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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 311A
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1200UT 06 NOV 1980

I. SOLAR ACTIVITY HAS BEEN HIGH THROUGHOUT THE PAST 24 HOURS.
REGION 2779 (S12E70) HAS PRODUCED AN X4/2B FLARE WITH MAXIMUM
AT 05/1355 UT AND AN X9/2B FLARE WITH MAXIMUM AT 06/0352 UT IN
ADDITION TO AN M2/SB AT 05/1106 UT. REGION 2776 (N12W01) HAS
PRODUCED AN M2/1B, AN M4/1B, AN M1/SB AND AN M3/1B AT 05/1640,
2236, 06/0111 AND 0656 UT RESPECTIVE MAXIMUM TIMES. RAPIDLY
GROWING REGION 2782 (S19E32) PRODUCED AN M1/1B WITH MAXIMUM AT
06/0632 UT. ONE WAY OR ANOTHER AN X- OR M-CLASS FLARE
HAS OCCURRED ABOUT ONCE EVERY 3 HOURS FOR THE PAST 24 HOURS.
THE X4 FLARE WAS ACCOMPANIED BY STRONG SHORT WAVE FADES TO
18 MHZ. NO TYPE II OR IV RADIO SPECTRAL EVENTS WERE NOTED
WITH IT. THE ACCOMPANYING 2695 MHZ RADIO BURST ONLY REACHED
250 FLUX UNITS HOWEVER, A CASTELLI U-SHAPE SPECTRUM WAS REPORTED.
THE X9 FLARE WAS ACCOMPANIED BY BOTH TYPE II AND TYPE IV SPECTRAL
EVENTS (BOTH STRONG). 12,000 FLUX UNITS WERE REPORTED AT 15,400
MHZ AS WELL AS 92,000 FLUX UNITS AT 1415 MHZ. THE 2695 MHZ BURST
ACCOMPANYING THIS EVENT WAS 1600 FLUX UNITS. X-RAY BACKGROUND
LEVELS HAVE BEEN AT OR NEAR C8 FOR MOST OF THE PAST 24 HOURS.
IN ADDITION TO THE ABOVE, REGIONS 2780 (S19W81) AND 2772 (N23W32)
HAVE EACH PRODUCED 8 C-CLASS SUBFLARES DURING THE 24 HOUR PERIOD.

II. FURTHER MAJOR FLARES MUST BE ANTICIPATED FROM REGION 2779.
IT IS STILL DIFFICULT TO ACCURATELY ASSESS ITS POTENTIAL DUE TO
ITS POSITION BUT IT HAS MADE NO SECRET OF EITHER ITS CAPACITY OR
ITS INTENTIONS. REGION 2776 IS NOW FLARING MORE FREQUENTLY AND
ENERGETICALLY. IT HAS ALSO DEVELOPED IN COMPLEXITY AND MUST
BE REGARDED AS A GOOD PROSPECT TO PRODUCE AN X-CLASS FLARE AND
PROTONS ANY DAY NOW. IT IS EXPECTED THAT A SMALL PROTON EVENT
(ESTIMATED AT 90 PARTICLES/SQUARE CENTIMETER/SECOND/STERADIAN
AT GREATER THAN 10 MEV) WILL BEGIN BETWEEN 06/1500 AND 2000 UT
AND REACH MAXIMUM BETWEEN 07/0300 AND 1300 UT DUE TO THE X9 FLARE
AT 06/0352 UT. A 3.8 DECIBEL DAYTIME PCA IS EXPECTED.

III. THE GEOMAGNETIC FIELD HAS BEEN QUIET DURING THE PAST 24
HOURS. THE FIELD IS EXPECTED TO BECOME UNSETLED ON 07 NOVEMBER.
A MINOR GEOMAGNETIC STORM, IS EXPECTED TO BEGIN BETWEEN 08/0900
AND 09/0800 UT AS A RESULT OF THE 2 X-CLASS FLARES THAT HAVE
OCCURRED DURING THE PAST 24 HOURS.

IV. EVENT PROBABILITIES: 07-09 NOV 1980

CLASS M 9/09 0/9 0

CLASS X 45/45/45

PROTON 20/25/35

PCAF 100% YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 05 NOV 272

ESTIMATED 06 NOV 280

PREDICTED 07-09 NOV 285/289/290

90 DAY MEAN 06 NOV 194

V. GEOMAGNETIC INDICES

OBSERVED AFR 04 NOV 12 AP 05 NOV 06

ESTIMATED AFR 05 NOV 09 AFR/AP 06 NOV 07/10

PREDICTED AFR/AP 07-09 NOV 14/18 25/28 31/34

SOLTERWARM

BT

HFUS 1 B011 062200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO.

SD F NUMBER 311B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 06 NOVEMBER 1980

I.A. SOLAR ACTIVITY HAS BEEN VERY HIGH WITH REGIONS 2779 (S11E59), 2776 (N11W07), 2780 (S19W88), 2781 (N05E03), 2782 (S19E28) ALL CONTRIBUTING TO ACTIVITY. THE PRINCIPLE EVENTS WERE AN X9/1B IN REGION 2779 AT 0352 UT MAXIMUM, AN X1/SB IN REGION 2779 AT 1526 UT, AN M4/2B IN REGION 2779 AT 1728 UT MAXIMUM AND AN M5/2B IN REGION 2776 AT 1948 UT MAXIMUM. RADIO BURSTS OF 1600 FLUX UNITS AT 2695 MHZ AND 510 FLUX UNITS AT 245 MHZ ACCOMPANIED THE X9 EVENT, AND A CLASSIC COSTELLIU BURST WAS OBSERVED. THE X1 EVENT PRODUCED A RADIO BURST OF 200 FLUX UNITS AT 245 MHZ AND 190 FLUX UNITS AT 2695 MHZ. NUMEROUS ADDITIONAL M-CLASS FLARES HAVE OCCURRED DURING THE PERIOD.

I.B. SOLAR ACTIVITY SHOULD REMAIN HIGH WITH CONTRIBUTIONS CONTINUING FROM REGIONS 2779, 2776 AND TO A LESSER DEGREE FROM THE REGIONS MENTIONED AND PERHAPS FROM REGIONS 2772 (N23W37), AND 2773 (N04W36).

II. THE GEOMAGNETIC FIELD HAS BEEN QUIET, BUT SHOULD BECOME UNSETLED DURING 07 NOVEMBER AND A MINOR MAGNETIC STORM IS POSSIBLE DURING MID 08 NOVEMBER TO LATE 09 NOVEMBER DUE TO ACTIVITY TODAY. A PROTON EVENT HAS A LOW PROBABILITY OF OCCURRING DURING 07 NOVEMBER THOUGH 09 NOVEMBER DUE TO CURRENT ACTIVITY.

III. EVENT PROBABILITIES 07 NOVEMBER - 09 NOVEMBER

CLASS M 9/8/9/8/9/0

CLASS X 6/6/6/5/5/0

PROTON 35/35/20

PCAF RED

IV. OTTAWA 10.7 CM FLUX

OBSERVED 06 NOVEMBER 302

PREDICTED 07-09 NOVEMBER 295/299/300

90-DAY MEAN 06 NOVEMBER 19.6

V. GEOMAGNETIC INDICES

OBSERVED AFR/AP 05 NOVEMBER 08/06

ESTIMATED AFR/AP 06 NOVEMBER 09/06

PREDICTED AFR/AP 07-09 NOVEMBER 18/18 - 30/30 - 30/34

SOLARFLARE

BT