spatiale - 2013-03-01 diffusé à 21:09 TU (16:09 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect. •
- Stormy conditions observed 28 FEB 2012 in the auroral zone have ended.
- See our website for current information: http://www.spaceweather.gc.ca (updated every 15 minutes)

Current Conditions (20:45 UT)

Geomagnetic Activity:

- polar cap zone: active •
- auroral zone: unsettled
- sub-auroral zone: unsettled

Geostationary Satellite Environment:

- energetic electron fluence at geostationary orbit: low
- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

Solar activity has been low.

Interplanetary

- Interplanetary activity has been moderate.
- The solar wind speed has been increasing over the last 12 hours (currently \sim 700 km/s).

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a low level at 28 FEB 2013 and is expected to be at a normal level tomorrow.
- Visit http://www.spaceweather.gc.ca/sffl-eng.php for the electron forecast.

- Over the last 24 hours 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 sub-auroral 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 in the sub-auroral zone.
- Enhanced geomagnetic activity was likely due to the arrival of a high speed stream associated with coronal holes.
- 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: March-02-13 8:32 PM Subject: Space Weather Bulletin - 2013-03-03 issued at 01:30 UT (20:30 EST) / Bulletin de météorologie spatiale - 2013-03-03 diffusé à 01:30 TU (20:30 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-03 issued at 01:30 UT (20:30 EST) / Bulletin de météorologie spatiale - 2013-03-03 diffusé à 01:30 TU (20:30 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (01:15 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 on Technology:

• 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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

- Interplanetary activity has been low.
- The solar wind speed has been decreasing over the last hour (currently ~ 500 km/s).

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 02 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: March-03-13 7:13 PM Subject: Space Weather Bulletin - 2013-03-04 issued at 00:12 UT (19:12 EST) / Bulletin de météorologie spatiale - 2013-03-04 diffusé à 00:12 TU (19:12 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-04 issued at 00:12 UT (19:12 EST) / Bulletin de météorologie spatiale - 2013-03-04 diffusé à 00:12 TU (19:12 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (00:00 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 Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

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: unavailable

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Geostationary Satellite Environment

• Data about conditions in the near-Earth environment are currently unavailable.

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

- 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, unsettled in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: March-04-13 5:50 PM Subject: Space Weather Bulletin - 2013-03-04 issued at 22:48 UT (17:48 EST) / Bulletin de météorologie spatiale - 2013-03-04 diffusé à 22:48 TU (17:48 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-04 issued at 22:48 UT (17:48 EST) / Bulletin de météorologie spatiale - 2013-03-04 diffusé à 22:48 TU (17:48 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:30 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 on Technology:

• 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 on Technology:

• 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 moderate level at 03 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: March-05-13 7:27 PM Subject: Space Weather Bulletin - 2013-03-06 issued at 00:24 UT (19:24 EST) / Bulletin de météorologie spatiale - 2013-03-06 diffusé à 00:24 TU (19:24 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-06 issued at 00:24 UT (19:24 EST) / Bulletin de météorologie spatiale - 2013-03-06 diffusé à 00:24 TU (19:24 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (00:15 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 on Technology:

• 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: unavailable

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Geostationary Satellite Environment

• Data about conditions in the near-Earth environment are currently unavailable.

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

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: March-06-13 5:58 PM Subject: Space Weather Bulletin - 2013-03-06 issued at 22:56 UT (17:56 EST) / Bulletin de météorologie spatiale - 2013-03-06 diffusé à 22:56 TU (17:56 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-06 issued at 22:56 UT (17:56 EST) / Bulletin de météorologie spatiale - 2013-03-06 diffusé à 22:56 TU (17:56 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:45 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 on Technology:

• 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 on Technology:

• 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 moderate level at 05 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: March-07-13 7:45 PM Subject: Space Weather Bulletin - 2013-03-08 issued at 00:44 UT (19:44 EST) / Bulletin de météorologie spatiale - 2013-03-08 diffusé à 00:44 TU (19:44 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-08 issued at 00:44 UT (19:44 EST) / Bulletin de météorologie spatiale - 2013-03-08 diffusé à 00:44 TU (19:44 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (Time)

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 on Technology:

• 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 on Technology:

• 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 moderate level at 06 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been quiet in the polar zone, unsettled 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 <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: March-08-13 5:01 PM Subject: Space Weather Bulletin - 2013-03-08 issued at 21:54 UT (16:54 EST) / Bulletin de météorologie spatiale - 2013-03-08 diffusé à 21:54 TU (16:54 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-08 issued at 21:54 UT (16:54 EST) / Bulletin de météorologie spatiale - 2013-03-08 diffusé à 21:54 TU (16:54 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:45 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 on Technology:

• 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 on Technology:

• 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 moderate level at 07 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: March-09-13 5:29 PM Subject: Space Weather Bulletin - 2013-03-09 issued at 22:28 UT (17:28 EST) / Bulletin de météorologie spatiale - 2013-03-09 diffusé à 22:28 TU (17:28 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-09 issued at 22:28 UT (17:28 EST) / Bulletin de météorologie spatiale - 2013-03-09 diffusé à 22:28 TU (17:28 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:15 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 on Technology:

• 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 on Technology:

• 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 moderate level at 08 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: March-10-13 8:23 PM Subject: Space Weather Bulletin - 2013-03-11 issued at 00:21 UT (20:21 EST) / Bulletin de météorologie spatiale - 2013-03-11 diffusé à 00:21 TU (20:21 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-11 issued at 00:21 UT (20:21 EST) / Bulletin de météorologie spatiale - 2013-03-11 diffusé à 00:21 TU (20:21 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (00:15 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: unavailable

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Geostationary Satellite Environment

- Data about conditions in the near-Earth environment are currently unavailable.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: March-11-13 6:22 PM Subject: Space Weather Bulletin - 2013-03-11 issued at 22:21 UT (18:21 EST) / Bulletin de météorologie spatiale - 2013-03-11 diffusé à 22:21 TU (18:21 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-11 issued at 22:21 UT (18:21 EST) / Bulletin de météorologie spatiale - 2013-03-11 diffusé à 22:21 TU (18:21 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:15 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

Possible Impacts on Technology:

• 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 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: March-12-13 11:08 PM Subject: Space Weather Bulletin - 2013-03-13 issued at 03:07 UT (23:07 EST) / Bulletin de météorologie spatiale - 2013-03-13 diffusé à 03:07 TU (23:07 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-13 issued at 03:07 UT (23:07 EST) / Bulletin de météorologie spatiale - 2013-03-13 diffusé à 03:07 TU (23:07 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (03:00 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 on Technology:

• 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 on Technology:

• 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 12 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March-13-13 2:12 PM Subject: Space Weather Bulletin - 2013-03-13 issued at 18:09 UT (14:09 EST) / Bulletin de météorologie spatiale - 2013-03-13 diffusé à 18:09 TU (14:09 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-13 issued at 18:09 UT (14:09 EST) / Bulletin de météorologie spatiale - 2013-03-13 diffusé à 18:09 TU (14:09 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A moderate Earth-directed CME has erupted over the past 24 hours.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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

- **Possible Impacts on Technology:**
 - 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

Detailed Information

Solar

- Solar activity has been moderate.
- A long duration C (low) solar x-ray flare erupted at 12 MAR 2013 10:17 UT near the centre of the solar disk.
- A moderate CME was observed on 12 MAR 2013 10:48, and is expected to deliver a glancing blow to the Earth on 15 MAR 2013, resulting in disturbed geomagnetic activity.

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 12 MAR 2013 and is expected to be at a normal level tomorrow.

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

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March-14-13 12:13 PM Subject: Space Weather Bulletin - 2013-03-14 issued at 16:12 UT (12:12 EST) / Bulletin de météorologie spatiale - 2013-03-14 diffusé à 16:12 TU (12:12 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-14 issued at 16:12 UT (12:12 EST) / Bulletin de météorologie spatiale - 2013-03-14 diffusé à 16:12 TU (12:12 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A moderate Earth-directed CME erupted on 12 MAR 2013 10:48 UT and is expected to reach the Earth on 15 MAR 2013, resulting in disturbed geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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 on Technology:

• 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 on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- A moderate CME was observed on 12 MAR 2013 10:48, and is expected to deliver a glancing blow to the Earth on 15 MAR 2013, resulting in disturbed geomagnetic activity.

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 13 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March-15-13 2:43 PM Subject: Space Weather Bulletin - 2013-03-15 issued at 18:29 UT (14:29 EST) / Bulletin de météorologie spatiale - 2013-03-15 diffusé à 18:29 TU (14:29 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-15 issued at 18:29 UT (14:29 EST) / Bulletin de météorologie spatiale - 2013-03-15 diffusé à 18:29 TU (14:29 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Major storm conditions are possible from 17 MAR 2013 to 18 MAR 2013 for the polar cap, auroral, and subauroral zones.
- A moderate Earth-directed CME has erupted over the past 24 hours.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 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 Impacts on Technology:

• Impacts are not expected.

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 Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been high.
- A long duration M (medium) solar x-ray flare erupted at 15 MAR 2013 07:00 UT near the centre of the solar disk.

• A moderate Earth-directed CME erupted on 15 MAR 2013 06:54 UT, resulting in disturbed geomagnetic activity.

Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been primarily positive at moderate (5<|Bz|<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 14 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- A geomagnetic sudden impulse due to a shock in the solar wind was observed on 15 MAR 2013 05:26 UT.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March-16-13 1:19 PM Subject: Space Weather Bulletin - 2013-03-16 issued at 17:17 UT (13:17 EST) / Bulletin de météorologie spatiale - 2013-03-16 diffusé à 17:17 TU (13:17 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-16 issued at 17:17 UT (13:17 EST) / Bulletin de météorologie spatiale - 2013-03-16 diffusé à 17:17 TU (13:17 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Major storm conditions are possible from 16 MAR 2013 22:00 UT to 17 MAR 2013 12:00 UT for the polar cap, auroral, and sub-auroral zones.
- A moderate Earth-directed CME erupted on 15 MAR 2013 06:54 UT and is expected to reach the Earth on 16 MAR 2013 22:00.
- See our website for current information: 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: normal
- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- 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.
- Geostationary satellites: moderate risk of internal charging.
- 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 moderate Earth-directed CME erupted on 15 MAR 2013 06:54 UT and is expected to reach the Earth on 16 MAR 2013 22:00.
- An M (medium) solar x-ray flare erupted 15 MAR 2013 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 15 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been unsettled 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 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.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March-17-13 8:54 AM Subject: Space Weather Bulletin - 2013-03-17 issued at 12:49 UT (08:49 EST) / Bulletin de météorologie spatiale - 2013-03-17 diffusé à 12:49 TU (08:49 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-17 issued at 12:49 UT (08:49 EST) / Bulletin de météorologie spatiale - 2013-03-17 diffusé à 12:49 TU (08:49 HNE) La version française du bulletin suit.

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Summary

- The major storm WATCH issued 17 MAR 2013 06:27 UT for the auroral zone ended 17 MAR 2013 10:13 UT.
- A major storm WATCH is in effect for the polar cap, auroral, and sub-auroral zones from 17 MAR 2013 11:57 UT to 17 MAR 2013 14:17 UT.
- Stormy conditions are possible in the polar cap, auroral, and sub-auroral zones within the next 24 hours.

• See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes) **Current Conditions (12:30 UT)**

Geomagnetic Activity:

- polar cap zone: stormy
- auroral zone: stormy
- sub-auroral zone: stormy

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- 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 polar cap, auroral, and sub-auroral zones.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the auroral and sub-auroral zones.
- Geostationary satellites: moderate risk of internal charging.
- Aeromagnetic surveys: Potential for disruption 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 moderate Earth-directed CME erupted on 15 MAR 2013 06:54 UT, resulting in disturbed geomagnetic activity.

Interplanetary

- Fast solar wind speeds are due to a CME observed at 15 MAR 2013 06:54 UT.
- The solar wind speed is currently fast (700-1000 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 normal level at 16 MAR 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been unsettled with major storm 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 active interval in the polar zone, stormy interval in the auroral zone, and unsettled interval in the sub-auroral zone.
- A geomagnetic sudden impulse due to a shock in the solar wind was observed on 17 MAR 2013 06:07 UT.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: March-17-13 11:30 AM
Subject: Space Weather Bulletin UPDATE - 2013-03-17 issued at 12:49 UT (08:49 EST) / Bulletin de météorologie spatiale - 2013-03-17 diffusé à 12:49 TU (08:49 HNE) MISE A JOUR

This is for testing purposes

Space Weather Bulletin UPDATE - 2013-03-17 issued at 15:20 UT (11:20 EST) / Bulletin de météorologie spatiale - 2013-03-17 diffusé à 15:20 TU (11:20 HNE) MISE A JOUR La version française du bulletin suit.

Summary

- The major storm WATCH issued 17 MAR 2013 11:57 UT for the polar cap, auroral, and sub-auroral zones has ended 17 MAR 2013 15:12 UT.
- Stormy conditions are possible in the polar cap, auroral, and sub-auroral zones within the next 24 hours.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (15:15 UT)

Geomagnetic Activity:

- polar cap zone: active
- auroral zone: stormy
- sub-auroral zone: active

Possible Impacts on Technology:

- 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 polar cap, auroral, and sub-auroral zones.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March 18, 2013 14:28 Subject: Space Weather Bulletin - 2013-03-18 issued at 18:26 UT (14:26 EST) / Bulletin de météorologie spatiale - 2013-03-18 diffusé à 18:26 TU (14:26 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-18 issued at 18:26 UT (14:26 EST) / Bulletin de météorologie spatiale - 2013-03-18 diffusé à 18:26 TU (14:26 HNE) La version française du bulletin suit

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Summary

- There is currently no major storm watch in effect.
- Stormy conditions observed 17 MAR 2013 in the polar cap, auroral, and sub-auroral zones have ended.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: high

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

- Solar activity has been low.
- One medium coronal hole is located near the centre of the solar disk.
- A slow CME erupted on 17 MAR 2013 16:24 UT. It is not yet known if the CME will impact the Earth.

Interplanetary

- The solar wind speed has been decreasing over the last 24 hours (currently ~ 500 km/s).
- The interplanetary magnetic field has been primarily positive at moderate (5<|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 17 MAR 2013 and is expected to be at a high level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March-19-13 1:03 PM Subject: Space Weather Bulletin - 2013-03-19 issued at 17:01 UT (13:01 EST) / Bulletin de météorologie spatiale - 2013-03-19 diffusé à 17:01 TU (13:01 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-19 issued at 17:01 UT (13:01 EST) / Bulletin de météorologie spatiale - 2013-03-19 diffusé à 17:01 TU (13:01 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 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 Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

- Geomagnetic Activity:
 - polar cap zone: quiet with active intervals
 - auroral zone: quiet
 - sub-auroral zone: quiet

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- A slow CME was observed on 17 MAR 2013 16:24, and is expected to deliver a glancing blow to the Earth on 21 MAR 2013.
- A moderate CME erupted on 19 MAR 2013 14:00 UT. It is not yet known if the CME will impact the Earth.

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.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 18 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March-20-13 1:03 PM Subject: Space Weather Bulletin - 2013-03-20 issued at 17:02 UT (13:02 EST) / Bulletin de météorologie spatiale - 2013-03-20 diffusé à 17:02 TU (13:02 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-20 issued at 17:02 UT (13:02 EST) / Bulletin de météorologie spatiale - 2013-03-20 diffusé à 17:02 TU (13:02 HNE) La version française du bulletin suit.

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 21 MAR 2013 and 22 MAR 2013.
- 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: active
- auroral zone: unsettled
- sub-auroral zone: quiet

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Two slow CMEs were observed on 17 MAR 2013, and are expected to deliver a glancing blow to the Earth on 21 MAR 2013.
- Solar activity has been low.
- A moderate non-Earth-directed CME erupted on 19 MAR 2013 14:00 UT.

Interplanetary

- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (5 < |Bz| < 10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 19 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March-21-13 12:44 PM Subject: Space Weather Bulletin - 2013-03-21 issued at 16:42 UT (12:42 EST) / Bulletin de météorologie spatiale - 2013-03-21 diffusé à 16:42 TU (12:42 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-21 issued at 16:42 UT (12:42 EST) / Bulletin de météorologie spatiale - 2013-03-21 diffusé à 16:42 TU (12:42 HNE) La version française du bulletin suit.

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 21 MAR 2013 and 22 MAR 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Two slow CMEs were observed on 17 MAR 2013, and are expected to deliver a glancing blow to the Earth on 21 MAR 2013.
- Solar activity has been low.

Interplanetary

- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (5<|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 20 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 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: March-22-13 12:41 PM Subject: Space Weather Bulletin - 2013-03-22 issued at 16:40 UT (12:40 EST) / Bulletin de météorologie spatiale - 2013-03-22 diffusé à 16:40 TU (12:40 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-22 issued at 16:40 UT (12:40 EST) / Bulletin de météorologie spatiale - 2013-03-22 diffusé à 16:40 TU (12:40 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Disturbed conditions observed 21 MAR 2013 in the auroral zone have ended.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

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<|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 21 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March-23-13 3:06 PM Subject: Space Weather Bulletin - 2013-03-23 issued at 19:05 UT (15:05 EST) / Bulletin de météorologie spatiale - 2013-03-23 diffusé à 19:05 TU (15:05 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-23 issued at 19:05 UT (15:05 EST) / Bulletin de météorologie spatiale - 2013-03-23 diffusé à 19:05 TU (15:05 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 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 on Technology:

• Geostationary satellites: moderate risk of internal charging.

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 Impacts on Technology:

• 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<|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 22 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March-24-13 12:02 PM Subject: Space Weather Bulletin - 2013-03-24 issued at 16:00 UT (12:00 EST) / Bulletin de météorologie spatiale - 2013-03-24 diffusé à 16:00 TU (12:00 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-24 issued at 16:00 UT (12:00 EST) / Bulletin de météorologie spatiale - 2013-03-24 diffusé à 16:00 TU (12:00 HNE) La version française du bulletin suit.

Summary

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

• 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 on Technology:

• 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<|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 23 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: March-25-13 12:25 PM Subject: Space Weather Bulletin - 2013-03-25 issued at 16:23 UT (12:23 EST) / Bulletin de météorologie spatiale - 2013-03-25 diffusé à 16:23 TU (12:23 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-25 issued at 16:23 UT (12:23 EST) / Bulletin de météorologie spatiale - 2013-03-25 diffusé à 16:23 TU (12:23 HNE) La version française du bulletin suit.

Summary

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

Possible Impacts on Technology:

• 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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

- Solar activity has been low.
- One medium coronal hole ELONGATED_IN_LONGITUDE 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 (2 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 24 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: March-26-13 1:16 PM
Subject: Space Weather Bulletin - 2013-03-26 issued at 17:14 UT (13:14 EST) / Bulletin de météorologie spatiale - 2013-03-26 diffusé à 17:14 TU (13:14 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-26 issued at 17:14 UT (13:14 EST) / Bulletin de météorologie spatiale - 2013-03-26 diffusé à 17:14 TU (13:14 HNE) La version française du bulletin suit.

Summary

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

Possible Impacts on Technology:

• 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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a moderate level at 25 MAR 2013 and is expected to be at a normal level tomorrow.

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

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: March-27-13 1:44 PM
Subject: Space Weather Bulletin - 2013-03-27 issued at 17:41 UT (13:41 EST) / Bulletin de météorologie spatiale - 2013-03-27 diffusé à 17:41 TU (13:41 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-27 issued at 17:41 UT (13:41 EST) / Bulletin de météorologie spatiale - 2013-03-27 diffusé à 17:41 TU (13:41 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 with unsettled intervals

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.

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 moderate.
- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (5 < |Bz| < 10 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a moderate level at 26 MAR 2013 and is expected to be at a normal level tomorrow.

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

- 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 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, 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.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: March-28-13 1:15 PM Subject: Space Weather Bulletin - 2013-03-28 issued at 17:08 UT (12:08 EST) / Bulletin de météorologie spatiale - 2013-03-28 diffusé à 17:08 TU (12:08 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-28 issued at 17:08 UT (12:08 EST) / Bulletin de météorologie spatiale - 2013-03-28 diffusé à 17:08 TU (12:08 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.

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 on Technology:

- 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.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.

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 low (2 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 27 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: March-29-13 2:29 PM Subject: Space Weather Bulletin - 2013-03-29 issued at 18:27 UT (13:27 EST) / Bulletin de météorologie spatiale - 2013-03-29 diffusé à 18:27 TU (13:27 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-29 issued at 18:27 UT (13:27 EST) / Bulletin de météorologie spatiale - 2013-03-29 diffusé à 18:27 TU (13:27 HNE)

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity are currently observed in the auroral zone.
- Disturbed geomagnetic conditions are expected 29 MAR 2013 to 31 MAR 2013 due to high speed streams from coronal holes.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral and sub-auroral zones.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- 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.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.

Detailed Information

Solar

- Solar activity has been low.
- 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 has been increasing over the last 7 hours (currently ~ 500 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 28 MAR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 in the sub-auroral zone.
- Enhanced geomagnetic activity is likely due to the arrival of a high speed stream associated with coronal holes.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: March-29-13 10:45 PM
Subject: Space Weather Bulletin - 2013-03-30 issued at 02:43 UT (21:43 EST) / Bulletin de météorologie spatiale - 2013-03-30 diffusé à 02:43 TU (21:43 HNE) - UPDATE

This is for testing purposes

Space Weather Bulletin - 2013-03-30 issued at 02:43 UT (21:43 EST) / Bulletin de météorologie spatiale - 2013-03-30 diffusé à 02:43 TU (21:43 HNE) - UPDATE La version française du bulletin suit.

