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Real-time auroral and solar activity

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Solar activity report

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Report of Solar-Geophysical Activity 2001 Apr 15 2200 UTC

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Joint USAF/NOAA Report of Solar and Geophysical Activity

SDF Number 105 Issued at 2200Z on 15 Apr 2001

IA. Analysis of Solar Active Regions and Activity from 14-2100Z to 15-2100Z

Solar activity was high. Region 9415 (S12W87) produced an X14/2b flare at 15/1350 UTC. This event had an associated Type II, with a speed of 1000 km/s, and Type IV radio sweeps. It was also accompanied by a tenflare of 48000 sfu. A 12 degree filament located at S23W02 disappeared between 14/2054 UTC and 15/1135 UTC.

IB. Solar Activity Forecast

Solar activity is expected to be low to moderate. Region 9415 is still capable of producing a major flare before it rotates over the western limb.

IIA. Geophysical Activity Summary 14-2100Z to 15-2100Z

The geomagnetic field was unsettled to active. The X-class event described in Part IA produced proton events at greater than 10 and 100 MeV flux at geosynchronous orbit which are still in progress. The greater than 100 MeV crossed event threshold at 15/1405 UTC, and so far have reached a peak flux of 146 pfu at 15/1525 UTC. The greater than 10 MeV crossed event threshold at 15/1410 UTC and has reached a peak flux of 951 pfu at 15/1920 UTC. A ground level event was measured on the Thule riometer at 15/1505 UTC, and a polar cap absorption (PCA) event began at 15/1950 UTC.

IIB. Geophysical Activity Forecast

The geomagnetic field is expected to be quiet to active for April 16 and 17. Active to minor storm conditions are expected on April 18 as a result of the X14 mentioned in Part IA above. Effects from a high speed coronal stream may also be expected on April 18. The greater than 10 MeV proton event is expected to continue for most of the period, and the greater than 100 MeV proton event is expected to go below threshold by sometime on April 16.

III. Event Probabilities 16 Apr to 18 Apr

Class M	80%	70%	60%
Class X	25%	10%	10%
Proton	90%	10%	10%
PCAF	in progress		

IV. Penticton 10.7 cm Flux

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Observed       15 Apr 134
Predicted   16 Apr-18 Apr  145/150/160
ay Mean        15 Apr 166
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VI. Geomagnetic Activity Probabilities 16 Apr to 18 Apr

A. Middle Latitudes

Active	25%	25%	50%
Minor storm	05%	05%	10%
Major-severe storm	01%	01%	05%

B. High Latitudes

Active	30%	35%	60%
Minor storm	10%	10%	15%
Major-severe storm	05%	05%	10%

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The maximum X-ray flux of the past two hours is:

C5.11

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