Summary

- A major storm WATCH is in effect for the auroral zone from 30 MAR 2013 02:00 UT to 30 MAR 2013 05:00 UT.
- Stormy conditions are currently observed in the auroral and sub-auroral zones.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 29 MAR 2013 and 01 APR 2013.
- See our website for current information: http://www.spaceweather.gc.ca (updated every 15 minutes)

Current Conditions (02:15 UT)

Geomagnetic Activity:

- polar cap zone: active
- auroral zone: stormy
- sub-auroral zone: stormy

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the auroral and sub-auroral zones.
- Aeromagnetic surveys: Potential for severe disruptions in the auroral and sub-auroral zones.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap, auroral, and sub-auroral zones.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the auroral and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap, auroral, and sub-auroral zones.
- Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

- Solar activity has been low.
- Two coronal holes are located near the edge 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 moderate (5<|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 29 MAR 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, active interval in the auroral zone, and unsettled with active intervals in the sub-auroral zone.
- Enhanced geomagnetic activity is likely due to the arrival of a high speed stream associated with coronal holes.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: March-30-13 4:10 PM Subject: Space Weather Bulletin - 2013-03-30 issued at 20:09 UT (15:09 EST) / Bulletin de météorologie spatiale - 2013-03-30 diffusé à 20:09 TU (15:09 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-30 issued at 20:09 UT (15:09 EST) / Bulletin de météorologie spatiale - 2013-03-30 diffusé à 20:09 TU (15:09 HNE)

La version française du bulletin suit.

Summary

- The major storm WATCH issued 30 MAR 2013 02:00 UT for the auroral zone ended 30 MAR 2013 04:00 UT.
- 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.
- Disturbed geomagnetic conditions due to solar activity are expected to be observed on the Earth between 29 MAR 2013 and 01 APR 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Geostationary satellites: moderate risk of internal charging.
- Power Systems: possibility of weak voltage fluctuations in the sub-auroral zone.
- Aeromagnetic surveys: Potential for severe disruptions in the sub-auroral zone.
- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Directional Drilling: Significant deviations possible in the auroral and sub-auroral zones.

Detailed Information

Solar

- Solar activity has been low.
- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 29 MAR 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 unsettled 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, unsettled with stormy intervals in the auroral zone, and unsettled with stormy intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: March-31-13 1:23 PM Subject: Space Weather Bulletin - 2013-03-31 issued at 17:22 UT (12:22 EST) / Bulletin de météorologie spatiale - 2013-03-31 diffusé à 17:22 TU (12:22 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-03-31 issued at 17:22 UT (12:22 EST) / Bulletin de météorologie spatiale - 2013-03-31 diffusé à 17:22 TU (12:22 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Stormy conditions expected from 30 MAR 2013 20:00 UT to 31 MAR 2013 17:00 UT for the polar cap, auroral, and sub-auroral zones did not occur.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Geostationary satellites: moderate risk of internal charging.
- Aeromagnetic surveys: Potential for disruption in the polar cap and sub-auroral zones.

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: moderate

Possible Impacts on Technology:

- Geostationary satellites: moderate risk of internal charging.
- Aeromagnetic surveys: Potential for disruption in the polar cap zone.

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 slow (400-500 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 moderate level at 30 MAR 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: April-01-13 1:15 PM
Subject: Space Weather Bulletin - 2013-04-01 issued at 17:13 UT (12:13 EST) / Bulletin de météorologie spatiale - 2013-04-01 diffusé à 17:13 TU (12:13 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-01 issued at 17:13 UT (12:13 EST) / Bulletin de météorologie spatiale - 2013-04-01 diffusé à 17:13 TU (12:13 HNE) La version française du bulletin suit.

Summary

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

Possible Impacts on Technology:

• 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 on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.

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 is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at very low (|Bz|<2 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a moderate level at 31 MAR 2013 and is expected to be at a normal level tomorrow.

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

- 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, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: April-02-13 1:48 PM
Subject: Space Weather Bulletin - 2013-04-02 issued at 17:46 UT (12:46 EST) / Bulletin de météorologie spatiale - 2013-04-02 diffusé à 17:46 TU (12:46 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-02 issued at 17:46 UT (12:46 EST) / Bulletin de météorologie spatiale - 2013-04-02 diffusé à 17:46 TU (12:46 HNE) La version française du bulletin suit.

Summary

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

• 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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- Three 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 (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 01 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 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: April-03-13 1:11 PM Subject: Space Weather Bulletin - 2013-04-03 issued at 17:10 UT (12:10 EST) / Bulletin de météorologie spatiale - 2013-04-03 diffusé à 17:10 TU (12:10 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-03 issued at 17:10 UT (12:10 EST) / Bulletin de météorologie spatiale - 2013-04-03 diffusé à 17:10 TU (12:10 HNE) La version française du bulletin suit.

Summary

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

Possible Impacts on Technology:

• 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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- Three 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 (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 02 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 with unsettled intervals 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: April-04-13 2:35 PM
Subject: Space Weather Bulletin - 2013-04-04 issued at 18:32 UT (13:32 EST) / Bulletin de météorologie spatiale - 2013-04-04 diffusé à 18:32 TU (13:32 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-04 issued at 18:32 UT (13:32 EST) / Bulletin de météorologie spatiale - 2013-04-04 diffusé à 18:32 TU (13:32 HNE) La version française du bulletin suit.

Summary

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

Possible Impacts on Technology:

• 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 on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.

Detailed Information

Solar

- Solar activity has been low.
- One coronal hole is located near the edge of the solar disk.
- Two coronal holes are 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 (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 03 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: April-05-13 1:26 PM
Subject: Space Weather Bulletin - 2013-04-05 issued at 17:25 UT (12:25 EST) / Bulletin de météorologie spatiale - 2013-04-05 diffusé à 17:25 TU (12:25 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-05 issued at 17:25 UT (12:25 EST) / Bulletin de météorologie spatiale - 2013-04-05 diffusé à 17:25 TU (12:25 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption in the polar cap zone.
- 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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

Detailed Information

Solar

- Solar activity has been moderate.
- Two non-Earth-directed CMEs erupted on 04-05 APR 2013 at 2212 and 0650.
- A long duration C (low) solar x-ray flare erupted at 05 APR 2013 near the edge of the solar disk.
- Three 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 very low (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 04 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: April-06-13 2:10 PM
Subject: Space Weather Bulletin - 2013-04-06 issued at 18:08 UT (13:08 EST) / Bulletin de météorologie spatiale - 2013-04-06 diffusé à 18:08 TU (13:08 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-06 issued at 18:08 UT (13:08 EST) / Bulletin de météorologie spatiale - 2013-04-06 diffusé à 18:08 TU (13:08 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 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 on Technology:

• 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 Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

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.
- An M (medium) solar x-ray flare erupted 05 APR 2013 17:48 UT near the edge of the solar disk.
- A non-Earth-directed CME erupted on 05 APR 2013 07:12 UT.

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 moderate level at 05 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: April-07-13 12:55 PM Subject: Space Weather Bulletin - 2013-04-07 issued at 16:54 UT (11:54 EST) / Bulletin de météorologie spatiale - 2013-04-07 diffusé à 16:54 TU (11:54 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-07 issued at 16:54 UT (11:54 EST) / Bulletin de météorologie spatiale - 2013-04-07 diffusé à 16:54 TU (11:54 HNE) La version française du bulletin suit.

Summary

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

• 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 on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.

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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 06 APR 2013 and is expected to be at a normal level tomorrow.

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

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: April-08-13 12:57 PM
Subject: Space Weather Bulletin - 2013-04-08 issued at 16:56 UT (11:56 EST) / Bulletin de météorologie spatiale - 2013-04-08 diffusé à 16:56 TU (11:56 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-08 issued at 16:56 UT (11:56 EST) / Bulletin de météorologie spatiale - 2013-04-08 diffusé à 16:56 TU (11:56 HNE) La version française du bulletin suit.

Summary

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

• 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 Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

Detailed Information

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

• The solar wind speed is currently very slow (< 400 km/s).

• The interplanetary magnetic field has been fluctuating at very low (|Bz|<2 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 07 APR 2013 and is expected to be at a normal level tomorrow.

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

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: April-09-13 3:45 PM
Subject: Space Weather Bulletin - 2013-04-09 issued at 19:39 UT (14:39 EST) / Bulletin de météorologie spatiale - 2013-04-09 diffusé à 19:39 TU (14:39 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-09 issued at 19:39 UT (14:39 EST) / Bulletin de météorologie spatiale - 2013-04-09 diffusé à 19:39 TU (14:39 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 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 Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

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 Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- Two coronal holes are 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 08 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: April-10-13 3:55 PM
Subject: Space Weather Bulletin - 2013-04-10 issued at 19:52 UT (14:52 EST) / Bulletin de météorologie spatiale - 2013-04-10 diffusé à 19:52 TU (14:52 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-10 issued at 19:52 UT (14:52 EST) / Bulletin de météorologie spatiale - 2013-04-10 diffusé à 19:52 TU (14:52 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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
- sub-auroral zone: quiet

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- Three coronal holes are 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 09 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: April-11-13 11:23 AM Subject: Space Weather Bulletin - 2013-04-11 issued at 15:19 UT (10:19 EST) / Bulletin de météorologie spatiale - 2013-04-11 diffusé à 15:19 TU (10:19 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-11 issued at 15:19 UT (10:19 EST) / Bulletin de météorologie spatiale - 2013-04-11 diffusé à 15:19 TU (10:19 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A moderate Earth-directed CME erupted on 11 APR 2013 07:24 UT and is expected to reach the Earth on 13 APR 2013, resulting in disturbed geomagnetic activity.
- A polar cap absorption event is currently in progress in the polar cap zone.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (15:00 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption in the polar cap zone.
- 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: unsettled with active intervals
- auroral zone: quiet
- sub-auroral zone: quiet

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

Detailed Information

Solar

- Solar activity has been moderate.
- An M (medium) solar x-ray flare erupted 11 APR 2013 07:16 UT near the centre of the solar disk.
- A moderate Earth-directed CME erupted on 11 APR 2013 07:24 UT and is expected to reach the Earth on 13 APR 2013, resulting in disturbed geomagnetic activity.

Interplanetary

• Interplanetary activity has been moderate.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 10 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: April-12-13 3:08 PM
Subject: Space Weather Bulletin - 2013-04-12 issued at 19:02 UT (14:02 EST) / Bulletin de météorologie spatiale - 2013-04-12 diffusé à 19:02 TU (14:02 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-12 issued at 19:02 UT (14:02 EST) / Bulletin de météorologie spatiale - 2013-04-12 diffusé à 19:02 TU (14:02 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A moderate Earth-directed CME erupted on 11 APR 2013 07:24 UT and is expected to reach the Earth on 13 APR 2013, resulting in disturbed geomagnetic activity.
- A polar cap absorption event is currently in progress in the polar cap zone.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- HF radio: Ionospheric and polar cap absorptions events may affect radio communications for transpolar flights and other arctic operations.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- 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.

Interplanetary

• Interplanetary activity has been moderate.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 11 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral zone.
- Over the next 24 hours geomagnetic 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 sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: April-13-13 3:36 PM
Subject: Space Weather Bulletin - 2013-04-13 issued at 19:33 UT (14:33 EST) / Bulletin de météorologie spatiale - 2013-04-13 diffusé à 19:33 TU (14:33 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-13 issued at 19:33 UT (14:33 EST) / Bulletin de météorologie spatiale - 2013-04-13 diffusé à 19:33 TU (14:33 HNE) La version française du bulletin suit

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A moderate Earth-directed CME erupted on 11 APR 2013 07:24 UT and is expected to reach the Earth on 13 APR 2013, resulting in disturbed geomagnetic activity.
- Stormy conditions are possible in the polar cap, auroral, and sub-auroral zones within the next 24 hours.
- The polar cap absorption event reported yesterday has ended.
- See our website for current information: http://www.spaceweather.gc.ca (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: active 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 on Technology:

- 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.

Interplanetary

• Interplanetary activity has been moderate.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 12 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been quiet with stormy 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 active 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 <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: April-14-13 1:14 AM Subject: Update for Space Weather Bulletin - 2013-04-13 issued at 19:33 UT (14:33 EST)

The CME of April 11 arrived at Earth on April 13 around 22:55 UT. The ensuing geomagnetic conditions have so far not reached stormy conditions because the orientation of the vertical interplanetary magnetic field (IMF) has not been favourable to produce such conditions.

However, the level of geomagnetic activity can become stormy, should the orientation of the vertical IMF changes during the passage of the CME.

It is therefore advisable to check NRCan's space weather web site using the links below for the LATEST geomagnetic conditions, which are UPDATED EVERY 15 MINUTES.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: April-14-13 3:25 PM Subject: Space Weather Bulletin - 2013-04-14 issued at 19:17 UT (14:17 EST) / Bulletin de météorologie spatiale - 2013-04-14 diffusé à 19:17 TU (14:17 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-14 issued at 19:17 UT (14:17 EST) / Bulletin de météorologie spatiale - 2013-04-14 diffusé à 19:17 TU (14:17 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

- Interplanetary activity has been moderate.
- An interplanetary shock has been observed on 13 APR 2013 22:15 UT.
- The solar wind speed has been decreasing over the last hour (currently ~ 425 km/s).
- The interplanetary magnetic field has been primarily positive at moderate (5<|Bz|<10 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 13 APR 2013 and is expected to be at a normal level tomorrow.

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

- 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 sub-auroral 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 auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: April-15-13 2:06 PM
Subject: Space Weather Bulletin - 2013-04-15 issued at 18:04 UT (13:04 EST) / Bulletin de météorologie spatiale - 2013-04-15 diffusé à 18:04 TU (13:04 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-15 issued at 18:04 UT (13:04 EST) / Bulletin de météorologie spatiale - 2013-04-15 diffusé à 18:04 TU (13:04 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 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 Impacts on Technology:

• 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
- sub-auroral zone: quiet

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

- The solar wind speed has been decreasing over the last 30 hours (currently ~ 350 km/s).
- The interplanetary magnetic field has been primarily positive at moderate (5 < |Bz| < 10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 14 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: April-16-13 2:41 PM
Subject: Space Weather Bulletin - 2013-04-16 issued at 18:39 UT (13:39 EST) / Bulletin de météorologie spatiale - 2013-04-16 diffusé à 18:39 TU (13:39 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-16 issued at 18:39 UT (13:39 EST) / Bulletin de météorologie spatiale - 2013-04-16 diffusé à 18:39 TU (13:39 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 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 on Technology:

• 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 Impacts on Technology:

• 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

• Interplanetary activity has been low.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 15 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: April-17-13 2:30 PM
Subject: Space Weather Bulletin - 2013-04-17 issued at 18:28 UT (13:28 EST) / Bulletin de météorologie spatiale - 2013-04-17 diffusé à 18:28 TU (13:28 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-17 issued at 18:28 UT (13:28 EST) / Bulletin de météorologie spatiale - 2013-04-17 diffusé à 18:28 TU (13:28 HNE) La version française du bulletin suit.

Summary

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

• 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 Impacts on Technology:

• 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

• Interplanetary activity has been low.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 16 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: April-18-13 2:39 PM
Subject: Space Weather Bulletin - 2013-04-18 issued at 18:37 UT (13:37 EST) / Bulletin de météorologie spatiale - 2013-04-18 diffusé à 18:37 TU (13:37 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-18 issued at 18:37 UT (13:37 EST) / Bulletin de météorologie spatiale - 2013-04-18 diffusé à 18:37 TU (13:37 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 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 on Technology:

• 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 on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- Two coronal holes are 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 17 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: April-19-13 4:46 PM Subject: Space Weather Bulletin - 2013-04-19 issued at 20:44 UT (15:44 EST) / Bulletin de météorologie spatiale - 2013-04-19 diffusé à 20:44 TU (15:44 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-19 issued at 20:44 UT (15:44 EST) / Bulletin de météorologie spatiale - 2013-04-19 diffusé à 20:44 TU (15:44 HNE) La version française du bulletin suit.

Summary

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

Possible Impacts on Technology:

• 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 on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- Two coronal holes are 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 18 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: April-20-13 9:19 PM
Subject: Space Weather Bulletin - 2013-04-21 issued at 01:16 UT (20:16 EST) / Bulletin de météorologie spatiale - 2013-04-21 diffusé à 01:16 TU (20:16 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-21 issued at 01:16 UT (20:16 EST) / Bulletin de météorologie spatiale - 2013-04-21 diffusé à 01:16 TU (20:16 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (01:00 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 on Technology:

• 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 Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- Two coronal holes are 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 20 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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: April-21-13 3:20 PM Subject: Space Weather Bulletin - 2013-04-21 issued at 19:17 UT (14:17 EST) / Bulletin de météorologie spatiale - 2013-04-21 diffusé à 19:17 TU (14:17 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-21 issued at 19:17 UT (14:17 EST) / Bulletin de météorologie spatiale - 2013-04-21 diffusé à 19:17 TU (14:17 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 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 Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

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 Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- Two coronal holes are 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 20 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: April-22-13 1:54 PM
Subject: Space Weather Bulletin - 2013-04-22 issued at 17:51 UT (12:51 EST) / Bulletin de météorologie spatiale - 2013-04-22 diffusé à 17:51 TU (12:51 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-22 issued at 17:51 UT (12:51 EST) / Bulletin de météorologie spatiale - 2013-04-22 diffusé à 17:51 TU (12:51 HNE) La version française du bulletin suit.

Summary

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

• 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 Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- Two coronal holes are 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 21 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: April-23-13 1:39 PM
Subject: Space Weather Bulletin - 2013-04-23 issued at 17:33 UT (12:33 EST) / Bulletin de météorologie spatiale - 2013-04-23 diffusé à 17:33 TU (12:33 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-23 issued at 17:33 UT (12:33 EST) / Bulletin de météorologie spatiale - 2013-04-23 diffusé à 17:33 TU (12:33 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: low

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

Detailed Information

Solar

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

Interplanetary

• Data about interplanetary conditions are currently unavailable.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 22 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: April-24-13 1:42 PM
Subject: Space Weather Bulletin - 2013-04-24 issued at 17:35 UT (12:35 EST) / Bulletin de météorologie spatiale - 2013-04-24 diffusé à 17:35 TU (12:35 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-24 issued at 17:35 UT (12:35 EST) / Bulletin de météorologie spatiale - 2013-04-24 diffusé à 17:35 TU (12:35 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: low

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption in the polar cap zone.
- 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: unsettled with stormy intervals
- auroral zone: unsettled with stormy intervals
- sub-auroral zone: quiet with unsettled intervals

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- 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.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.

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 primarily negative at moderate (|Bz|<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 23 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 quiet with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: April-25-13 2:34 PM
Subject: Space Weather Bulletin - 2013-04-25 issued at 18:29 UT (13:29 EST) / Bulletin de météorologie spatiale - 2013-04-25 diffusé à 18:29 TU (13:29 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-25 issued at 18:29 UT (13:29 EST) / Bulletin de météorologie spatiale - 2013-04-25 diffusé à 18:29 TU (13:29 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 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 Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

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 Impacts on Technology:

- 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.
- Geostationary satellites: moderate risk of internal charging.

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 negative at low (|Bz| < 5 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a low level at 24 APR 2013 and is expected to be at a moderate level tomorrow.

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

- 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 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 quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: April-26-13 3:00 PM
Subject: Space Weather Bulletin - 2013-04-26 issued at 18:55 UT (13:55 EST) / Bulletin de météorologie spatiale - 2013-04-26 diffusé à 18:55 TU (13:55 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-26 issued at 18:55 UT (13:55 EST) / Bulletin de météorologie spatiale - 2013-04-26 diffusé à 18:55 TU (13:55 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- 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.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at low (|Bz| < 5 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 25 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 unsettled with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: April-27-13 1:16 PM Subject: Space Weather Bulletin - 2013-04-27 issued at 17:12 UT (12:12 EST) / Bulletin de météorologie spatiale - 2013-04-27 diffusé à 17:12 TU (12:12 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-27 issued at 17:12 UT (12:12 EST) / Bulletin de météorologie spatiale - 2013-04-27 diffusé à 17:12 TU (12:12 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.
- 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: moderate

Possible Impacts on Technology:

- 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.
- Geostationary satellites: moderate risk of internal charging.

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 (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 26 APR 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 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: April-28-13 1:14 PM
Subject: Space Weather Bulletin - 2013-04-28 issued at 17:08 UT (12:08 EST) / Bulletin de météorologie spatiale - 2013-04-28 diffusé à 17:08 TU (12:08 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-28 issued at 17:08 UT (12:08 EST) / Bulletin de météorologie spatiale - 2013-04-28 diffusé à 17:08 TU (12:08 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.

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 Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap 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 (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 27 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: April-29-13 1:54 PM
Subject: Space Weather Bulletin - 2013-04-29 issued at 17:47 UT (12:47 EST) / Bulletin de météorologie spatiale - 2013-04-29 diffusé à 17:47 TU (12:47 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-29 issued at 17:47 UT (12:47 EST) / Bulletin de météorologie spatiale - 2013-04-29 diffusé à 17:47 TU (12:47 HNE) La version française du bulletin suit.

Summary

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

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap 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 (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 28 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours 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 sub-auroral 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 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: April-30-13 1:48 PM
Subject: Space Weather Bulletin - 2013-04-30 issued at 17:44 UT (12:44 EST) / Bulletin de météorologie spatiale - 2013-04-30 diffusé à 17:44 TU (12:44 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-04-30 issued at 17:44 UT (12:44 EST) / Bulletin de météorologie spatiale - 2013-04-30 diffusé à 17:44 TU (12:44 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

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 primarily positive at moderate (|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 29 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been quiet with stormy 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 unsettled with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: May-01-13 1:59 PM Subject: Space Weather Bulletin - 2013-05-01 issued at 17:55 UT (12:55 EST) / Bulletin de météorologie spatiale - 2013-05-01 diffusé à 17:55 TU (12:55 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-01 issued at 17:55 UT (12:55 EST) / Bulletin de météorologie spatiale - 2013-05-01 diffusé à 17:55 TU (12:55 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- 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 disruption in the polar cap and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the auroral zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- 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 polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap and 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 negative at moderate (|Bz|<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 moderate level at 30 APR 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, active with stormy intervals in the auroral zone, and unsettled 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: May-02-13 2:59 PM Subject: Space Weather Bulletin - 2013-05-02 issued at 18:54 UT (13:54 EST) / Bulletin de météorologie spatiale - 2013-05-02 diffusé à 18:54 TU (13:54 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-02 issued at 18:54 UT (13:54 EST) / Bulletin de météorologie spatiale - 2013-05-02 diffusé à 18:54 TU (13:54 HNE)

La version française du bulletin suit.

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 (18:30 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 on Technology:

• 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: quiet with unsettled intervals

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap and auroral zones.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones. •
- Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

- Solar activity has been low. •
- An M (medium) solar x-ray flare erupted 02 05 2013 05:10 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 low (|Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 01 MAY 2013 and is expected to be at a moderate level tomorrow.
- Visit http://www.spaceweather.gc.ca/sffl-eng.php for the electron forecast. •

- Over the last 24 hours 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 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 quiet with unsettled 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: May-03-13 1:50 PM Subject: Space Weather Bulletin - 2013-05-03 issued at 17:44 UT (12:44 EST) / Bulletin de météorologie spatiale - 2013-05-03 diffusé à 17:44 TU (12:44 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-03 issued at 17:44 UT (12:44 EST) / Bulletin de météorologie spatiale - 2013-05-03 diffusé à 17:44 TU (12:44 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.

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 Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap 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 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 02 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 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: May-04-13 1:34 PM Subject: Space Weather Bulletin - 2013-05-04 issued at 17:30 UT (12:30 EST) / Bulletin de météorologie spatiale - 2013-05-04 diffusé à 17:30 TU (12:30 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-04 issued at 17:30 UT (12:30 EST) / Bulletin de météorologie spatiale - 2013-05-04 diffusé à 17:30 TU (12:30 HNE)

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.

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 Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap 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 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 moderate level at 03 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours 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 sub-auroral 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 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: May-05-13 12:55 PM Subject: Space Weather Bulletin - 2013-05-05 issued at 16:52 UT (11:52 EST) / Bulletin de météorologie spatiale - 2013-05-05 diffusé à 16:52 TU (11:52 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-05 issued at 16:52 UT (11:52 EST) / Bulletin de météorologie spatiale - 2013-05-05 diffusé à 16:52 TU (11:52 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible 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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

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 (|Bz|<5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 04 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: May-06-13 1:33 PM Subject: Space Weather Bulletin - 2013-05-06 issued at 17:29 UT (12:29 EST) / Bulletin de météorologie spatiale - 2013-05-06 diffusé à 17:29 TU (12:29 HNE)

* This is for testing purposes*

Space Weather Bulletin - 2013-05-06 issued at 17:29 UT (12:29 EST) / Bulletin de météorologie spatiale - 2013-05-06 diffusé à 17:29 TU (12:29 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

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 (|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 05 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours 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 sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be active with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: May-07-13 1:19 PM Subject: Space Weather Bulletin - 2013-05-07 issued at 17:17 UT (12:17 EST) / Bulletin de météorologie spatiale - 2013-05-07 diffusé à 17:17 TU (12:17 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-07 issued at 17:17 UT (12:17 EST) / Bulletin de météorologie spatiale - 2013-05-07 diffusé à 17:17 TU (12:17 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Stormy conditions are possible in the polar cap zone within the next 24 hours.
- See our website for current information: http://www.spaceweather.gc.ca (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: unsettled with stormy 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 on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.

Detailed Information

Solar

- Solar activity has been low.
- Three 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).
- The interplanetary magnetic field currently has Bz=-5 nT.
- 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 normal level at 06 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: May-08-13 1:36 PM
Subject: Space Weather Bulletin - 2013-05-08 issued at 17:35 UT (12:35 EST) / Bulletin de météorologie spatiale - 2013-05-08 diffusé à 17:35 TU (12:35 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-08 issued at 17:35 UT (12:35 EST) / Bulletin de météorologie spatiale - 2013-05-08 diffusé à 17:35 TU (12:35 HNE)

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Stormy conditions are currently observed in the polar cap zone.
- Stormy conditions are possible in the polar cap zone within the next 24 hours.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- A non-Earth-directed CME erupted on 07 MAY 2013 02:05 UT.
- 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).
- The interplanetary magnetic field has been fluctuating at low (2 < |Bz| < 5 nT) levels.
- 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 normal level at 07 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled 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 unsettled with stormy intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: May-09-13 12:48 PM
Subject: Space Weather Bulletin - 2013-05-09 issued at 16:47 UT (11:47 EST) / Bulletin de météorologie spatiale - 2013-05-09 diffusé à 16:47 TU (11:47 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-09 issued at 16:47 UT (11:47 EST) / Bulletin de météorologie spatiale - 2013-05-09 diffusé à 16:47 TU (11:47 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:30 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 Impacts on Technology:

• Aeromagnetic surveys: Potential for disruption in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- 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 moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at low (2 < |Bz| < 5 nT) levels.
- 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 normal level at 08 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: May-10-13 1:25 PM Subject: Space Weather Bulletin - 2013-05-10 issued at 17:23 UT (12:23 EST) / Bulletin de météorologie spatiale - 2013-05-10 diffusé à 17:23 TU (12:23 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-10 issued at 17:23 UT (12:23 EST) / Bulletin de météorologie spatiale - 2013-05-10 diffusé à 17:23 TU (12:23 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Two medium solar x-ray flares have erupted over the past 24 hours.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 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 Impacts on Technology:

• 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
- sub-auroral zone: quiet

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

Detailed Information

Solar

- Solar activity has been moderate.
- A non-Earth-directed CME erupted on 09 MAY 2013 18:48 UT.
- 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 low (2 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 09 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: May-11-13 1:57 PM Subject: Space Weather Bulletin - 2013-05-11 issued at 17:55 UT (12:55 EST) / Bulletin de météorologie spatiale - 2013-05-11 diffusé à 17:55 TU (12:55 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-11 issued at 17:55 UT (12:55 EST) / Bulletin de météorologie spatiale - 2013-05-11 diffusé à 17:55 TU (12:55 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 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 Impacts on Technology:

• 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
- sub-auroral zone: quiet

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

Detailed Information

Solar

- Solar activity has been moderate.
- One coronal hole is located near the centre of the solar disk.
- A long duration C (low) solar x-ray flare erupted at 10 MAY 2013 16:43 UT near the edge of the solar disk.
- An M (medium) solar x-ray flare erupted 10 MAY 2013 00:57 UT near the edge of the solar disk.
- An M (medium) solar x-ray flare erupted 10 MAY 2013 12:56 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 very low (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 10 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: May-12-13 1:40 PM Subject: Space Weather Bulletin - 2013-05-12 issued at 17:38 UT (12:38 EST) / Bulletin de météorologie spatiale - 2013-05-12 diffusé à 17:38 TU (12:38 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-12 issued at 17:38 UT (12:38 EST) / Bulletin de météorologie spatiale - 2013-05-12 diffusé à 17:38 TU (12:38 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 12 MAY 2013, and is expected to deliver a glancing blow to the Earth on 15 MAY 2013, resulting in disturbed geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 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 Impacts on Technology:

• 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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

Detailed Information

Solar

- Solar activity has been moderate.
- A CME was observed on 12 MAY 2013, and is expected to deliver a glancing blow to the Earth on 15 MAY 2013, resulting in disturbed geomagnetic activity.
- A long duration C (low) solar x-ray flare erupted at 11 MAY 2013 19:48 UT 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 very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 11 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 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: May-13-13 1:56 PM
Subject: Space Weather Bulletin - 2013-05-13 issued at 17:54 UT (12:54 EST) / Bulletin de météorologie spatiale - 2013-05-13 diffusé à 17:54 TU (12:54 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-13 issued at 17:54 UT (12:54 EST) / Bulletin de météorologie spatiale - 2013-05-13 diffusé à 17:54 TU (12:54 HNE)

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 12 MAY 2013, and is expected to deliver a glancing blow to the Earth on 15 MAY 2013, resulting in disturbed geomagnetic activity.
- Several medium to large solar x-ray flares have erupted over the past 24 hours.

• See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

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 an associated CME and has the potential to produce subsequent solar eruptions.
- A CME was observed on 12 MAY 2013, and is expected to deliver a glancing blow to the Earth on 15 MAY 2013, resulting in disturbed geomagnetic activity.
- A fast non-Earth-directed CME erupted on 13 MAY 2013.
- One coronal hole is located near the edge of the solar disk.
- Several medium to large 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 low (2 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 12 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: May-14-13 12:51 PM Subject: Space Weather Bulletin - 2013-05-14 issued at 16:46 UT (11:46 EST) / Bulletin de météorologie spatiale - 2013-05-14 diffusé à 16:46 TU (11:46 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-14 issued at 16:46 UT (11:46 EST) / Bulletin de météorologie spatiale - 2013-05-14 diffusé à 16:46 TU (11:46 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 12 MAY 2013, and is expected to deliver a glancing blow to the Earth on 15 MAY 2013, resulting in disturbed geomagnetic activity.
- Two large solar x-ray flares have erupted over the past 24 hours.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:30 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 on Technology:

- 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: unsettled with active intervals
- auroral zone: unsettled with active intervals
- sub-auroral zone: quiet with active intervals

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- 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 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.
- A CME was observed on 12 MAY 2013, and is expected to deliver a glancing blow to the Earth on 15 MAY 2013, resulting in disturbed geomagnetic activity.
- A fast non-Earth-directed CME erupted on 13 MAY 2013 15:57 UT.
- A fast non-Earth-directed CME erupted on 14 MAY 2013 01:11 UT.

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 13 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 quiet with active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: May-15-13 1:21 PM Subject: Space Weather Bulletin - 2013-05-15 issued at 17:19 UT (12:19 EST) / Bulletin de météorologie spatiale - 2013-05-15 diffusé à 17:19 TU (12:19 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-15 issued at 17:19 UT (12:19 EST) / Bulletin de météorologie spatiale - 2013-05-15 diffusé à 17:19 TU (12:19 HNE) La version française du bulletin suit.

Summary

- 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 fast Earth-directed CME has erupted over the past 24 hours.
- A large 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 (17:00 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: active 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 on Technology:

- 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 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.
- A fast Earth-directed CME erupted on 15 MAY 2013 and is expected to reach the Earth on 16 MAY 2013, resulting in increased geomagnetic activity.
- Two coronal holes are located near the centre of the solar disk.
- An X (large) solar x-ray flare erupted 15 MAY 2013 01:31 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 14 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be active 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 <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: May-16-13 1:13 PM Subject: Space Weather Bulletin - 2013-05-16 issued at 17:12 UT (12:12 EST) / Bulletin de météorologie spatiale - 2013-05-16 diffusé à 17:12 TU (12:12 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-16 issued at 17:12 UT (12:12 EST) / Bulletin de météorologie spatiale - 2013-05-16 diffusé à 17:12 TU (12:12 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Stormy conditions are currently observed in the polar cap zone.
- Stormy conditions are possible in the polar cap zone within the next 24 hours.
- A CME was observed on 15 MAY 2013, and is expected to deliver a glancing blow to the Earth on 17-18 MAY 2012, resulting in disturbed geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

- polar cap zone: stormy
- auroral zone: active
- sub-auroral zone: unsettled

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: unsettled with stormy 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 on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.

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.
- A CME was observed on 15 MAY 2013, and is expected to deliver a glancing blow to the Earth on 17-18 May 2013, resulting in disturbed geomagnetic activity.
- 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 15 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: May-17-13 1:55 PM Subject: Space Weather Bulletin - 2013-05-17 issued at 17:54 UT (12:54 EST) / Bulletin de météorologie spatiale - 2013-05-17 diffusé à 17:54 TU (12:54 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-17 issued at 17:54 UT (12:54 EST) / Bulletin de météorologie spatiale - 2013-05-17 diffusé à 17:54 TU (12:54 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 17 MAY 2013, and is expected to deliver a glancing blow to the Earth on 19 MAY 2013, resulting in disturbed geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

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 Impacts on Technology:

- 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.

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 CME was observed on 17 MAY 2013, and is expected to deliver a glancing blow to the Earth on 19 MAY 2013, resulting in disturbed geomagnetic activity.
- Two 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 low (2 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 16 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: May-18-13 1:47 PM Subject: Space Weather Bulletin - 2013-05-18 issued at 17:46 UT (12:46 EST) / Bulletin de météorologie spatiale - 2013-05-18 diffusé à 17:46 TU (12:46 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-18 issued at 17:46 UT (12:46 EST) / Bulletin de météorologie spatiale - 2013-05-18 diffusé à 17:46 TU (12:46 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 17 MAY 2013, and is expected to deliver a glancing blow to the Earth on 19 MAY 2013, resulting in disturbed geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- 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.
- 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 CME was observed on 17 MAY 2013, and is expected to deliver a glancing blow to the Earth on 19 MAY 2013, resulting in disturbed geomagnetic activity.

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.
- An interplanetary shock has been observed on 18 MAY 2013 00:22 UT.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 17 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, active with stormy intervals in the auroral zone, and unsettled with stormy intervals in the sub-auroral zone.
- A geomagnetic sudden impulse due to a shock in the solar wind was observed on 18 MAY 2013 01:21 UT.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: May-19-13 2:11 PM Subject: Space Weather Bulletin - 2013-05-19 issued at 18:09 UT (13:09 EST) / Bulletin de météorologie spatiale - 2013-05-19 diffusé à 18:09 TU (13:09 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-19 issued at 18:09 UT (13:09 EST) / Bulletin de météorologie spatiale - 2013-05-19 diffusé à 18:09 TU (13:09 HNE)

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Stormy conditions are currently observed in the polar cap zone.
- Stormy conditions are possible in the polar cap and auroral zones within the next 24 hours.
- A CME was observed on 17 MAY 2013, and is expected to deliver a glancing blow to the Earth on 19 MAY 2013, resulting in disturbed geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: unavailable

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap and auroral zones.
- Geostationary satellites: moderate risk of internal charging.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap and auroral zones.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.

Detailed Information

Solar

- Solar activity has been low.
- The active region located near the central region of the solar disk has produced a solar x-ray flare and associated CMEs and has the potential to produce subsequent solar eruptions.
- A CME was observed on 17 MAY 2013, and is expected to deliver a glancing blow to the Earth on 19 MAY 2013, resulting in disturbed geomagnetic activity.
- 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 low (2 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit for 18 MAY 2013 is unavailable but is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, active with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: May-20-13 1:08 PM
Subject: Space Weather Bulletin - 2013-05-20 issued at 17:06 UT (12:06 EST) / Bulletin de météorologie spatiale - 2013-05-20 diffusé à 17:06 TU (12:06 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-20 issued at 17:06 UT (12:06 EST) / Bulletin de météorologie spatiale - 2013-05-20 diffusé à 17:06 TU (12:06 HNE) La version française du bulletin suit

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Stormy conditions are possible in the polar cap zone within the next 24 hours.
- A medium solar x-ray flare has erupted over the past 24 hours.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.
- Aeromagnetic surveys: Potential for severe disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- Two coronal holes are located near the centre of the solar disk.
- An M (medium) solar x-ray flare erupted 20 MAY 2013 05:21 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 (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 19 MAY 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- A geomagnetic sudden impulse due to a shock in the solar wind was observed on 19 MAY 2013 23:22 UT.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: May-21-13 4:33 PM Subject: Space Weather Bulletin - 2013-05-21 issued at 20:29 UT (15:29 EST) / Bulletin de météorologie spatiale - 2013-05-21 diffusé à 20:29 TU (15:29 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-21 issued at 20:29 UT (15:29 EST) / Bulletin de météorologie spatiale - 2013-05-21 diffusé à 20:29 TU (15:29 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:00 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 on Technology:

• Impacts are not expected.

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 Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Two medium coronal holes are located near the centre of the solar disk.

Interplanetary

- Interplanetary activity has been moderate.
- 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 normal level at 20 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 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: May-22-13 4:39 PM Subject: Space Weather Bulletin - 2013-05-22 issued at 20:37 UT (15:37 EST) / Bulletin de météorologie spatiale - 2013-05-22 diffusé à 20:37 TU (15:37 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-22 issued at 20:37 UT (15:37 EST) / Bulletin de météorologie spatiale - 2013-05-22 diffusé à 20:37 TU (15:37 HNE)

La version française du bulletin suit.

Summary

- A polar cap absorption event is currently in progress in the polar cap and auroral zones.
- A medium solar x-ray flare has erupted over the past 24 hours.
- Possibility of impacts to radio systems and satellites.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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: unsettled with stormy 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 on Technology:

• HF radio: Ionospheric and polar cap absorptions events may affect radio communications for transpolar flights and other arctic operations.

Detailed Information

Solar

• An M (medium) solar x-ray flare erupted 22 MAY 2013 12:30 UT near the edge of the solar disk.

• Two medium coronal holes are located near the centre of the solar disk.

Interplanetary

- A solar energetic proton event started on 22 MAY 2013 14:30 UT. Current levels are moderate.
- 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 normal level at 21 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: May 23, 2013 15:48
Subject: Space Weather Bulletin - 2013-05-23 issued at 19:46 UT (14:46 EST) / Bulletin de météorologie spatiale - 2013-05-23 diffusé à 19:46 TU (14:46 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-23 issued at 19:46 UT (14:46 EST) / Bulletin de météorologie spatiale - 2013-05-23 diffusé à 19:46 TU (14:46 HNE)

La version française du bulletin suit.

Summary

- 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.
- Two moderate CMEs were observed on 22 May 2013, and are expected to deliver a glancing blow to the Earth on 24-25 May 2013, resulting in increased geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

- polar cap zone: active
- auroral zone: quiet
- sub-auroral zone: unsettled
- **Geostationary Satellite Environment:**
 - energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- 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 polar cap, auroral, and sub-auroral zones.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: active with stormy 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 on Technology:

- 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 polar cap and auroral zones.

Detailed Information

Solar

- The active region located near the west limb of the solar disk has produced solar x-ray flares and associated CMEs.
- Two moderate CMEs erupted on 22 May 2013 at 09:12 UT and 13:25 UT. It is not yet known if the CMEs will impact the Earth.
- One medium coronal hole is located near the centre of the solar disk.

Interplanetary

- A solar energetic proton event started on 22 MAY 2013 14:30 UT. Current levels are moderate.
- The interplanetary magnetic field has been fluctuating at moderate (5<|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 22 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled 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 active with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and unsettled with active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: May-24-13 2:59 PM Subject: Space Weather Bulletin - 2013-05-24 issued at 18:53 UT (13:53 EST) / Bulletin de météorologie spatiale - 2013-05-24 diffusé à 18:53 TU (13:53 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-24 issued at 18:53 UT (13:53 EST) / Bulletin de météorologie spatiale - 2013-05-24 diffusé à 18:53 TU (13:53 HNE)

La version française du bulletin suit.

Summary

- 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.
- Stormy conditions are currently observed in the polar cap, 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 (18:30 UT)

Geomagnetic Activity:

- polar cap zone: stormy
- auroral zone: stormy
- sub-auroral zone: stormy

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the auroral zone.
- 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 polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap, auroral, and sub-auroral zones.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: active with stormy 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 on Technology:

- HF radio: Ionospheric and polar cap absorptions events may affect radio communications for transpolar flights and other arctic operations.
- Power Systems: possibility of weak voltage fluctuations in the polar cap, auroral, and sub-auroral zones.
- Aeromagnetic surveys: Potential for disruption 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.
- One large coronal hole is located near the centre of the solar disk.

Interplanetary

- An interplanetary shock has been observed on 24 May 2013 18:12 UT.
- A solar energetic proton event started on 22 MAY 2013 14:30 UT. Current levels are moderate.
- The interplanetary magnetic field has been fluctuating at high (10<|Bz|<20 nT) levels.
- The solar wind speed has been at 550 km/s since the passage of an interplanetary shock 24 May 2013 18:12 UT.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 23 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: May-25-13 4:14 PM Subject: Space Weather Bulletin - 2013-05-25 issued at 20:11 UT (15:11 EST) / Bulletin de météorologie spatiale - 2013-05-25 diffusé à 20:11 TU (15:11 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-25 issued at 20:11 UT (15:11 EST) / Bulletin de météorologie spatiale - 2013-05-25 diffusé à 20:11 TU (15:11 HNE)

La version française du bulletin suit.

Summary

- 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.
- The polar cap absorption event reported yesterday has ended.
- Possibility of impacts to aeromagnetic surveys and directional drilling.
- See our website for current information: http://www.spaceweather.gc.ca (updated every 15 minutes)

Current Conditions (20:00 UT)

Geomagnetic Activity:

- polar cap zone: stormy
- auroral zone: stormy
- sub-auroral zone: unsettled
- **Geostationary Satellite Environment:**
 - energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap, auroral, and sub-auroral zones.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption 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

• One medium coronal hole is located near the centre of the solar disk.

Interplanetary

• Interplanetary activity has been high.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 24 MAY 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 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: May-26-13 6:44 PM Subject: Space Weather Bulletin - 2013-05-26 issued at 22:42 UT (17:42 EST) / Bulletin de météorologie spatiale - 2013-05-26 diffusé à 22:42 TU (17:42 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-26 issued at 22:42 UT (17:42 EST) / Bulletin de météorologie spatiale - 2013-05-26 diffusé à 22:42 TU (17:42 HNE) La version française du bulletin suit.

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 26 May 2013 and 27 May 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

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 moderate.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 25 MAY 2013 and is expected to be at a moderate level tomorrow.

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

- 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 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, active in the auroral zone, and unsettled in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: May-27-13 2:57 PM Subject: Space Weather Bulletin - 2013-05-27 issued at 18:55 UT (13:55 EST) / Bulletin de météorologie spatiale - 2013-05-27 diffusé à 18:55 TU (13:55 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-27 issued at 18:55 UT (13:55 EST) / Bulletin de météorologie spatiale - 2013-05-27 diffusé à 18:55 TU (13:55 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions are expected 27 May 2013 to 28 May 2013 due to high speed streams from coronal holes.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: high

Possible Impacts on Technology:

• Geostationary satellites: high risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

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

Interplanetary

- Interplanetary activity has been moderate.
- Fast solar wind speeds are due to high speed streams from coronal holes.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 26 MAY 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: May-28-13 1:46 PM Subject: Space Weather Bulletin - 2013-05-28 issued at 17:44 UT (12:44 EST) / Bulletin de météorologie spatiale - 2013-05-28 diffusé à 17:44 TU (12:44 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-28 issued at 17:44 UT (12:44 EST) / Bulletin de météorologie spatiale - 2013-05-28 diffusé à 17:44 TU (12:44 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 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 Impacts on Technology:

• Geostationary satellites: high risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

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

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 high level at 27 MAY 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 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: May-29-13 4:05 PM Subject: Space Weather Bulletin - 2013-05-29 issued at 20:03 UT (15:03 EST) / Bulletin de météorologie spatiale - 2013-05-29 diffusé à 20:03 TU (15:03 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-29 issued at 20:03 UT (15:03 EST) / Bulletin de météorologie spatiale - 2013-05-29 diffusé à 20:03 TU (15:03 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:45 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 Impacts on Technology:

• Geostationary satellites: high risk of internal charging.

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 Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

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

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 high level at 28 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 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: May-30-13 4:02 PM Subject: Space Weather Bulletin - 2013-05-30 issued at 19:59 UT (14:59 EST) / Bulletin de météorologie spatiale - 2013-05-30 diffusé à 19:59 TU (14:59 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-05-30 issued at 19:59 UT (14:59 EST) / Bulletin de météorologie spatiale - 2013-05-30 diffusé à 19:59 TU (14:59 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:45 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 Impacts on Technology:

• Geostationary satellites: high risk of internal charging.

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 Impacts on Technology:

• 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 high level at 29 MAY 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: June-01-13 14:12 Subject: Space Weather Bulletin - 2013-06-01 issued at 18:10 UT (13:10 EST) / Bulletin de météorologie spatiale - 2013-06-01 diffusé à 18:10 TU (13:10 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-01 issued at 18:10 UT (13:10 EST) / Bulletin de météorologie spatiale - 2013-06-01 diffusé à 18:10 TU (13:10 HNE)

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect. •
- Disturbed geomagnetic conditions are expected 01 Jun 2013 to 02 Jun 2013 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 (18:00 UT)

Geomagnetic Activity:

- polar cap zone: stormy •
- auroral zone: active
- sub-auroral zone: unsettled

Geostationary Satellite Environment:

energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: active with stormy intervals •
- auroral zone: active with stormy intervals
- sub-auroral zone: active with stormy intervals •

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

Impacts are not expected. •

Detailed Information

Solar

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

Interplanetary

- Interplanetary activity has been moderate. •
- Fast solar wind speeds are due to high speed streams from coronal holes.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a high level at 31 MAY 2013 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 stormy with major storm 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 active with stormy intervals in the polar zone, active with stormy intervals 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: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: June-02-13 8:22 PM Subject: Space Weather Bulletin - 2013-06-03 issued at 00:19 UT (19:19 EST) / Bulletin de météorologie spatiale - 2013-06-03 diffusé à 00:19 TU (19:19 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-03 issued at 00:19 UT (19:19 EST) / Bulletin de météorologie spatiale - 2013-06-03 diffusé à 00:19 TU (19:19 HNE)

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect. •
- Disturbed geomagnetic conditions are expected 02 Jun 2013 to 03 Jun 2013 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 (00:00 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

Impacts are not expected. •

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: unavailable

Possible Impacts on Technology:

Impacts are not expected. •

Detailed Information

Solar

- Solar activity has been low. •
- Two medium coronal holes are located near the centre of the solar disk.

Interplanetary

- Interplanetary activity has been low. •
- Moderate solar wind speeds are due to high speed streams from coronal holes.

Geostationary Satellite Environment

- Data about conditions in the near-Earth environment are currently unavailable.
- Energetic electron fluence at geostationary orbit for 03 June 2013 is unavailable but is expected to be at a normal • level tomorrow.
- Visit http://www.spaceweather.gc.ca/sffl-eng.php for the electron forecast. •

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: June-03-13 1:06 PM
Subject: Space Weather Bulletin - 2013-06-03 issued at 16:55 UT (11:55 EST) / Bulletin de météorologie spatiale - 2013-06-03 diffusé à 16:55 TU (11:55 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-03 issued at 16:55 UT (11:55 EST) / Bulletin de météorologie spatiale - 2013-06-03 diffusé à 16:55 TU (11:55 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

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

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 moderate level at 02 JUN 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: June-04-13 3:47 PM Subject: Space Weather Bulletin - 2013-06-04 issued at 19:45 UT (14:45 EST) / Bulletin de météorologie spatiale - 2013-06-04 diffusé à 19:45 TU (14:45 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-04 issued at 19:45 UT (14:45 EST) / Bulletin de météorologie spatiale - 2013-06-04 diffusé à 19:45 TU (14:45 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: high

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: unsettled with stormy 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 on Technology:

• 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 interplanetary magnetic field has been fluctuating at low (2 < |Bz| < 5 nT) levels.
- The solar wind speed has been decreasing over the last 24 hours (currently ~ 550 km/s).
- 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 moderate level at 03 JUN 2013 and is expected to be at a normal level tomorrow.

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

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: June 6, 2013 13:01
Subject: Space Weather Bulletin - 2013-06-05 issued at 19:53 UT (14:53 EST) / Bulletin de météorologie spatiale - 2013-06-05 diffusé à 19:53 TU (14:53 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-05 issued at 19:53 UT (14:53 EST) / Bulletin de météorologie spatiale - 2013-06-05 diffusé à 19:53 TU (14:53 HNE) La version française du bulletin suit.

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 (19:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: high

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- A long duration M (medium) solar x-ray flare erupted at 05 JUN 2013 08:41 UT near the edge of the solar disk.
- A slow CME was observed on 05 JUN 2013, and is expected to deliver a glancing blow to the Earth on 09 JUN 2013, resulting in disturbed geomagnetic activity.
- One small coronal hole is located near the centre of the solar disk.

Interplanetary

- The interplanetary magnetic field has been fluctuating at low (2 < |Bz| < 5 nT) levels.
- The solar wind speed has been decreasing over the last 24 hours (currently ~ 500 km/s).

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a high level at 04 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: June-06-13 1:32 PM
Subject: Space Weather Bulletin - 2013-06-06 issued at 17:25 UT (12:25 EST) / Bulletin de météorologie spatiale - 2013-06-06 diffusé à 17:25 TU (12:25 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-06 issued at 17:25 UT (12:25 EST) / Bulletin de météorologie spatiale - 2013-06-06 diffusé à 17:25 TU (12:25 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

- polar cap zone: stormy
- auroral zone: active
- sub-auroral zone: unsettled

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: high

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- A long duration M (medium) solar x-ray flare erupted at 05 JUN 2013 08:41 UT near the edge of the solar disk.
- A slow CME was observed on 05 JUN 2013, and is expected to deliver a glancing blow to the Earth on 09 JUN 2013, resulting in disturbed geomagnetic activity.
- One small coronal hole is located near the centre of the solar disk.

Interplanetary

• The interplanetary magnetic field has been fluctuating at moderate (5<|Bz|<10 nT) levels.

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

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a high level on 05 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, active with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: June-07-13 2:01 PM
Subject: Space Weather Bulletin - 2013-06-07 issued at 17:58 UT (12:58 EST) / Bulletin de météorologie spatiale - 2013-06-07 diffusé à 17:58 TU (12:58 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-07 issued at 17:58 UT (12:58 EST) / Bulletin de météorologie spatiale - 2013-06-07 diffusé à 17:58 TU (12:58 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A slow CME was observed on 05 JUN 2013, and is expected to deliver a glancing blow to the Earth on 09 JUN 2013, resulting in disturbed geomagnetic activity.
- A slow Earth-directed CME erupted on 03 JUN 2013, resulting in disturbed geomagnetic activity.

• See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: active with stormy intervals
- auroral zone: stormy
- sub-auroral zone: active

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

- The interplanetary magnetic field has been primarily negative at moderate (5<|Bz|<10 nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.
- The solar wind speed is currently slow (400-500 km/s).

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 06 JUN 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: June-08-13 2:13 PM
Subject: Space Weather Bulletin - 2013-06-08 issued at 18:11 UT (13:11 EST) / Bulletin de météorologie spatiale - 2013-06-08 diffusé à 18:11 TU (13:11 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-08 issued at 18:11 UT (13:11 EST) / Bulletin de météorologie spatiale - 2013-06-08 diffusé à 18:11 TU (13:11 HNE) La version française du bulletin suit

La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A slow CME was observed on 05 JUN 2013, and is expected to deliver a glancing blow to the Earth on 09 JUN 2013, resulting in disturbed geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (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: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

- Solar activity has been low.
- An M (medium) solar x-ray flare erupted 07 JUN 2013 22:11 UT near the edge of the solar disk.
- A slow non-Earth-directed CME erupted on 07 JUN 2013 22:11 UT.

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.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 07 JUN 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: June-09-13 5:14 PM Subject: Space Weather Bulletin - 2013-06-09 issued at 21:12 UT (16:12 EST) / Bulletin de météorologie spatiale - 2013-06-09 diffusé à 21:12 TU (16:12 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-09 issued at 21:12 UT (16:12 EST) / Bulletin de météorologie spatiale - 2013-06-09 diffusé à 21:12 TU (16:12 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions due to solar activity are currently observed in the polar cap zone.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:00 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 08 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: June-10-13 2:51 PM Subject: Space Weather Bulletin - 2013-06-10 issued at 18:50 UT (13:50 EST) / Bulletin de météorologie spatiale - 2013-06-10 diffusé à 18:50 TU (13:50 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-10 issued at 18:50 UT (13:50 EST) / Bulletin de météorologie spatiale - 2013-06-10 diffusé à 18:50 TU (13:50 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: unsettled with stormy 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 on Technology:

• 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<|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 09 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, unsettled with active intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: June-11-13 12:27 PM Subject: Space Weather Bulletin - 2013-06-11 issued at 16:24 UT (11:24 EST) / Bulletin de météorologie spatiale - 2013-06-11 diffusé à 16:24 TU (11:24 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-11 issued at 16:24 UT (11:24 EST) / Bulletin de météorologie spatiale - 2013-06-11 diffusé à 16:24 TU (11:24 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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<|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 10 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: June-12-13 12:07 PM Subject: Space Weather Bulletin - 2013-06-12 issued at 16:06 UT (11:06 EST) / Bulletin de météorologie spatiale - 2013-06-12 diffusé à 16:06 TU (11:06 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-12 issued at 16:06 UT (11:06 EST) / Bulletin de météorologie spatiale - 2013-06-12 diffusé à 16:06 TU (11:06 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:00 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 Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been very low.

Interplanetary

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

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 11 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 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: June-13-13 1:37 PM Subject: Space Weather Bulletin - 2013-06-13 issued at 17:36 UT (12:36 EST) / Bulletin de météorologie spatiale - 2013-06-13 diffusé à 17:36 TU (12:36 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-13 issued at 17:36 UT (12:36 EST) / Bulletin de météorologie spatiale - 2013-06-13 diffusé à 17:36 TU (12:36 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 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 Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 12 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: June-14-13 2:30 PM Subject: Space Weather Bulletin - 2013-06-14 issued at 18:28 UT (13:28 EST) / Bulletin de météorologie spatiale - 2013-06-14 diffusé à 18:28 TU (13:28 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-14 issued at 18:28 UT (13:28 EST) / Bulletin de météorologie spatiale - 2013-06-14 diffusé à 18:28 TU (13:28 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 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 Impacts on Technology:

• 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 Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been moderate.
- A slow non-Earth-directed CME erupted on 14 JUN 2013 00:31 UT.

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 13 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: June-15-13 3:14 PM Subject: Space Weather Bulletin - 2013-06-15 issued at 19:13 UT (14:13 EST) / Bulletin de météorologie spatiale - 2013-06-15 diffusé à 19:13 TU (14:13 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-15 issued at 19:13 UT (14:13 EST) / Bulletin de météorologie spatiale - 2013-06-15 diffusé à 19:13 TU (14:13 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 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 Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 14 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 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: June-16-13 5:35 PM Subject: Space Weather Bulletin - 2013-06-16 issued at 21:33 UT (16:33 EST) / Bulletin de météorologie spatiale - 2013-06-16 diffusé à 21:33 TU (16:33 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-16 issued at 21:33 UT (16:33 EST) / Bulletin de météorologie spatiale - 2013-06-16 diffusé à 21:33 TU (16:33 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:15 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 Impacts on Technology:

• 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 Impacts on Technology:

• 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 15 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: June-17-13 12:39 PM Subject: Space Weather Bulletin - 2013-06-17 issued at 16:36 UT (11:36 EST) / Bulletin de météorologie spatiale - 2013-06-17 diffusé à 16:36 TU (11:36 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-17 issued at 16:36 UT (11:36 EST) / Bulletin de météorologie spatiale - 2013-06-17 diffusé à 16:36 TU (11:36 HNE) La version française du bulletin suit.

Summary

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

• 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 Impacts on Technology:

• Impacts are not expected.

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 slow (400-500 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 16 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: June-18-13 1:42 PM Subject: Space Weather Bulletin - 2013-06-18 issued at 17:40 UT (12:40 EST) / Bulletin de météorologie spatiale - 2013-06-18 diffusé à 17:40 TU (12:40 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-18 issued at 17:40 UT (12:40 EST) / Bulletin de météorologie spatiale - 2013-06-18 diffusé à 17:40 TU (12:40 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 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 on Technology:

• Impacts are not expected.

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 Impacts on Technology:

• 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 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been quiet with stormy 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 active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: June-19-13 3:29 PM Subject: Space Weather Bulletin - 2013-06-19 issued at 19:28 UT (14:28 EST) / Bulletin de météorologie spatiale - 2013-06-19 diffusé à 19:28 TU (14:28 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-19 issued at 19:28 UT (14:28 EST) / Bulletin de météorologie spatiale - 2013-06-19 diffusé à 19:28 TU (14:28 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: June-20-13 2:06 PM
Subject: Space Weather Bulletin - 2013-06-20 issued at 18:04 UT (13:04 EST) / Bulletin de météorologie spatiale - 2013-06-20 diffusé à 18:04 TU (13:04 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-20 issued at 18:04 UT (13:04 EST) / Bulletin de météorologie spatiale - 2013-06-20 diffusé à 18:04 TU (13:04 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

- Interplanetary activity has been moderate.
- The interplanetary magnetic field has been fluctuating at moderate (5<|Bz|<10 nT) levels.
- The solar wind speed is currently slow (400-500 km/s).

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 19 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled 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 unsettled with stormy 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: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: June-21-13 1:49 PM
Subject: Space Weather Bulletin - 2013-06-21 issued at 17:48 UT (12:48 EST) / Bulletin de météorologie spatiale - 2013-06-21 diffusé à 17:48 TU (12:48 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-21 issued at 17:48 UT (12:48 EST) / Bulletin de météorologie spatiale - 2013-06-21 diffusé à 17:48 TU (12:48 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 fluctuating at moderate (5<|Bz|<10 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 20 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, unsettled with active intervals in the auroral zone, and unsettled 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: June-22-13 1:43 PM
Subject: Space Weather Bulletin - 2013-06-22 issued at 17:41 UT (12:41 EST) / Bulletin de météorologie spatiale - 2013-06-22 diffusé à 17:41 TU (12:41 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-22 issued at 17:41 UT (12:41 EST) / Bulletin de météorologie spatiale - 2013-06-22 diffusé à 17:41 TU (12:41 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption 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 low.

Interplanetary

- Interplanetary activity has been moderate.
- The solar wind speed is currently moderate (500-700 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 21 JUN 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been active with major storm intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active 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, active with stormy intervals in the auroral zone, and unsettled in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: June-23-13 2:55 PM Subject: Space Weather Bulletin - 2013-06-23 issued at 18:53 UT (13:53 EST) / Bulletin de météorologie spatiale - 2013-06-23 diffusé à 18:53 TU (13:53 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-23 issued at 18:53 UT (13:53 EST) / Bulletin de météorologie spatiale - 2013-06-23 diffusé à 18:53 TU (13:53 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption 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 low.

Interplanetary

- Interplanetary activity has been moderate.
- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (5 < |Bz| < 10 nT) levels.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a normal level at 22 JUN 2013 and is expected to be at a moderate level tomorrow.

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

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: June-24-13 2:02 PM Subject: Space Weather Bulletin - 2013-06-24 issued at 18:01 UT (13:01 EST) / Bulletin de météorologie spatiale - 2013-06-24 diffusé à 18:01 TU (13:01 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-24 issued at 18:01 UT (13:01 EST) / Bulletin de météorologie spatiale - 2013-06-24 diffusé à 18:01 TU (13:01 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

- polar cap zone: active
- auroral zone: stormy
- sub-auroral zone: unsettled

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- 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.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- 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

- Interplanetary activity has been moderate.
- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been primarily negative at low (2<|Bz|<5 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 23 JUN 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, active with stormy intervals in the auroral zone, and unsettled in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca] Sent: June-25-13 2:50 PM Subject: Space Weather Bulletin - 2013-06-25 issued at 18:47 UT (13:47 EST) / Bulletin de météorologie spatiale - 2013-06-25 diffusé à 18:47 TU (13:47 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-25 issued at 18:47 UT (13:47 EST) / Bulletin de météorologie spatiale - 2013-06-25 diffusé à 18:47 TU (13:47 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• 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 fluctuating at low (2 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a moderate level at 24 JUN 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 unsettled with stormy 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: June-26-13 3:15 PM Subject: Space Weather Bulletin - 2013-06-26 issued at 19:13 UT (14:13 EST) / Bulletin de météorologie spatiale - 2013-06-26 diffusé à 19:13 TU (14:13 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-26 issued at 19:13 UT (14:13 EST) / Bulletin de météorologie spatiale - 2013-06-26 diffusé à 19:13 TU (14:13 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: high

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a high level at 25 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: June-27-13 12:06 PM
Subject: Space Weather Bulletin - 2013-06-27 issued at 16:05 UT (11:05 EST) / Bulletin de météorologie spatiale - 2013-06-27 diffusé à 16:05 TU (11:05 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-27 issued at 16:05 UT (11:05 EST) / Bulletin de météorologie spatiale - 2013-06-27 diffusé à 16:05 TU (11:05 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (15:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: high

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

- Geomagnetic Activity:
 - polar cap zone: quiet with active intervals
 - auroral zone: quiet
 - sub-auroral zone: quiet with unsettled intervals

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 moderate.
- The interplanetary magnetic field has been fluctuating at moderate (5<|Bz|<10 nT) levels.
- The solar wind speed has been at 500 km/s since the passage of an interplanetary shock 27 Jun 2013 14:00 UT.

Geostationary Satellite Environment

• Energetic electron fluence at geostationary orbit was at a high level at 26 JUN 2013 and is expected to be at a normal level tomorrow.

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

- 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 sub-auroral 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 with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: June-28-13 1:10 PM Subject: Space Weather Bulletin - 2013-06-28 issued at 17:09 UT (12:09 EST) / Bulletin de météorologie spatiale - 2013-06-28 diffusé à 17:09 TU (12:09 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-28 issued at 17:09 UT (12:09 EST) / Bulletin de météorologie spatiale - 2013-06-28 diffusé à 17:09 TU (12:09 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

- polar cap zone: stormy
- auroral zone: stormy
- sub-auroral zone: active

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap and auroral zones.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap and auroral zones.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.
- Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: unsettled with stormy 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 on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap and auroral zones.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap and auroral zones.
- Aeromagnetic surveys: Potential for disruption in the sub-auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.

Detailed Information

Solar

- Solar activity has been moderate.
- A non-Earth-directed CME erupted on 27 JUN 2013 20:37 UT.
- A CME erupted on 28 JUN 2013 01:59 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.

Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been primarily negative at moderate (5<|Bz|<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 high level at 27 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: June-29-13 1:58 PM
Subject: Space Weather Bulletin - 2013-06-29 issued at 17:56 UT (12:56 EST) / Bulletin de météorologie spatiale - 2013-06-29 diffusé à 17:56 TU (12:56 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-29 issued at 17:56 UT (12:56 EST) / Bulletin de météorologie spatiale - 2013-06-29 diffusé à 17:56 TU (12:56 HNE) La version française du bulletin suit.

Summary

- The major storm WATCH issued 29 JUN 2013 04:00 UT for the polar cap, auroral, and sub-auroral zones ended 29 JUN 2013 08:00 UT.
- 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 28 JUN 2013, and is expected to deliver a glancing blow to the Earth on 30 JUN 2013, resulting in disturbed geomagnetic activity.
- See our website for current information: http://www.spaceweather.gc.ca (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption in the polar cap and auroral zones.
- Directional Drilling: Significant deviations possible in the polar cap and auroral zones.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap, auroral, and sub-auroral zones.
- 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.
- Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 28 JUN 2013, and is expected to deliver a glancing blow to the Earth on 30 JUN 2013, resulting in disturbed geomagnetic activity.
- 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 (2 < |Bz| < 5 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 28 JUN 2013 and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 stormy in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: June-30-13 1:23 PM Subject: Space Weather Bulletin - 2013-06-30 issued at 17:22 UT (12:22 EST) / Bulletin de météorologie spatiale - 2013-06-30 diffusé à 17:22 TU (12:22 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-06-30 issued at 17:22 UT (12:22 EST) / Bulletin de météorologie spatiale - 2013-06-30 diffusé à 17:22 TU (12:22 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- A CME was observed on 28 JUN 2013, and is expected to deliver a glancing blow to the Earth on 30 JUN 2013, resulting in disturbed geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: high

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Geostationary satellites: high risk of internal charging.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 28 JUN 2013, and is expected to deliver a glancing blow to the Earth on 30 JUN 2013, resulting in disturbed 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.

Interplanetary

- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at low (2 < |Bz| < 5 nT) levels.
- 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 normal level at 29 JUN 2013 and is expected to be at a high level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: July-01-13 2:12 PM Subject: Space Weather Bulletin - 2013-07-01 issued at 18:10 UT (13:10 EST) / Bulletin de météorologie spatiale - 2013-07-01 diffusé à 18:10 TU (13:10 HNE)

This is for testing purposes

Space Weather Bulletin - 2013-07-01 issued at 18:10 UT (13:10 EST) / Bulletin de météorologie spatiale - 2013-07-01 diffusé à 18:10 TU (13:10 HNE) La version française du bulletin suit.

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruption in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Geostationary Satellite Environment:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruption in the auroral zone.
- Directional Drilling: Significant deviations possible in the polar cap 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 very low (|Bz|<2 nT) levels.

Geostationary Satellite Environment

- Energetic electron fluence at geostationary orbit was at a normal level at 30 JUN 2013 and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: July-02-13 3:37 PM Subject: Space Weather Bulletin - 2013-07-02 issued at 19:22 UT (14:22 EST) / Bulletin de météorologie spatiale - 2013-07-02 diffusé à 19:22 TU (14:22 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-02 issued at 19:22 UT (14:22 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: July-03-13 1:45 PM Subject: Space Weather Bulletin - 2013-07-03 issued at 17:41 UT (12:41 EST) / Bulletin de météorologie spatiale - 2013-07-03 diffusé à 17:41 TU (12:41 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-03 issued at 17:41 UT (12:41 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Detailed Information

Solar

- Solar activity has been moderate.
- An M (medium) solar x-ray flare erupted 03 JUL 2013 07:08 UT near the edge of the solar disk.
- Two coronal holes are located near the centre of the solar disk.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.

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

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: July-04-13 2:23 PM Subject: Space Weather Bulletin - 2013-07-04 issued at 18:20 UT (13:20 EST) / Bulletin de météorologie spatiale - 2013-07-04 diffusé à 18:20 TU (13:20 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-04 issued at 18:20 UT (13:20 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 with unsettled 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, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: July-05-13 1:24 PM
Subject: Space Weather Bulletin - 2013-07-05 issued at 17:21 UT (12:21 EST) / Bulletin de météorologie spatiale - 2013-07-05 diffusé à 17:21 TU (12:21 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-05 issued at 17:21 UT (12:21 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled 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 unsettled with stormy intervals in the polar zone, unsettled in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: July-06-13 2:58 PM Subject: Space Weather Bulletin - 2013-07-06 issued at 18:53 UT (13:53 EST) / Bulletin de météorologie spatiale - 2013-07-06 diffusé à 18:53 TU (13:53 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-06 issued at 18:53 UT (13:53 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Directional Drilling: Potential for significant deviations in the auroral zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Detailed Information

Solar

- Solar activity has been low.
- 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 primarily negative at moderate (|Bz|<10 nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 unsettled 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, active with stormy intervals in the auroral zone, and unsettled 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: July-07-13 3:15 PM
Subject: Space Weather Bulletin - 2013-07-07 issued at 19:09 UT (14:09 EST) / Bulletin de météorologie spatiale - 2013-07-07 diffusé à 19:09 TU (14:09 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-07 issued at 19:09 UT (14:09 EST) 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 (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: high

Possible Impacts on Technology:

• Geostationary satellites: high risk of internal charging.

Detailed Information

Solar

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

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a high level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: July-08-13 11:31 AM Subject: Space Weather Bulletin - 2013-07-08 issued at 15:25 UT (10:25 EST) / Bulletin de météorologie spatiale - 2013-07-08 diffusé à 15:25 TU (10:25 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-08 issued at 15:25 UT (10:25 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (15:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Detailed Information

Solar

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

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: July-09-13 2:31 PM Subject: Space Weather Bulletin - 2013-07-09 issued at 18:27 UT (13:27 EST) / Bulletin de météorologie spatiale - 2013-07-09 diffusé à 18:27 TU (13:27 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-09 issued at 18:27 UT (13:27 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Detailed Information

Solar

- Solar activity has been low.
- 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 moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, 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: July-10-13 1:09 PM
Subject: Space Weather Bulletin - 2013-07-10 issued at 17:05 UT (12:05 EST) / Bulletin de météorologie spatiale - 2013-07-10 diffusé à 17:05 TU (12:05 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-10 issued at 17:05 UT (12:05 EST) Summary

- There is currently no major storm watch in effect.
- A slow Earth-directed CME erupted on 09 JUL 2013 15:24 UT and is expected to reach the Earth on 13 JUL 2013, resulting in disturbed geomagnetic activity.
 - See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• electron fluence at geostationary orbit: normal

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Detailed Information

Solar

- Solar activity has been low.
- A slow Earth-directed CME erupted on 09 JUL 2013 15:24 UT and is expected to reach the Earth on 13 JUL 2013, resulting in disturbed geomagnetic activity.

Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been primarily negative at moderate (|Bz|<10 nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: July-11-13 2:21 PM Subject: Space Weather Bulletin - 2013-07-11 issued at 18:14 UT (13:14 EST) / Bulletin de météorologie spatiale - 2013-07-11 diffusé à 18:14 TU (13:14 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-11 issued at 18:14 UT (13:14 EST) Summary

- There is currently no major storm watch in effect.
- A slow Earth-directed CME erupted on 09 JUL 2013 15:24 UT and is expected to reach the Earth on 13 JUL 2013, resulting in disturbed geomagnetic activity.
 - See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Directional Drilling: Potential for significant deviations in the auroral zone.
- Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: high

Possible Impacts on Technology:

• Geostationary satellites: high risk of internal charging.

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 negative at low (|Bz|<5 nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a high level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been active with stormy intervals in the polar zone, stormy 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, active with stormy intervals in the auroral zone, and unsettled in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: July-12-13 3:17 PM Subject: Space Weather Bulletin - 2013-07-12 issued at 19:10 UT (14:10 EST) / Bulletin de météorologie spatiale - 2013-07-12 diffusé à 19:10 TU (14:10 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-12 issued at 19:10 UT (14:10 EST) Summary

- There is currently no major storm watch in effect.
- A slow Earth-directed CME erupted on 09 JUL 2013 15:24 UT and is expected to reach the Earth on 13 JUL 2013, resulting in disturbed geomagnetic activity.
 - See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Geostationary satellites: moderate risk of internal charging.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

- The solar wind speed has been increasing over the last 6 hours (currently ~ 500 km/s).
- The interplanetary magnetic field has been fluctuating at low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled 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 active with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: July-13-13 2:49 PM Subject: Space Weather Bulletin - 2013-07-13 issued at 18:45 UT (13:45 EST) / Bulletin de météorologie spatiale - 2013-07-13 diffusé à 18:45 TU (13:45 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-13 issued at 18:45 UT (13:45 EST) Summary

- There is currently no major storm watch in effect.
- A slow Earth-directed CME erupted on 09 JUL 2013 15:24 UT and is expected to reach the Earth on 13 JUL 2013, resulting in disturbed geomagnetic activity.
 - See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• 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 primarily positive at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a high level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been active with stormy 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 active with stormy intervals in the polar zone, unsettled in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca] Sent: July-14-13 6:19 PM Subject: Space Weather Bulletin - 2013-07-14 issued at 22:16 UT (17:16 EST) / Bulletin de météorologie spatiale - 2013-07-14 diffusé à 22:16 TU (17:16 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-14 issued at 22:16 UT (17:16 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Geostationary satellites: moderate risk of internal charging.
- Aeromagnetic surveys: Potential for disruptions in the polar cap and auroral zones.
- Directional Drilling: Potential for deviations in the polar cap and auroral zones.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Detailed Information

Solar

- Solar activity has been low.
- One coronal hole elongated in longitude 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 negative at moderate (|Bz|<10 nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic

activity. Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.

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

- Over the last 24 hours geomagnetic activity has been unsettled with active intervals in the polar zone, active with stormy intervals in the auroral zone, and unsettled with active 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, active with stormy intervals in the auroral zone, and unsettled 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: July-15-13 1:31 PM Subject: Space Weather Bulletin - 2013-07-15 issued at 17:27 UT (12:27 EST) / Bulletin de météorologie spatiale - 2013-07-15 diffusé à 17:27 TU (12:27 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-15 issued at 17:27 UT (12:27 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: quiet with active intervals
- auroral zone: active with stormy intervals
- sub-auroral zone: active

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

- Solar activity has been low.
- One coronal hole elongated in longitude 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 (|Bz| < 5 nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been unsettled with active 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 quiet with active intervals in the polar zone, active with stormy intervals in the auroral zone, and active in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: July-16-13 2:17 PM
Subject: Space Weather Bulletin - 2013-07-16 issued at 18:11 UT (13:11 EST) / Bulletin de météorologie spatiale - 2013-07-16 diffusé à 18:11 TU (13:11 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-16 issued at 18:11 UT (13:11 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.

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.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: July-17-13 1:58 PM Subject: Space Weather Bulletin - 2013-07-17 issued at 17:56 UT (12:56 EST) / Bulletin de météorologie spatiale - 2013-07-17 diffusé à 17:56 TU (12:56 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-17 issued at 17:56 UT (12:56 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap 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.

Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.

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

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: July-18-13 2:22 PM Subject: Space Weather Bulletin - 2013-07-18 issued at 18:13 UT (13:13 EST) / Bulletin de météorologie spatiale - 2013-07-18 diffusé à 18:13 TU (13:13 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-18 issued at 18:13 UT (13:13 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

- polar cap zone: stormy
- auroral zone: active
- sub-auroral zone: unsettled
- **Environment at Geostationary orbit:**

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruptions in the auroral zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.
- Directional Drilling: Potential for deviations in the auroral zone.
- Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- One medium coronal hole elongated in longitude is located near the centre of the solar disk.

Interplanetary

- The solar wind speed has been increasing over the last hour (currently ~ 500 km/s).
- The interplanetary magnetic field has been fluctuating at high (|Bz|<20 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been active 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.
- 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 sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: July-19-13 2:17 PM
Subject: Space Weather Bulletin - 2013-07-19 issued at 18:11 UT (13:11 EST) / Bulletin de météorologie spatiale - 2013-07-19 diffusé à 18:11 TU (13:11 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-19 issued at 18:11 UT (13:11 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruptions in the auroral zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.
- Directional Drilling: Potential for deviations in the auroral zone.

Detailed Information

Solar

- Solar activity has been low.
- One medium coronal hole elongated in longitude 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 moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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, unsettled with active intervals in the auroral zone, and unsettled in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: July-20-13 4:23 PM Subject: Space Weather Bulletin - 2013-07-20 issued at 20:19 UT (15:19 EST) / Bulletin de météorologie spatiale - 2013-07-20 diffusé à 20:19 TU (15:19 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-20 issued at 20:19 UT (15:19 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.

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 (|Bz|<2 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: July-21-13 1:37 PM
Subject: Space Weather Bulletin - 2013-07-21 issued at 17:35 UT (12:35 EST) / Bulletin de météorologie spatiale - 2013-07-21 diffusé à 17:35 TU (12:35 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-21 issued at 17:35 UT (12:35 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap 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.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: July-22-13 3:31 PM Subject: Space Weather Bulletin - 2013-07-22 issued at 19:28 UT (14:28 EST) / Bulletin de météorologie spatiale - 2013-07-22 diffusé à 19:28 TU (14:28 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-22 issued at 19:28 UT (14:28 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: active with stormy intervals
- auroral zone: quiet
- sub-auroral zone: quiet

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the polar cap 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.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be active with stormy intervals in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: July-23-13 2:48 PM Subject: Space Weather Bulletin - 2013-07-23 issued at 18:46 UT (13:46 EST) / Bulletin de météorologie spatiale - 2013-07-23 diffusé à 18:46 TU (13:46 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-23 issued at 18:46 UT (13:46 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap 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.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: July-24-13 1:33 PM Subject: Space Weather Bulletin - 2013-07-24 issued at 17:31 UT (12:31 EST) / Bulletin de météorologie spatiale - 2013-07-24 diffusé à 17:31 TU (12:31 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-24 issued at 17:31 UT (12:31 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: July-25-13 1:44 PM Subject: Space Weather Bulletin - 2013-07-25 issued at 17:40 UT (12:40 EST) / Bulletin de météorologie spatiale - 2013-07-25 diffusé à 17:40 TU (12:40 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-25 issued at 17:40 UT (12:40 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

Detailed Information

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

Interplanetary

- The solar wind speed has been increasing over the last hour (currently ~ 400 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: July-26-13 1:54 PM Subject: Space Weather Bulletin - 2013-07-26 issued at 17:51 UT (12:51 EST) / Bulletin de météorologie spatiale - 2013-07-26 diffusé à 17:51 TU (12:51 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-26 issued at 17:51 UT (12:51 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruptions in the auroral zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.
- Directional Drilling: Potential for deviations in the auroral zone.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 unsettled in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: July-27-13 3:13 PM
Subject: Space Weather Bulletin - 2013-07-27 issued at 19:09 UT (14:09 EST) / Bulletin de météorologie spatiale - 2013-07-27 diffusé à 19:09 TU (14:09 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-27 issued at 19:09 UT (14:09 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.
- Geostationary satellites: moderate risk of internal charging.

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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: July-28-13 3:30 PM Subject: Space Weather Bulletin - 2013-07-28 issued at 19:28 UT (14:28 EST) / Bulletin de météorologie spatiale - 2013-07-28 diffusé à 19:28 TU (14:28 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-28 issued at 19:28 UT (14:28 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruptions in the auroral zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.
- Directional Drilling: Potential for deviations 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 low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled 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 unsettled with stormy intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca] Sent: July-29-13 1:23 PM Subject: Space Weather Bulletin - 2013-07-29 issued at 17:21 UT (12:21 EST) / Bulletin de météorologie spatiale - 2013-07-29 diffusé à 17:21 TU (12:21 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-29 issued at 17:21 UT (12:21 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the polar cap 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.

Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.

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

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: July-30-13 1:34 PM
Subject: Space Weather Bulletin - 2013-07-30 issued at 17:32 UT (12:32 EST) / Bulletin de météorologie spatiale - 2013-07-30 diffusé à 17:32 TU (12:32 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-30 issued at 17:32 UT (12:32 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap 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 very slow (< 400 km/s).
- The interplanetary magnetic field has been primarily negative at low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: July-31-13 12:45 PM Subject: Space Weather Bulletin - 2013-07-31 issued at 16:36 UT (11:36 EST) / Bulletin de météorologie spatiale - 2013-07-31 diffusé à 16:36 TU (11:36 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-07-31 issued at 16:36 UT (11:36 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

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 primarily negative at low (|Bz|<5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: August-01-13 12:56 PM Subject: Space Weather Bulletin - 2013-08-01 issued at 16:54 UT (11:54 EST) / Bulletin de météorologie spatiale - 2013-08-01 diffusé à 16:54 TU (11:54 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-01 issued at 16:54 UT (11:54 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

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 low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: August-02-13 2:01 PM Subject: Space Weather Bulletin - 2013-08-02 issued at 17:59 UT (12:59 EST) / Bulletin de météorologie spatiale - 2013-08-02 diffusé à 17:59 TU (12:59 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-02 issued at 17:59 UT (12:59 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 low (|Bz|<2 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: August-03-13 1:38 PM
Subject: Space Weather Bulletin - 2013-08-03 issued at 17:37 UT (12:37 EST) / Bulletin de météorologie spatiale - 2013-08-03 diffusé à 17:37 TU (12:37 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-03 issued at 17:37 UT (12:37 EST) Summary

- There is currently no major storm watch in effect.
- A CME was observed on 02 AUG 2013, and is expected to deliver a glancing blow to the Earth on 05 AUG 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 02 AUG 2013, and is expected to deliver a glancing blow to the Earth on 05 AUG 2013.
- 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been quiet with stormy intervals in the polar zone, quiet 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 in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: August-04-13 1:54 PM
Subject: Space Weather Bulletin - 2013-08-04 issued at 17:52 UT (12:52 EST) / Bulletin de météorologie spatiale - 2013-08-04 diffusé à 17:52 TU (12:52 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-04 issued at 17:52 UT (12:52 EST) 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 zone within the next 24 hours.
- A CME was observed on 02 AUG 2013, and is expected to deliver a glancing blow to the Earth on 05 AUG 2013.
- Disturbed geomagnetic conditions are expected 04 AUG 2013 to 05 AUG 2013 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: active
- auroral zone: stormy
- sub-auroral zone: active

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the auroral zone.
- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Aeromagnetic surveys: Potential for disruptions in the polar cap and sub-auroral zones.
- Directional Drilling: Potential for significant deviations in the auroral zone.
- Directional Drilling: Potential for deviations in the polar cap and sub-auroral zones.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Aeromagnetic surveys: Potential for disruptions in the auroral zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.
- Directional Drilling: Potential for deviations in the auroral zone.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 02 AUG 2013, and is expected to deliver a glancing blow to the Earth on 05 AUG 2013.
- Two 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 primarily negative at moderate (|Bz|<10 nT) levels.
- Moderate solar wind speeds are due to high speed streams from coronal holes.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: August-05-13 2:04 PM
Subject: Space Weather Bulletin - 2013-08-05 issued at 18:03 UT (13:03 EST) / Bulletin de météorologie spatiale - 2013-08-05 diffusé à 18:03 TU (13:03 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-05 issued at 18:03 UT (13:03 EST) Summary

- There is currently no major storm watch in effect.
- Stormy conditions are possible in the polar cap and auroral zones within the next 24 hours.
- Disturbed geomagnetic conditions are expected 04 AUG 2013 to 05 AUG 2013 due to high speed streams from coronal holes.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap and auroral zones.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap and auroral zones.
- Directional Drilling: Potential for significant deviations in the polar cap and auroral zones.

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 moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at low (|Bz|<5 nT) levels.
- Moderate solar wind speeds are due to high speed streams from coronal holes.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: August-06-13 12:44 PM Subject: Space Weather Bulletin - 2013-08-06 issued at 16:43 UT (11:43 EST) / Bulletin de météorologie spatiale - 2013-08-06 diffusé à 16:43 TU (11:43 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-06 issued at 16:43 UT (11:43 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Geostationary satellites: moderate risk of internal charging.
- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Geostationary satellites: moderate risk of internal charging.
- Aeromagnetic surveys: Potential for disruptions in the polar cap and auroral zones.
- Directional Drilling: Potential for deviations in the polar cap and auroral zones.

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 (|Bz| < 2 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 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: August-07-13 1:14 PM Subject: Space Weather Bulletin - 2013-08-07 issued at 17:13 UT (12:13 EST) / Bulletin de météorologie spatiale - 2013-08-07 diffusé à 17:13 TU (12:13 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-07 issued at 17:13 UT (12:13 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- 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 (|Bz|<2 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: August-08-13 1:05 PM
Subject: Space Weather Bulletin - 2013-08-08 issued at 17:04 UT (12:04 EST) / Bulletin de météorologie spatiale - 2013-08-08 diffusé à 17:04 TU (12:04 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-08 issued at 17:04 UT (12:04 EST) Summary

- There is currently no major storm watch in effect.
- A CME was observed on 07 AUG 2013, and is expected to deliver a glancing blow to the Earth on 10 AUG 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 07 AUG 2013, and is expected to deliver a glancing blow to the Earth on 10 AUG 2013.
- 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 primarily negative at very low (|Bz| < 2 nT) levels.

Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.

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

- 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 with unsettled intervals in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: August-09-13 2:11 PM
Subject: Space Weather Bulletin - 2013-08-09 issued at 18:09 UT (13:09 EST) / Bulletin de météorologie spatiale - 2013-08-09 diffusé à 18:09 TU (13:09 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-09 issued at 18:09 UT (13:09 EST) Summary

- There is currently no major storm watch in effect.
- Stormy conditions are possible in the polar cap zone within the next 24 hours.
- A CME was observed on 07 AUG 2013, and is expected to deliver a glancing blow to the Earth on 10 AUG 2013.
- A CME was observed on 08 AUG 2013, and is expected to deliver a glancing blow to the Earth on 10 AUG 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap zone.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- A CME was observed on 07 AUG 2013, and is expected to deliver a glancing blow to the Earth on 10 AUG 2013.
- A CME was observed on 08 AUG 2013, and is expected to deliver a glancing blow to the Earth on 10 AUG 2013.
- 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 primarily positive at low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]

Sent: August-10-13 12:57 PM

Subject: Space Weather Bulletin - 2013-08-10 issued at 16:56 UT (11:56 EST) / Bulletin de météorologie spatiale - 2013-08-10 diffusé à 16:56 TU (11:56 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-10 issued at 16:56 UT (11:56 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- A non-Earth-directed CME erupted on 09 AUG 2013 20:48 UT.
- One coronal hole is located near the edge of the solar disk.
- A long duration C (low) solar x-ray flare erupted at 09 AUG 2013 20:28 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 positive at low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca]
Sent: August-11-13 1:45 PM
Subject: Space Weather Bulletin - 2013-08-11 issued at 17:44 UT (12:44 EST) / Bulletin de météorologie spatiale - 2013-08-11 diffusé à 17:44 TU (12:44 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-11 issued at 17:44 UT (12:44 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- A non-Earth-directed CME erupted on 10 AUG 2013 10:15 UT.
- A non-Earth-directed CME erupted on 11 AUG 2013.
- One coronal hole elongated in longitude 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Fiori, Robyn [mailto:Robyn.Fiori@NRCan-RNCan.gc.ca] Sent: August-12-13 1:23 PM Subject: Space Weather Bulletin - 2013-08-12 issued at 17:22 UT (12:22 EST) / Bulletin de météorologie spatiale - 2013-08-12 diffusé à 17:22 TU (12:22 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-12 issued at 17:22 UT (12:22 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

Detailed Information

Solar

- Solar activity has been low.
- One large coronal hole elongated in longitude is located near the edge of the solar disk.
- An M (medium) solar x-ray flare erupted 12 AUG 2013 10:48 UT.

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.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: August-13-13 3:20 PM Subject: Space Weather Bulletin - 2013-08-13 issued at 19:18 UT (14:18 EST) / Bulletin de météorologie spatiale - 2013-08-13 diffusé à 19:18 TU (14:18 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-13 issued at 19:18 UT (14:18 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

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

Interplanetary

- Interplanetary activity has been moderate.
- Interplanetary activity has been moderate.
- Moderate solar wind speeds are due to high speed streams from coronal holes.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Enhanced geomagnetic activity is likely due to the arrival of a high speed stream associated with coronal holes.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: August-14-13 5:35 PM Subject: Space Weather Bulletin - 2013-08-14 issued at 21:34 UT (16:34 EST) / Bulletin de météorologie spatiale - 2013-08-14 diffusé à 21:34 TU (16:34 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-14 issued at 21:34 UT (16:34 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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: quiet

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

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

Interplanetary

- Interplanetary activity has been low.
- Moderate solar wind speeds are due to high speed streams from coronal holes.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: August-15-13 4:23 PM Subject: Space Weather Bulletin - 2013-08-15 issued at 20:22 UT (15:22 EST) / Bulletin de météorologie spatiale - 2013-08-15 diffusé à 20:22 TU (15:22 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-15 issued at 20:22 UT (15:22 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruptions in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruptions in the polar cap and auroral zones.

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.
- Moderate solar wind speeds are due to high speed streams from coronal holes.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be active with stormy intervals in the polar zone, active in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: August-16-13 2:52 PM Subject: Space Weather Bulletin - 2013-08-16 issued at 18:51 UT (13:51 EST) / Bulletin de météorologie spatiale - 2013-08-16 diffusé à 18:51 TU (13:51 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-16 issued at 18:51 UT (13:51 EST) Summary

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions are expected 16 Aug 2013 to 17 Aug 2013 due to high speed streams from coronal holes.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 UT)

Geomagnetic Activity:

- polar cap zone: stormy
- auroral zone: active
- sub-auroral zone: unsettled

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Geostationary satellites: moderate risk of internal charging.
- Aeromagnetic surveys: Potential for disruptions in the polar cap and auroral zones.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Geostationary satellites: moderate risk of internal charging.
- Directional Drilling: Potential for deviations in the polar cap and auroral zones.

Detailed Information

Solar

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

Interplanetary

- Interplanetary activity has been moderate.
- Fast solar wind speeds are due to high speed streams from coronal holes.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: August-17-13 6:27 PM Subject: Space Weather Bulletin - 2013-08-17 issued at 22:25 UT (17:25 EST) / Bulletin de météorologie spatiale - 2013-08-17 diffusé à 22:25 TU (17:25 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-17 issued at 22:25 UT (17:25 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been moderate.
- An M (medium) solar x-ray flare erupted 17 Aug 2013 18:24 UT.
- Two medium coronal holes are located near the centre of the solar disk.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: August-18-13 4:36 PM Subject: Space Weather Bulletin - 2013-08-18 issued at 20:34 UT (15:34 EST) / Bulletin de météorologie spatiale - 2013-08-18 diffusé à 20:34 TU (15:34 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-18 issued at 20:34 UT (15:34 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been moderate.

Interplanetary

• Interplanetary activity has been moderate.

Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.

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

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: August-19-13 5:55 PM
Subject: Space Weather Bulletin - 2013-08-19 issued at 21:53 UT (16:53 EST) / Bulletin de météorologie spatiale - 2013-08-19 diffusé à 21:53 TU (16:53 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-19 issued at 21:53 UT (16:53 EST) 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 20 Aug 2013 and 22 Aug 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- A moderate CME erupted on 17 August 20:00 UT. It is not yet known if the CME will impact the Earth.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: August-20-13 3:05 PM
Subject: Space Weather Bulletin - 2013-08-20 issued at 19:03 UT (14:03 EST) / Bulletin de météorologie spatiale - 2013-08-20 diffusé à 19:03 TU (14:03 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-20 issued at 19:03 UT (14:03 EST) 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 21 Aug 2013 and 22 Aug 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- A moderate CME erupted on 17 Aug 2013 20:00 UT. It is not yet known if the CME will impact the Earth.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: August-21-13 3:19 PM Subject: Space Weather Bulletin - 2013-08-21 issued at 19:17 UT (14:17 EST) / Bulletin de météorologie spatiale - 2013-08-21 diffusé à 19:17 TU (14:17 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-21 issued at 19:17 UT (14:17 EST) Summary

- There is currently no major storm watch in effect.
- Stormy conditions are possible in the auroral zone within the next 24 hours.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruptions in the polar cap zone.

24 Hour Forecast

- Geomagnetic Activity:
 - polar cap zone: unsettled with stormy intervals
 - auroral zone: unsettled with active intervals
 - sub-auroral zone: quiet with unsettled intervals

Environment at Geostationary orbit:

• 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 has been increasing over the last hour (currently ~ 600 km/s).
- The interplanetary magnetic field has been fluctuating at high (|Bz|<20 nT) levels.
- An interplanetary shock has been observed on 20Aug 2013 22:00 UT.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 unsettled 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 active intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: August-22-13 3:20 PM Subject: Space Weather Bulletin - 2013-08-22 issued at 19:18 UT (14:18 EST) / Bulletin de météorologie spatiale - 2013-08-22 diffusé à 19:18 TU (14:18 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-22 issued at 19:18 UT (14:18 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- A moderate CME was observed on 20 Aug 2013, and is expected to deliver a glancing blow to the Earth on 23 Aug 2013, resulting in increased geomagnetic activity.
- Two small coronal holes are located near the centre of the solar disk.

Interplanetary

• Interplanetary activity has been moderate.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 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: August-23-13 3:24 PM Subject: Space Weather Bulletin - 2013-08-23 issued at 19:22 UT (14:22 EST) / Bulletin de météorologie spatiale - 2013-08-23 diffusé à 19:22 TU (14:22 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-23 issued at 19:22 UT (14:22 EST) 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 Aug 2013 and 25 Aug 2013.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Aeromagnetic surveys: Potential for disruptions in the polar cap and auroral zones.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Detailed Information

Solar

- Solar activity has been low.
- A moderate CME was observed on 20Aug 2013, and is expected to deliver a glancing blow to the Earth on 24 Aug 2013, resulting in increased geomagnetic activity.
- One small coronal hole is located near the centre of the solar disk.

Interplanetary

- Interplanetary activity has been moderate.
- Moderate solar wind speeds are due to high speed streams from coronal holes.

Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.

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

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: August-24-13 9:10 PM Subject: Space Weather Bulletin - 2013-08-25 issued at 01:08 UT (20:08 EST) / Bulletin de météorologie spatiale - 2013-08-25 diffusé à 01:08 TU (20:08 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-25 issued at 01:08 UT (20:08 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (01:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.

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

- Over the last 24 hours geomagnetic activity has been unsettled with stormy intervals in the polar zone, unsettled 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 active intervals in the polar zone, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: August-25-13 10:49 PM Subject: Space Weather Bulletin - 2013-08-26 issued at 02:48 UT (21:48 EST) / Bulletin de météorologie spatiale - 2013-08-26 diffusé à 02:48 TU (21:48 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-26 issued at 02:48 UT (21:48 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (02:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours 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 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 <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: August-26-13 2:30 PM Subject: Space Weather Bulletin - 2013-08-26 issued at 18:14 UT (13:14 EST) / Bulletin de météorologie spatiale - 2013-08-26 diffusé à 18:14 TU (13:14 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-26 issued at 18:14 UT (13:14 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

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

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 with unsettled intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: August-27-13 2:55 PM Subject: Space Weather Bulletin - 2013-08-27 issued at 18:53 UT (13:53 EST) / Bulletin de météorologie spatiale - 2013-08-27 diffusé à 18:53 TU (13:53 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-27 issued at 18:53 UT (13:53 EST) Summary

- There is currently no major storm watch in effect.
- Disturbed geomagnetic conditions are expected 27 AUG 2013 to 28 AUG 2013 due to high speed streams from coronal holes.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

- polar cap zone: active
- auroral zone: active
- sub-auroral zone: active

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Potential for deviations in the polar cap, auroral, and sub-auroral zones.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: unsettled with active intervals
- auroral zone: unsettled
- sub-auroral zone: quiet with active intervals
- **Environment at Geostationary orbit:**
 - energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- One medium coronal hole elongated in longitude 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 high (|Bz|<20 nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 unsettled with active intervals in the polar zone, unsettled in the auroral zone, and quiet with active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: August-28-13 2:55 PM
Subject: Space Weather Bulletin - 2013-08-28 issued at 18:54 UT (13:54 EST) / Bulletin de météorologie spatiale - 2013-08-28 diffusé à 18:54 TU (13:54 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-28 issued at 18:54 UT (13:54 EST) Summary

- There is currently no major storm watch in effect.
- Disturbed conditions observed 27 AUG 2013 in the polar cap, auroral, and sub-auroral zones have ended.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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: unsettled

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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, unsettled with active intervals in the auroral zone, and unsettled in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: August-29-13 2:14 PM
Subject: Space Weather Bulletin - 2013-08-29 issued at 18:12 UT (13:12 EST) / Bulletin de météorologie spatiale - 2013-08-29 diffusé à 18:12 TU (13:12 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-29 issued at 18:12 UT (13:12 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: normal
- **Possible Impacts on Technology:**
- Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• A CME erupted on 29 AUG 2013. It is not yet known if the CME will impact the Earth.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: August-30-13 1:12 PM Subject: Space Weather Bulletin - 2013-08-30 issued at 17:10 UT (12:10 EST) / Bulletin de météorologie spatiale - 2013-08-30 diffusé à 17:10 TU (12:10 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-30 issued at 17:10 UT (12:10 EST) Summary

- There is currently no major storm watch in effect.
- A moderate Earth-directed CME erupted on 30 AUG 2013 02:48 UT and is expected to reach the Earth on 01 SEP 2013, resulting in disturbed geomagnetic activity.
 - See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- An Earth-directed CME erupted on 30 AUG 2013 02:48 UT and is expected to reach the Earth on 01 SEP 2013, resulting in disturbed geomagnetic activity.
- A moderate CME was observed on 29 AUG 2013, and is expected to deliver a glancing blow to the Earth on 01 SEP 2013.

Interplanetary

- The solar wind speed has been increasing over the last 7 hours (currently ~ 440 km/s).
- Moderate solar wind speeds are due to high speed streams from coronal holes.
- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: August-31-13 2:33 PM Subject: Space Weather Bulletin - 2013-08-31 issued at 18:32 UT (13:32 EST) / Bulletin de météorologie spatiale - 2013-08-31 diffusé à 18:32 TU (13:32 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-08-31 issued at 18:32 UT (13:32 EST) Summary

- There is currently no major storm watch in effect.
- A moderate Earth-directed CME erupted on 30 AUG 2013 02:48 UT and is expected to reach the Earth on 01 SEP 2013, resulting in disturbed geomagnetic activity.
 - See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: normal
- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap, auroral, and sub-auroral zones.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Potential for significant deviations in the polar cap, auroral, and sub-auroral zones.

Detailed Information

Solar

- An Earth-directed CME erupted on 30 AUG 2013 02:48 UT and is expected to reach the Earth on 01 SEP 2013, resulting in disturbed geomagnetic activity.
- A moderate CME was observed on 29 AUG 2013, and is expected to deliver a glancing blow to the Earth on 01 SEP 2013.

Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours 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 sub-auroral 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 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: September-01-13 2:59 PM Subject: Space Weather Bulletin - 2013-09-01 issued at 18:57 UT (13:57 EST) / Bulletin de météorologie spatiale - 2013-09-01 diffusé à 18:57 TU (13:57 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-01 issued at 18:57 UT (13:57 EST) Summary

- There is currently no major storm watch in effect.
- A slow Earth-directed CME erupted on 30 AUG 2013 02:48 UT and is expected to reach the Earth on 01 SEP 2013, resulting in disturbed geomagnetic activity.
 - See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: normal
- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the polar cap, auroral, and sub-auroral zones.
- Aeromagnetic surveys: Potential for significant disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Potential for significant deviations in the polar cap, auroral, and sub-auroral zones.

Detailed Information

Solar

- An Earth-directed CME erupted on 30 AUG 2013 02:48 UT and is expected to reach the Earth on 01 SEP 2013, resulting in disturbed geomagnetic activity.
- A moderate CME was observed on 29 AUG 2013, and is expected to deliver a glancing blow to the Earth on 01 SEP 2013.

Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

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

Sent: September-02-13 3:25 PM

Subject: Space Weather Bulletin - 2013-09-02 issued at 19:24 UT (14:24 EST) / Bulletin de météorologie spatiale - 2013-09-02 diffusé à 19:24 TU (14:24 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-02 issued at 19:24 UT (14:24 EST)

Summary

- There is currently no major storm watch in effect.
- Stormy conditions expected from 01 SEP 2013 to 02 SEP 2013 for the polar cap and sub-auroral zones did not occur.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: moderate
- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the auroral zone.
- Directional Drilling: Potential for deviations 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 low (|Bz| < 5 nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active intervals in the polar zone, active with stormy intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: September-03-13 12:59 PM
Subject: Space Weather Bulletin - 2013-09-03 issued at 16:56 UT (11:56 EST) / Bulletin de météorologie spatiale - 2013-09-03 diffusé à 16:56 TU (11:56 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-03 issued at 16:56 UT (11:56 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.
- The solar wind speed is currently slow (400-500 km/s).

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: September-04-13 2:59 PM Subject: Space Weather Bulletin - 2013-09-04 issued at 18:57 UT (13:57 EST) / Bulletin de météorologie spatiale - 2013-09-04 diffusé à 18:57 TU (13:57 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-04 issued at 18:57 UT (13:57 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral 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 auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: September-05-13 14:40 Subject: Space Weather Bulletin - 2013-09-05 issued at 18:39 UT (13:39 EST) / Bulletin de météorologie spatiale - 2013-09-05 diffusé à 18:39 TU (13:39 HNE)

This is for testing purposes

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-05 issued at 18:39 UT (13:39 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be unsettled with active intervals in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: September-06-13 12:12
Subject: Space Weather Bulletin - 2013-09-06 issued at 16:11 UT (11:11 EST) / Bulletin de météorologie spatiale - 2013-09-06 diffusé à 16:11 TU (11:11 HNE)

Space Weather Bulletin - 2013-09-06 issued at 16:11 UT (11:11 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: September-07-13 13:26 Subject: Space Weather Bulletin - 2013-09-07 issued at 17:24 UT (12:24 EST) / Bulletin de météorologie spatiale - 2013-09-07 diffusé à 17:24 TU (12:24 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-07 issued at 17:24 UT (12:24 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: normal
- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: September-08-13 14:11
Subject: Space Weather Bulletin - 2013-09-08 issued at 18:09 UT (13:09 EST) / Bulletin de météorologie spatiale - 2013-09-08 diffusé à 18:09 TU (13:09 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-08 issued at 18:09 UT (13:09 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz|<5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: September-09-13 15:07
Subject: Space Weather Bulletin - 2013-09-09 issued at 19:06 UT (14:06 EST) / Bulletin de météorologie spatiale - 2013-09-09 diffusé à 19:06 TU (14:06 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-09 issued at 19:06 UT (14:06 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz|<5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: September-10-13 15:09
Subject: Space Weather Bulletin - 2013-09-10 issued at 19:08 UT (14:08 EST) / Bulletin de météorologie spatiale - 2013-09-10 diffusé à 19:08 TU (14:08 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-10 issued at 19:08 UT (14:08 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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.
- A non-Earth-directed CME erupted on 10 SEP 2013 13:39 UT.

Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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 unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: September-11-13 14:00
Subject: Space Weather Bulletin - 2013-09-11 issued at 17:58 UT (12:58 EST) / Bulletin de météorologie spatiale - 2013-09-11 diffusé à 17:58 TU (12:58 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-11 issued at 17:58 UT (12:58 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.
- The solar wind speed is currently slow (400-500 km/s).

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: September-12-13 15:09
Subject: Space Weather Bulletin - 2013-09-12 issued at 19:08 UT (14:08 EST) / Bulletin de météorologie spatiale - 2013-09-12 diffusé à 19:08 TU (14:08 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-12 issued at 19:08 UT (14:08 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been quiet with stormy 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 unsettled with active intervals in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: September-13-13 15:09
Subject: Space Weather Bulletin - 2013-09-13 issued at 19:08 UT (14:08 EST) / Bulletin de météorologie spatiale - 2013-09-13 diffusé à 19:08 TU (14:08 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-13 issued at 19:08 UT (14:08 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: September-14-13 14:06
Subject: Space Weather Bulletin - 2013-09-14 issued at 18:05 UT (13:05 EST) / Bulletin de météorologie spatiale - 2013-09-14 diffusé à 18:05 TU (13:05 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-14 issued at 18:05 UT (13:05 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: September-15-13 14:01
Subject: Space Weather Bulletin - 2013-09-15 issued at 18:00 UT (13:00 EST) / Bulletin de météorologie spatiale - 2013-09-15 diffusé à 18:00 TU (13:00 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-15 issued at 18:00 UT (13:00 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> 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 sub-auroral 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 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: September-16-13 13:33
Subject: Space Weather Bulletin - 2013-09-16 issued at 17:32 UT (12:32 EST) / Bulletin de météorologie spatiale - 2013-09-16 diffusé à 17:32 TU (12:32 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-16 issued at 17:32 UT (12:32 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: September-17-13 13:17
Subject: Space Weather Bulletin - 2013-09-17 issued at 17:16 UT (12:16 EST) / Bulletin de météorologie spatiale - 2013-09-17 diffusé à 17:16 TU (12:16 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-17 issued at 17:16 UT (12:16 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active intervals in the polar zone, unsettled in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: September-18-13 14:09
Subject: Space Weather Bulletin - 2013-09-18 issued at 18:08 UT (13:08 EST) / Bulletin de météorologie spatiale - 2013-09-18 diffusé à 18:08 TU (13:08 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-18 issued at 18:08 UT (13:08 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

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 fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours 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 sub-auroral 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 auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: September-19-13 14:33
Subject: Space Weather Bulletin - 2013-09-19 issued at 18:31 UT (13:31 EST) / Bulletin de météorologie spatiale - 2013-09-19 diffusé à 18:31 TU (13:31 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-19 issued at 18:31 UT (13:31 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 fluctuating at low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: September-20-13 15:52
Subject: Space Weather Bulletin - 2013-09-20 issued at 19:48 UT (14:48 EST) / Bulletin de météorologie spatiale - 2013-09-20 diffusé à 19:48 TU (14:48 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-20 issued at 19:48 UT (14:48 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: September-21-13 15:36
Subject: Space Weather Bulletin - 2013-09-21 issued at 19:35 UT (14:35 EST) / Bulletin de météorologie spatiale - 2013-09-21 diffusé à 19:35 TU (14:35 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-21 issued at 19:35 UT (14:35 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: September-22-13 13:56
Subject: Space Weather Bulletin - 2013-09-22 issued at 17:54 UT (12:54 EST) / Bulletin de météorologie spatiale - 2013-09-22 diffusé à 17:54 TU (12:54 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-22 issued at 17:54 UT (12:54 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: September-23-13 13:31
Subject: Space Weather Bulletin - 2013-09-23 issued at 17:30 UT (12:30 EST) / Bulletin de météorologie spatiale - 2013-09-23 diffusé à 17:30 TU (12:30 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-23 issued at 17:30 UT (12:30 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

- **Possible Impacts on Technology:**
 - 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: September-24-13 14:43
Subject: Space Weather Bulletin - 2013-09-24 issued at 18:24 UT (13:24 EST) / Bulletin de météorologie spatiale - 2013-09-24 diffusé à 18:24 TU (13:24 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-24 issued at 18:24 UT (13:24 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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, unsettled with active intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: September-25-13 14:23
Subject: Space Weather Bulletin - 2013-09-25 issued at 18:21 UT (13:21 EST) / Bulletin de météorologie spatiale - 2013-09-25 diffusé à 18:21 TU (13:21 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-25 issued at 18:21 UT (13:21 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

energetic electron fluence at geostationary orbit: low

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: September-26-13 14:03
Subject: Space Weather Bulletin - 2013-09-26 issued at 18:00 UT (13:00 EST) / Bulletin de météorologie spatiale - 2013-09-26 diffusé à 18:00 TU (13:00 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-26 issued at 18:00 UT (13:00 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: September-27-13 14:32
Subject: Space Weather Bulletin - 2013-09-27 issued at 18:29 UT (13:29 EST) / Bulletin de météorologie spatiale - 2013-09-27 diffusé à 18:29 TU (13:29 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-27 issued at 18:29 UT (13:29 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: September-28-13 13:53
Subject: Space Weather Bulletin - 2013-09-28 issued at 17:47 UT (12:47 EST) / Bulletin de météorologie spatiale - 2013-09-28 diffusé à 17:47 TU (12:47 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-28 issued at 17:47 UT (12:47 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: September-29-13 21:05
Subject: Space Weather Bulletin - 2013-09-30 issued at 00:59 UT (19:59 EST) / Bulletin de météorologie spatiale - 2013-09-30 diffusé à 00:59 TU (19:59 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-30 issued at 00:59 UT (19:59 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (00:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: unavailable

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Data about conditions in the environment at geostationary orbit are currently unavailable.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: September-30-13 14:32
Subject: Space Weather Bulletin - 2013-09-30 issued at 18:28 UT (13:28 EST) / Bulletin de météorologie spatiale - 2013-09-30 diffusé à 18:28 TU (13:28 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-09-30 issued at 18:28 UT (13:28 EST) Summary

- There is currently no major storm watch in effect.
- A polar cap absorption event is currently in progress in the polar cap zone.
- A moderate CME was observed on 29 SEP 2013, and is expected to deliver a glancing blow to the Earth on 2 OCT 2013, resulting in increased geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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
 - auroral zone: quiet
 - sub-auroral zone: quiet

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- A moderate CME was observed on 29 SEP 2013, and is expected to deliver a glancing blow to the Earth on 2 OCT 2013.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: October-01-13 14:28
Subject: Space Weather Bulletin - 2013-10-01 issued at 18:22 UT (13:22 EST) / Bulletin de météorologie spatiale - 2013-10-01 diffusé à 18:22 TU (13:22 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-01 issued at 18:22 UT (13:22 EST) Summary

- There is currently no major storm watch in effect.
- A polar cap absorption event is currently in progress in the polar cap zone.
- A moderate Earth-directed CME erupted on 29 SEP 2013 and is expected to reach the Earth on 2 OCT 2013, resulting in increased geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- 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 zone.
- Directional Drilling: Potential for significant deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: active with stormy intervals
- auroral zone: quiet with stormy intervals
- sub-auroral zone: quiet with stormy intervals

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Potential for deviations in the polar cap, auroral, and sub-auroral zones.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 sub-auroral zone.
- Over the next 24 hours geomagnetic activity is forecast to be active 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 <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: October-02-13 15:30
Subject: Space Weather Bulletin - 2013-10-02 issued at 19:26 UT (14:26 EST) / Bulletin de météorologie spatiale - 2013-10-02 diffusé à 19:26 TU (14:26 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-02 issued at 19:26 UT (14:26 EST) Summary

- There is currently no major storm watch in effect.
- The major storm WATCH issued 02 OCT 2013 06:00 UT for the polar cap, auroral, and sub-auroral zones ended 02 OCT 2013 09:00 UT.
- The polar cap absorption event reported yesterday has ended.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

- polar cap zone: active
- auroral zone: active
- sub-auroral zone: active

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Potential for deviations in the polar cap, auroral, and sub-auroral zones.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: active with stormy intervals
- auroral zone: stormy
- sub-auroral zone: active with stormy intervals

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Potential for deviations in the polar cap, auroral, and sub-auroral zones.
- Power Systems: possibility of weak voltage fluctuations in the auroral zone.

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 a CME observed at 29 SEP 2013 22:12 UT.
- An interplanetary shock has been observed on 02 OCT 2013 01:30 UT.
- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been active with major storm intervals in the polar zone, unsettled with major storm intervals in the auroral zone, and unsettled with major storm 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 <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: October-03-13 14:00
Subject: Space Weather Bulletin - 2013-10-03 issued at 17:53 UT (12:53 EST) / Bulletin de météorologie spatiale - 2013-10-03 diffusé à 17:53 TU (12:53 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-03 issued at 17:53 UT (12:53 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: high

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a high level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: October-04-13 14:09
Subject: Space Weather Bulletin - 2013-10-04 issued at 18:07 UT (13:07 EST) / Bulletin de météorologie spatiale - 2013-10-04 diffusé à 18:07 TU (13:07 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-04 issued at 18:07 UT (13:07 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: October-05-13 14:00
Subject: Space Weather Bulletin - 2013-10-05 issued at 17:54 UT (12:54 EST) / Bulletin de météorologie spatiale - 2013-10-05 diffusé à 17:54 TU (12:54 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-05 issued at 17:54 UT (12:54 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: October-06-13 15:46
Subject: Space Weather Bulletin - 2013-10-06 issued at 19:40 UT (14:40 EST) / Bulletin de météorologie spatiale - 2013-10-06 diffusé à 19:40 TU (14:40 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-06 issued at 19:40 UT (14:40 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: October-07-13 14:10
Subject: Space Weather Bulletin - 2013-10-07 issued at 18:07 UT (13:07 EST) / Bulletin de météorologie spatiale - 2013-10-07 diffusé à 18:07 TU (13:07 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-07 issued at 18:07 UT (13:07 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-08-13 14:14
Subject: Space Weather Bulletin - 2013-10-08 issued at 18:11 UT (13:11 EST) / Bulletin de météorologie spatiale - 2013-10-08 diffusé à 18:11 TU (13:11 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-08 issued at 18:11 UT (13:11 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-09-13 18:03
Subject: Space Weather Bulletin - 2013-10-09 issued at 21:58 UT (16:58 EST) / Bulletin de météorologie spatiale - 2013-10-09 diffusé à 21:58 TU (16:58 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-09 issued at 21:58 UT (16:58 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the auroral zone.
- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Aeromagnetic surveys: Potential for disruptions in the polar cap zone.
- Directional Drilling: Potential for significant deviations in the auroral zone.
- Directional Drilling: Potential for deviations in the polar cap zone.

Detailed Information

Solar

- An M (medium) solar x-ray flare erupted 09 OCT 2013 01:23 UT.
- A moderate CME erupted on 09 OCT 2013 02:12. UT. It is not yet known if the CME will impact the Earth.
- A moderate CME erupted on 08 OCT 2013 09:00 UT. It is not yet known if the CME will impact the Earth.

Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours 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 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 unsettled in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-10-13 17:56
Subject: Space Weather Bulletin - 2013-10-10 issued at 21:18 UT (16:18 EST) / Bulletin de météorologie spatiale - 2013-10-10 diffusé à 21:18 TU (16:18 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-10 issued at 21:18 UT (16:18 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

- Solar activity has been low.
- A moderate CME erupted on 09 OCT 2013 02:12 UT. It is not yet known if the CME will impact the Earth.
- A moderate non-Earth-directed CME erupted on 08 OCT 2013 09:00 UT.

Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at very low (|Bz|<2 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-11-13 17:15
Subject: Space Weather Bulletin - 2013-10-11 issued at 21:09 UT (16:09 EST) / Bulletin de météorologie spatiale - 2013-10-11 diffusé à 21:09 TU (16:09 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-11 issued at 21:09 UT (16:09 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Potential for deviations in the polar cap, auroral, and sub-auroral zones.

Detailed Information

Solar

- Two medium coronal holes are located near the centre of the solar disk.
- An M (medium) solar x-ray flare erupted 11 OCT 2013 07:23 UT.
- A slow CME was observed on 08 OCT 2013 22:00 UT, and is expected to deliver a glancing blow to the Earth on 12 OCT 2013.
- A moderate non-Earth-directed CME erupted on 09 OCT 2013 02:12 UT.

Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at very low (|Bz|<2 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-12-13 14:43
Subject: Space Weather Bulletin - 2013-10-12 issued at 18:38 UT (13:38 EST) / Bulletin de météorologie spatiale - 2013-10-12 diffusé à 18:38 TU (13:38 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-12 issued at 18:38 UT (13:38 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Potential for deviations in the polar cap, auroral, and sub-auroral zones.

Detailed Information

Solar

- Solar activity has been moderate.
- 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-13-13 16:58
Subject: Space Weather Bulletin - 2013-10-13 issued at 20:56 UT (15:56 EST) / Bulletin de météorologie spatiale - 2013-10-13 diffusé à 20:56 TU (15:56 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-13 issued at 20:56 UT (15:56 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been moderate.
- An M (medium) solar x-ray flare erupted 13 OCT 2013 00:12 UT.
- Two small coronal holes are located near the centre of the solar disk.
- A moderate CME was observed on 13 OCT 2013 01:25 UT, and is expected to deliver a glancing blow to the Earth on 16 OCT 2013, 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 very low (|Bz|<2 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-14-13 17:39
Subject: Space Weather Bulletin - 2013-10-14 issued at 21:36 UT (16:36 EST) / Bulletin de météorologie spatiale - 2013-10-14 diffusé à 21:36 TU (16:36 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-14 issued at 21:36 UT (16:36 EST) Summary

- Disturbed geomagnetic conditions due to solar activity are currently observed in the auroral and sub-auroral zones.
- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:15 UT)

Geomagnetic Activity:

- polar cap zone: unsettled
- auroral zone: stormy
- sub-auroral zone: active

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Power Systems: possibility of weak voltage fluctuations in the auroral zone.
- Aeromagnetic surveys: Potential for significant disruptions in the auroral zone.
- Aeromagnetic surveys: Potential for disruptions in the sub-auroral zone.
- Directional Drilling: Potential for significant deviations in the auroral zone.
- Directional Drilling: Potential for deviations in the sub-auroral zone.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Potential for deviations in the polar cap, auroral, and sub-auroral zones.

Detailed Information

Solar

• Solar activity has been very low.

Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been primarily negative at low (|Bz| < 5 nT) levels.
- Prolonged periods of negative interplanetary magnetic field are often associated with increased geomagnetic activity.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-15-13 16:12
Subject: Space Weather Bulletin - 2013-10-15 issued at 20:09 UT (15:09 EST) / Bulletin de météorologie spatiale - 2013-10-15 diffusé à 20:09 TU (15:09 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-15 issued at 20:09 UT (15:09 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap, auroral, and sub-auroral zones.
- Directional Drilling: Potential for deviations in the polar cap, auroral, and sub-auroral zones.

Detailed Information

Solar

- Solar activity has been low.
- An M (medium) solar x-ray flare erupted 2013 OCT 15 08:00 UT.

Interplanetary

- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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, active in the auroral zone, and unsettled with active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-16-13 16:03
Subject: Space Weather Bulletin - 2013-10-16 issued at 19:59 UT (14:59 EST) / Bulletin de météorologie spatiale - 2013-10-16 diffusé à 19:59 TU (14:59 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-16 issued at 19:59 UT (14:59 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

- Solar activity has been low.
- Two 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 very low (|Bz| < 2 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 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 in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-17-13 14:40
Subject: Space Weather Bulletin - 2013-10-17 issued at 18:36 UT (13:36 EST) / Bulletin de météorologie spatiale - 2013-10-17 diffusé à 18:36 TU (13:36 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-17 issued at 18:36 UT (13:36 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the auroral zone.
- Directional Drilling: Potential for deviations in the auroral zone.

Detailed Information

Solar

- Solar activity has been low.
- An M (medium) solar x-ray flare erupted 17 OCT 2013 15:30 UT.

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.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours 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 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 <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-18-13 12:59
Subject: Space Weather Bulletin - 2013-10-18 issued at 16:58 UT (11:58 EST) / Bulletin de météorologie spatiale - 2013-10-18 diffusé à 16:58 TU (11:58 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-18 issued at 16:58 UT (11:58 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz|<2 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-19-13 13:43
Subject: Space Weather Bulletin - 2013-10-19 issued at 17:41 UT (12:41 EST) / Bulletin de météorologie spatiale - 2013-10-19 diffusé à 17:41 TU (12:41 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-19 issued at 17:41 UT (12:41 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz|<2 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-20-13 12:13
Subject: Space Weather Bulletin - 2013-10-20 issued at 16:10 UT (11:10 EST) / Bulletin de météorologie spatiale - 2013-10-20 diffusé à 16:10 TU (11:10 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-20 issued at 16:10 UT (11:10 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (16:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz|<2 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: October-21-13 13:59
Subject: Space Weather Bulletin - 2013-10-21 issued at 17:53 UT (12:53 EST) / Bulletin de météorologie spatiale - 2013-10-21 diffusé à 17:53 TU (12:53 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-21 issued at 17:53 UT (12:53 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz|<5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: October-22-13 15:56
Subject: Space Weather Bulletin - 2013-10-22 issued at 19:55 UT (14:55 EST) / Bulletin de météorologie spatiale - 2013-10-22 diffusé à 19:55 TU (14:55 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-22 issued at 19:55 UT (14:55 EST)

Summary

- There is currently no major storm watch in effect.
- A slow Earth-directed CME has erupted over the past 24 hours.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 UT)

Geomagnetic Activity:

- polar cap zone: unsettled
- auroral zone: quiet
- sub-auroral zone: quiet
- Environment at Geostationary orbit:
 - energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

24 Hour Forecast

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

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: normal
- **Possible Impacts on Technology:**
 - Impacts are not expected.

Detailed Information

Solar

• The active region located near the central region of the solar disk has produced a solar x-ray flare and an associated CME and has the potential to produce subsequent solar eruptions.

Interplanetary

• Interplanetary activity has been moderate.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: October-23-13 16:06
Subject: Space Weather Bulletin - 2013-10-23 issued at 20:04 UT (15:04 EST) / Bulletin de météorologie spatiale - 2013-10-23 diffusé à 20:04 TU (15:04 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-23 issued at 20:04 UT (15:04 EST)

Summary

- There is currently no major storm watch in effect.
- A slow Earth-directed CME has erupted over the past 24 hours.
- A medium solar x-ray flare has erupted over the past 24 hours.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: normal
- Possible Impacts on Technology:
 - Impacts are not expected.

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 flares and associated CMEs and has the potential to produce subsequent solar eruptions.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a moderate level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: October-24-13 16:26
Subject: Space Weather Bulletin - 2013-10-24 issued at 20:23 UT (15:23 EST) / Bulletin de météorologie spatiale - 2013-10-24 diffusé à 20:23 TU (15:23 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-24 issued at 20:23 UT (15:23 EST)

Summary

- There is currently no major storm watch in effect.
- A slow Earth-directed CME has erupted over the past 24 hours.
- Two medium solar x-ray flares have erupted over the past 24 hours.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap and auroral zones.
- Directional Drilling: Potential for deviations in the polar cap and auroral zones.

Detailed Information

Solar

- Solar activity has been moderate.
- A slow Earth-directed CME erupted on 24 OCT 2013 02:00 UT.
- Two medium solar x-ray flares have erupted over the past 24 hours.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: October-25-13 17:00
Subject: Space Weather Bulletin - 2013-10-25 issued at 20:58 UT (15:58 EST) / Bulletin de météorologie spatiale - 2013-10-25 diffusé à 20:58 TU (15:58 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-25 issued at 20:58 UT (15:58 EST) Summary

- There is currently no major storm watch in effect.
- Several medium to large solar x-ray flares have erupted over the past 24 hours.
- CMEs may be associated with these flares.
- A slow CME was observed on 22 Oct 2013, and is expected to deliver a glancing blow to the Earth on 26 Oct 2013, resulting in increased geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap and auroral zones.
- Directional Drilling: Potential for deviations in the polar cap and auroral zones.

Detailed Information

Solar

- There are several active regions visible on the solar disk.
- Several medium to large solar x-ray flares have erupted over the past 24 hours.
- A slow CME was observed on 22 Oct 2013, and is expected to deliver a glancing blow to the Earth on 26 Oct 2013, resulting in increased geomagnetic activity.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: October-26-13 18:51
Subject: Space Weather Bulletin - 2013-10-26 issued at 22:49 UT (17:49 EST) / Bulletin de météorologie spatiale - 2013-10-26 diffusé à 22:49 TU (17:49 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-26 issued at 22:49 UT (17:49 EST) Summary

- There is currently no major storm watch in effect.
- Several CMEs were observed on 25 OCT 2013, and are expected to deliver a glancing blow to the Earth on 28 OCT 2013, resulting in disturbed geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

- polar cap zone: active with stormy intervals
- auroral zone: active with stormy intervals
- sub-auroral zone: active with stormy intervals

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap and auroral zones.
- Directional Drilling: Potential for deviations in the polar cap and auroral zones.

Detailed Information

Solar

• Solar activity has been high.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active with stormy intervals in the polar zone, active with stormy intervals in the auroral zone, and active with stormy intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: October-27-13 18:25
Subject: Space Weather Bulletin - 2013-10-27 issued at 22:23 UT (17:23 EST) / Bulletin de météorologie spatiale - 2013-10-27 diffusé à 22:23 TU (17:23 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-27 issued at 22:23 UT (17:23 EST) Summary

- There is currently no major storm watch in effect.
- Several CMEs were observed on 25 OCT 2013, and are expected to deliver a glancing blow to the Earth on 28 Oct 2013, resulting in increased geomagnetic activity.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the polar cap and auroral zones.
- Directional Drilling: Potential for deviations in the polar cap and auroral zones.

Detailed Information

Solar

- Solar activity has been moderate.
- Several medium solar x-ray flares have erupted over the past 24 hours.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: October-28-13 17:47
Subject: Space Weather Bulletin - 2013-10-28 issued at 21:45 UT (16:45 EST) / Bulletin de météorologie spatiale - 2013-10-28 diffusé à 21:45 TU (16:45 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-28 issued at 21:45 UT (16:45 EST)

Summary

- 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: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: normal
- **Possible Impacts on Technology:**
 - Impacts are not expected.

Detailed Information

Solar

- Solar activity has been moderate.
- There are several active regions visible on the solar disk.
- Several medium solar x-ray flares have erupted over the past 24 hours.

Interplanetary

- Interplanetary activity has been low.
- A solar energetic proton event started on 28 OCT 2013 09:00 UT. Current levels are moderate.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: October-29-13 17:10
Subject: Space Weather Bulletin - 2013-10-29 issued at 21:09 UT (16:09 EST) / Bulletin de météorologie spatiale - 2013-10-29 diffusé à 21:09 TU (16:09 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-29 issued at 21:09 UT (16:09 EST) Summary

- 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: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: normal
- **Possible Impacts on Technology:**
 - Impacts are not expected.

Detailed Information

Solar

• Solar activity has been moderate.

Interplanetary

• Interplanetary activity has been moderate.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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, quiet with unsettled intervals in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: October-30-13 15:32
Subject: Space Weather Bulletin - 2013-10-30 issued at 19:30 UT (14:30 EST) / Bulletin de météorologie spatiale - 2013-10-30 diffusé à 19:30 TU (14:30 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-30 issued at 19:30 UT (14:30 EST) Summary

- There is currently no major storm watch in effect.
- Several medium to large solar x-ray flares have erupted over the past 24 hours.
- CMEs may be associated with these flares.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

- polar cap zone: unsettled
- auroral zone: quiet
- sub-auroral zone: quiet
- **Environment at Geostationary orbit:**
 - energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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: quiet with active intervals

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: normal
- **Possible Impacts on Technology:**
 - Impacts are not expected.

Detailed Information

Solar

- Solar activity has been moderate.
- There are several active regions visible on the solar disk.

Interplanetary

• Interplanetary activity has been moderate.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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, unsettled with active intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: October-31-13 17:31
Subject: Space Weather Bulletin - 2013-10-31 issued at 21:30 UT (16:30 EST) / Bulletin de météorologie spatiale - 2013-10-31 diffusé à 21:30 TU (16:30 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-10-31 issued at 21:30 UT (16:30 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been moderate.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: November-01-13 17:05 Subject: Space Weather Bulletin - 2013-11-01 issued at 21:04 UT (16:04 EST) / Bulletin de météorologie spatiale - 2013-11-01 diffusé à 21:04 TU (16:04 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-01 issued at 21:04 UT (16:04 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been moderate.
- Two medium to large solar x-ray flares have erupted over the past 24 hours.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: November-02-13 17:23
Subject: Space Weather Bulletin - 2013-11-02 issued at 21:22 UT (16:22 EST) / Bulletin de météorologie spatiale - 2013-11-02 diffusé à 21:22 TU (16:22 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-02 issued at 21:22 UT (16:22 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been moderate.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.

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

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: November-03-13 20:00
Subject: Space Weather Bulletin - 2013-11-04 issued at 00:58 UT (19:58 EST) / Bulletin de météorologie spatiale - 2013-11-04 diffusé à 00:58 TU (19:58 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-04 issued at 00:58 UT (19:58 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (00:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: unavailable

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Two medium solar x-ray flares have erupted over the past 24 hours.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Data about conditions in the environment at geostationary orbit are currently unavailable.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca] Sent: November-04-13 16:24 Subject: Space Weather Bulletin - 2013-11-04 issued at 21:23 UT (16:23 EST) / Bulletin de météorologie spatiale - 2013-11-04 diffusé à 21:23 TU (16:23 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-04 issued at 21:23 UT (16:23 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-05-13 15:03
Subject: Space Weather Bulletin - 2013-11-05 issued at 19:56 UT (14:56 EST) / Bulletin de météorologie spatiale - 2013-11-05 diffusé à 19:56 TU (14:56 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-05 issued at 19:56 UT (14:56 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- The active region located near the west limb of the solar disk has produced solar x-ray flares and an associated CME and has the potential to produce subsequent solar eruptions.
- A non-Earth-directed CME erupted on 05 NOV 2013 08:24 UT.

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.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-06-13 14:42
Subject: Space Weather Bulletin - 2013-11-06 issued at 19:40 UT (14:40 EST) / Bulletin de météorologie spatiale - 2013-11-06 diffusé à 19:40 TU (14:40 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-06 issued at 19:40 UT (14:40 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been high.
- A moderate non-Earth-directed CME erupted on 06 NOV 2013 22:12 UT.

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.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-07-13 16:27
Subject: Space Weather Bulletin - 2013-11-07 issued at 21:26 UT (16:26 EST) / Bulletin de météorologie spatiale - 2013-11-07 diffusé à 21:26 TU (16:26 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-07 issued at 21:26 UT (16:26 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- The active region located near the central region of the solar disk has produced solar x-ray flares and an associated CME and has the potential to produce subsequent solar eruptions.
- One small coronal hole is located near the centre of the solar disk.
- Two non-Earth-directed CMEs erupted on 07 NOV 2013 at 00:00 UT and 10:24 UT.

Interplanetary

- The solar wind speed is currently very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at high (|Bz|<20 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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, active in the auroral zone, and quiet with active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-08-13 16:47
Subject: Space Weather Bulletin - 2013-11-08 issued at 21:46 UT (16:46 EST) / Bulletin de météorologie spatiale - 2013-11-08 diffusé à 21:46 TU (16:46 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-08 issued at 21:46 UT (16:46 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

- The active region located near the central region of the solar disk has produced solar x-ray flares and associated CMEs and has the potential to produce subsequent solar eruptions.
- A slow CME was observed on 07 NOV 2013, and is expected to deliver a glancing blow to the Earth on 10 NOV 2013.
- A slow CME was observed on 08 NOV 2013, and is expected to deliver a glancing blow to the Earth on 12 NOV 2013, resulting in disturbed geomagnetic activity.

Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-09-13 15:47
Subject: Space Weather Bulletin - 2013-11-09 issued at 20:45 UT (15:45 EST) / Bulletin de météorologie spatiale - 2013-11-09 diffusé à 20:45 TU (15:45 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-09 issued at 20:45 UT (15:45 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• The active region located near the central region of the solar disk has produced solar x-ray flares and associated CMEs and has the potential to produce subsequent solar eruptions.

Interplanetary

- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.
- The solar wind speed is currently moderate (500-700 km/s).
- Moderate solar wind speeds are due to high speed streams from coronal holes.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been quiet with active 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, active with stormy intervals in the auroral zone, and unsettled with active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-10-13 18:54
Subject: Space Weather Bulletin - 2013-11-10 issued at 23:53 UT (18:53 EST) / Bulletin de météorologie spatiale - 2013-11-10 diffusé à 23:53 TU (18:53 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-10 issued at 23:53 UT (18:53 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (23:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

• A moderate CME was observed on 10 NOV 2013, and is expected to deliver a glancing blow to the Earth on 13 NOV 2013, resulting in disturbed geomagnetic activity.

Interplanetary

- The solar wind speed has been decreasing over the last 24 hours (currently ~ 500 km/s).
- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a moderate level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: November-11-13 17:36 Subject: Space Weather Bulletin - 2013-11-11 issued at 22:35 UT (17:35 EST) / Bulletin de météorologie spatiale - 2013-11-11 diffusé à 22:35 TU (17:35 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-11 issued at 22:35 UT (17:35 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

- Geomagnetic Activity:
 - polar cap zone: quiet with unsettled intervals
 - auroral zone: active
 - sub-auroral zone: quiet with unsettled intervals

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• A moderate CME was observed on 10 NOV 2013, and is expected to deliver a glancing blow to the Earth on 13 NOV 2013, resulting in disturbed geomagnetic activity.

Interplanetary

- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours geomagnetic activity has been unsettled in the polar zone, active with stormy intervals in the auroral zone, and unsettled 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, active in the auroral zone, and quiet with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-12-13 16:09
Subject: Space Weather Bulletin - 2013-11-12 issued at 21:08 UT (16:08 EST) / Bulletin de météorologie spatiale - 2013-11-12 diffusé à 21:08 TU (16:08 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-12 issued at 21:08 UT (16:08 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: moderate

Possible Impacts on Technology:

• Geostationary satellites: moderate risk of internal charging.

Detailed Information

Solar

• A slow CME was observed on 10 NOV 2013, and is expected to deliver a glancing blow to the Earth on 13 NOV 2013, resulting in disturbed geomagnetic activity.

Interplanetary

- The solar wind speed is currently slow (400-500 km/s).
- The interplanetary magnetic field has been fluctuating at low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a moderate level tomorrow.

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

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-13-13 17:03
Subject: Space Weather Bulletin - 2013-11-13 issued at 21:59 UT (16:59 EST) / Bulletin de météorologie spatiale - 2013-11-13 diffusé à 21:59 TU (16:59 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-13 issued at 21:59 UT (16:59 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been moderate.
- One medium coronal hole elongated in longitude 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 (|Bz| < 5 nT) levels.
- An interplanetary shock has been observed on 13 NOV 2013 18:10 UT.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-14-13 20:51
Subject: Space Weather Bulletin - 2013-11-15 issued at 01:49 UT (20:49 EST) / Bulletin de météorologie spatiale - 2013-11-15 diffusé à 01:49 TU (20:49 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-15 issued at 01:49 UT (20:49 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (01:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• One medium coronal hole elongated in longitude 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-15-13 13:29
Subject: Space Weather Bulletin - 2013-11-15 issued at 18:27 UT (13:27 EST) / Bulletin de météorologie spatiale - 2013-11-15 diffusé à 18:27 TU (13:27 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-15 issued at 18:27 UT (13:27 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 (|Bz|<5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-16-13 17:20
Subject: Space Weather Bulletin - 2013-11-16 issued at 22:19 UT (17:19 EST) / Bulletin de météorologie spatiale - 2013-11-16 diffusé à 22:19 TU (17:19 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-16 issued at 22:19 UT (17:19 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been moderate.

Interplanetary

- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at moderate (|Bz|<10 nT) levels.
- Moderate solar wind speeds are due to high speed streams from coronal holes.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca]
Sent: November-17-13 14:30
Subject: Space Weather Bulletin - 2013-11-17 issued at 19:28 UT (14:28 EST) / Bulletin de météorologie spatiale - 2013-11-17 diffusé à 19:28 TU (14:28 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-17 issued at 19:28 UT (14:28 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

- The solar wind speed is currently moderate (500-700 km/s).
- The interplanetary magnetic field has been fluctuating at low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 in the polar zone, quiet with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: McKee, Lorne [mailto:Lorne.McKee@NRCan-RNCan.gc.ca] Sent: November-18-13 15:06 Subject: Space Weather Bulletin - 2013-11-18 issued at 20:05 UT (15:05 EST) / Bulletin de météorologie spatiale - 2013-11-18 diffusé à 20:05 TU (15:05 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-18 issued at 20:05 UT (15:05 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz|<5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-19-13 15:51
Subject: Space Weather Bulletin - 2013-11-19 issued at 20:48 UT (15:48 EST) / Bulletin de météorologie spatiale - 2013-11-19 diffusé à 20:48 TU (15:48 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-19 issued at 20:48 UT (15:48 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been moderate.
- A moderate non-Earth-directed CME erupted on 19 Nov 2013 10:22 UT.
- An X (large) solar x-ray flare erupted 19 Nov 2013 10:22 UT near the edge of the solar disk.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-20-13 14:42
Subject: Space Weather Bulletin - 2013-11-20 issued at 19:40 UT (14:40 EST) / Bulletin de météorologie spatiale - 2013-11-20 diffusé à 19:40 TU (14:40 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-20 issued at 19:40 UT (14:40 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been moderate.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-21-13 13:52
Subject: Space Weather Bulletin - 2013-11-21 issued at 18:51 UT (13:51 EST) / Bulletin de météorologie spatiale - 2013-11-21 diffusé à 18:51 TU (13:51 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-21 issued at 18:51 UT (13:51 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-22-13 15:52
Subject: Space Weather Bulletin - 2013-11-22 issued at 19:00 UT (14:00 EST) / Bulletin de météorologie spatiale - 2013-11-22 diffusé à 19:00 TU (14:00 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-22 issued at 19:00 UT (14:00 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-23-13 14:07
Subject: Space Weather Bulletin - 2013-11-23 issued at 19:06 UT (14:06 EST) / Bulletin de météorologie spatiale - 2013-11-23 diffusé à 19:06 TU (14:06 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-23 issued at 19:06 UT (14:06 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-24-13 13:29
Subject: Space Weather Bulletin - 2013-11-24 issued at 18:28 UT (13:28 EST) / Bulletin de météorologie spatiale - 2013-11-24 diffusé à 18:28 TU (13:28 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-24 issued at 18:28 UT (13:28 EST) Summary

There is summently no r

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-25-13 13:40
Subject: Space Weather Bulletin - 2013-11-25 issued at 18:39 UT (13:39 EST) / Bulletin de météorologie spatiale - 2013-11-25 diffusé à 18:39 TU (13:39 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-25 issued at 18:39 UT (13:39 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-26-13 14:03
Subject: Space Weather Bulletin - 2013-11-26 issued at 19:01 UT (14:01 EST) / Bulletin de météorologie spatiale - 2013-11-26 diffusé à 19:01 TU (14:01 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-26 issued at 19:01 UT (14:01 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

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

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-27-13 14:50
Subject: Space Weather Bulletin - 2013-11-27 issued at 19:49 UT (14:49 EST) / Bulletin de météorologie spatiale - 2013-11-27 diffusé à 19:49 TU (14:49 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-27 issued at 19:49 UT (14:49 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been moderate.
- A slow CME was observed on 27 Nov 2013, and is expected to deliver a glancing blow to the Earth on 30 Nov 2013, resulting in increased geomagnetic activity.
- One small 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 fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-28-13 14:40
Subject: Space Weather Bulletin - 2013-11-28 issued at 19:26 UT (14:26 EST) / Bulletin de météorologie spatiale - 2013-11-28 diffusé à 19:26 TU (14:26 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-28 issued at 19:26 UT (14:26 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-29-13 13:20
Subject: Space Weather Bulletin - 2013-11-29 issued at 18:19 UT (13:19 EST) / Bulletin de météorologie spatiale - 2013-11-29 diffusé à 18:19 TU (13:19 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-29 issued at 18:19 UT (13:19 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- Three small coronal holes are 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 fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: November-30-13 12:34
Subject: Space Weather Bulletin - 2013-11-30 issued at 17:33 UT (12:33 EST) / Bulletin de météorologie spatiale - 2013-11-30 diffusé à 17:33 TU (12:33 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-11-30 issued at 17:33 UT (12:33 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (17:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- Possible Impacts on Technology:
 - 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: December-01-13 13:53
Subject: Space Weather Bulletin - 2013-12-01 issued at 18:51 UT (13:51 EST) / Bulletin de météorologie spatiale - 2013-12-01 diffusé à 18:51 TU (13:51 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-01 issued at 18:51 UT (13:51 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- Possible Impacts on Technology:
 - 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Danskin, Donald [mailto:Donald.Danskin@NRCan-RNCan.gc.ca]
Sent: December-02-13 13:29
Subject: Space Weather Bulletin - 2013-12-02 issued at 18:28 UT (13:28 EST) / Bulletin de météorologie spatiale - 2013-12-02 diffusé à 18:28 TU (13:28 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-02 issued at 18:28 UT (13:28 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 fluctuating at moderate (|Bz|<10 nT) levels.

Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.

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

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-03-13 14:37
Subject: Space Weather Bulletin - 2013-12-03 issued at 19:33 UT (14:33 EST) / Bulletin de météorologie spatiale - 2013-12-03 diffusé à 19:33 TU (14:33 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-03 issued at 19:33 UT (14:33 EST) 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 (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: normal
- **Possible Impacts on Technology:**
 - 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-04-13 13:54
Subject: Space Weather Bulletin - 2013-12-04 issued at 18:51 UT (13:51 EST) / Bulletin de météorologie spatiale - 2013-12-04 diffusé à 18:51 TU (13:51 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-04 issued at 18:51 UT (13:51 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-05-13 13:55
Subject: Space Weather Bulletin - 2013-12-05 issued at 18:52 UT (13:52 EST) / Bulletin de météorologie spatiale - 2013-12-05 diffusé à 18:52 TU (13:52 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-05 issued at 18:52 UT (13:52 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-06-13 14:30
Subject: Space Weather Bulletin - 2013-12-06 issued at 19:28 UT (14:28 EST) / Bulletin de météorologie spatiale - 2013-12-06 diffusé à 19:28 TU (14:28 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-06 issued at 19:28 UT (14:28 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

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

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-07-13 16:27
Subject: Space Weather Bulletin - 2013-12-07 issued at 21:22 UT (16:22 EST) / Bulletin de météorologie spatiale - 2013-12-07 diffusé à 21:22 TU (16:22 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-07 issued at 21:22 UT (16:22 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

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

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-08-13 14:27
Subject: Space Weather Bulletin - 2013-12-08 issued at 19:19 UT (14:19 EST) / Bulletin de météorologie spatiale - 2013-12-08 diffusé à 19:19 TU (14:19 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-08 issued at 19:19 UT (14:19 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

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

Interplanetary

• Interplanetary activity has been moderate.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- Over the last 24 hours 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 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 with unsettled intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-09-13 14:45
Subject: Space Weather Bulletin - 2013-12-09 issued at 19:40 UT (14:40 EST) / Bulletin de météorologie spatiale - 2013-12-09 diffusé à 19:40 TU (14:40 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-09 issued at 19:40 UT (14:40 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

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

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-10-13 14:43
Subject: Space Weather Bulletin - 2013-12-10 issued at 19:40 UT (14:40 EST) / Bulletin de météorologie spatiale - 2013-12-10 diffusé à 19:40 TU (14:40 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-10 issued at 19:40 UT (14:40 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 with unsettled intervals in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-11-13 15:47
Subject: Space Weather Bulletin - 2013-12-11 issued at 20:45 UT (15:45 EST) / Bulletin de météorologie spatiale - 2013-12-11 diffusé à 20:45 TU (15:45 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-11 issued at 20:45 UT (15:45 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-12-13 14:56
Subject: Space Weather Bulletin - 2013-12-12 issued at 19:54 UT (14:54 EST) / Bulletin de météorologie spatiale - 2013-12-12 diffusé à 19:54 TU (14:54 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-12 issued at 19:54 UT (14:54 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-13-13 14:08
Subject: Space Weather Bulletin - 2013-12-13 issued at 19:05 UT (14:05 EST) / Bulletin de météorologie spatiale - 2013-12-13 diffusé à 19:05 TU (14:05 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-13 issued at 19:05 UT (14:05 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.
- A CME was observed on 12 DEC 2013, and is expected to deliver a glancing blow to the Earth on 15 DEC 2013, resulting in increased geomagnetic activity.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-14-13 14:25
Subject: Space Weather Bulletin - 2013-12-14 issued at 19:20 UT (14:20 EST) / Bulletin de météorologie spatiale - 2013-12-14 diffusé à 19:20 TU (14:20 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-14 issued at 19:20 UT (14:20 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

- Aeromagnetic surveys: Potential for disruptions in the auroral zone.
- Directional Drilling: Potential for deviations 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 with active intervals

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- One coronal hole is located near the centre of the solar disk.
- A CME was observed on 12 DEC 2013, and is expected to deliver a glancing blow to the Earth on 15 DEC 2013, resulting in increased geomagnetic activity.

Interplanetary

• Interplanetary activity has been moderate.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 active 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, unsettled with active intervals in the auroral zone, and quiet with active intervals in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-15-13 16:50
Subject: Space Weather Bulletin - 2013-12-15 issued at 21:47 UT (16:47 EST) / Bulletin de météorologie spatiale - 2013-12-15 diffusé à 21:47 TU (16:47 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-15 issued at 21:47 UT (16:47 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (21:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

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

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Lam, Hing-Lan [mailto:Hing-Lan.Lam@NRCan-RNCan.gc.ca]
Sent: December-16-13 14:38
Subject: Space Weather Bulletin - 2013-12-16 issued at 19:35 UT (14:35 EST) / Bulletin de météorologie spatiale - 2013-12-16 diffusé à 19:35 TU (14:35 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-16 issued at 19:35 UT (14:35 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

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

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-17-13 13:54
Subject: Space Weather Bulletin - 2013-12-17 issued at 18:35 UT (13:35 EST) / Bulletin de météorologie spatiale - 2013-12-17 diffusé à 18:35 TU (13:35 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-17 issued at 18:35 UT (13:35 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: unavailable

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-18-13 14:11
Subject: Space Weather Bulletin - 2013-12-18 issued at 19:09 UT (14:09 EST) / Bulletin de météorologie spatiale - 2013-12-18 diffusé à 19:09 TU (14:09 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-18 issued at 19:09 UT (14:09 EST) Summary

• There is currently no major stor

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit for 17 DEC 2013 is unavailable but is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-19-13 13:36
Subject: Space Weather Bulletin - 2013-12-19 issued at 18:34 UT (13:34 EST) / Bulletin de météorologie spatiale - 2013-12-19 diffusé à 18:34 TU (13:34 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-19 issued at 18:34 UT (13:34 EST) 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-20-13 14:39
Subject: Space Weather Bulletin - 2013-12-20 issued at 19:33 UT (14:33 EST) / Bulletin de météorologie spatiale - 2013-12-20 diffusé à 19:33 TU (14:33 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-20 issued at 19:33 UT (14:33 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (19:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-21-13 18:59
Subject: Space Weather Bulletin - 2013-12-21 issued at 23:57 UT (18:57 EST) / Bulletin de météorologie spatiale - 2013-12-21 diffusé à 23:57 TU (18:57 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-21 issued at 23:57 UT (18:57 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (23:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

• Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.

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

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-22-13 15:47
Subject: Space Weather Bulletin - 2013-12-22 issued at 20:45 UT (15:45 EST) / Bulletin de météorologie spatiale - 2013-12-22 diffusé à 20:45 TU (15:45 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-22 issued at 20:45 UT (15:45 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:30 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- Two medium coronal holes are located near the centre of the solar disk.
- Several medium solar x-ray flares have erupted over the past 24 hours.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-23-13 13:35
Subject: Space Weather Bulletin - 2013-12-23 issued at 18:23 UT (13:23 EST) / Bulletin de météorologie spatiale - 2013-12-23 diffusé à 18:23 TU (13:23 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-23 issued at 18:23 UT (13:23 EST) 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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- Several medium solar x-ray flares have erupted over the past 24 hours.
- One medium coronal hole is located near the centre of the solar disk.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-24-13 15:24
Subject: Space Weather Bulletin - 2013-12-24 issued at 20:23 UT (15:23 EST) / Bulletin de météorologie spatiale - 2013-12-24 diffusé à 20:23 TU (15:23 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-24 issued at 20:23 UT (15:23 EST) 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 (20:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-25-13 15:22
Subject: Space Weather Bulletin - 2013-12-25 issued at 20:20 UT (15:20 EST) / Bulletin de météorologie spatiale - 2013-12-25 diffusé à 20:20 TU (15:20 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-25 issued at 20:20 UT (15:20 EST) Summary

ummary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-26-13 15:33
Subject: Space Weather Bulletin - 2013-12-26 issued at 20:31 UT (15:31 EST) / Bulletin de météorologie spatiale - 2013-12-26 diffusé à 20:31 TU (15:31 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-26 issued at 20:31 UT (15:31 EST) Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

Possible Impacts on Technology:

• Impacts are not expected.

24 Hour Forecast

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-27-13 15:35
Subject: Space Weather Bulletin - 2013-12-27 issued at 20:33 UT (15:33 EST) / Bulletin de météorologie spatiale - 2013-12-27 diffusé à 20:33 TU (15:33 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-27 issued at 20:33 UT (15:33 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-28-13 17:21
Subject: Space Weather Bulletin - 2013-12-28 issued at 22:19 UT (17:19 EST) / Bulletin de météorologie spatiale - 2013-12-28 diffusé à 22:19 TU (17:19 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-28 issued at 22:19 UT (17:19 EST) Summary

- There is currently no major
- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (22:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

Detailed Information

Solar

• Solar activity has been low.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-29-13 15:24
Subject: Space Weather Bulletin - 2013-12-29 issued at 20:22 UT (15:22 EST) / Bulletin de météorologie spatiale - 2013-12-29 diffusé à 20:22 TU (15:22 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-29 issued at 20:22 UT (15:22 EST)

Summary

- There is currently no major storm watch in effect.
- A polar cap absorption event is possible.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (20:00 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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
 - auroral zone: quiet
 - sub-auroral zone: quiet

Environment at Geostationary orbit:

- energetic electron fluence at geostationary orbit: normal
- **Possible Impacts on Technology:**
 - Impacts are not expected.

Detailed Information

Solar

- Solar activity has been low.
- An M (medium) solar x-ray flare erupted 29 Dec 07:50 UT near the centre of the solar disk.
- Two small coronal holes are located near the centre of the solar disk.

Interplanetary

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Trichtchenko, Larisa [mailto:Larisa.Trichtchenko@NRCan-RNCan.gc.ca]
Sent: December-30-13 13:33
Subject: Space Weather Bulletin - 2013-12-30 issued at 18:31 UT (13:31 EST) / Bulletin de météorologie spatiale - 2013-12-30 diffusé à 18:31 TU (13:31 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-30 issued at 18:31 UT (13:31 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:15 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- **Possible Impacts on Technology:**
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• 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

• Interplanetary activity has been low.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a normal level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

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

From: Nikolic, Ljubomir [mailto:Ljubomir.Nikolic@NRCan-RNCan.gc.ca]
Sent: December-31-13 14:10
Subject: Space Weather Bulletin - 2013-12-31 issued at 19:07 UT (14:07 EST) / Bulletin de météorologie spatiale - 2013-12-31 diffusé à 19:07 TU (14:07 HNE)

La version française du bulletin suit.

Space Weather Bulletin - 2013-12-31 issued at 19:07 UT (14:07 EST)

Summary

- There is currently no major storm watch in effect.
- See our website for current information: <u>http://www.spaceweather.gc.ca</u> (updated every 15 minutes)

Current Conditions (18:45 UT)

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: low

- Possible Impacts on Technology:
 - Impacts are not expected.

24 Hour Forecast

Geomagnetic Activity:

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

Environment at Geostationary orbit:

• energetic electron fluence at geostationary orbit: normal

Possible Impacts on Technology:

• Impacts are not expected.

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 very slow (< 400 km/s).
- The interplanetary magnetic field has been fluctuating at low (|Bz| < 5 nT) levels.

Environment at Geostationary orbit

- Energetic electron fluence at geostationary orbit was at a low level yesterday and is expected to be at a normal level tomorrow.
- Visit <u>http://www.spaceweather.gc.ca/sffl-eng.php</u> for the electron forecast.

- 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 in the polar zone, quiet in the auroral zone, and quiet in the sub-auroral zone.
- Visit <u>http://www.spaceweather.gc.ca/sfst-1-eng.php</u> for the magnetic forecast.