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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 311 A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1200UT 06 NOV 1980

14. SOLAR ACTIVITY HAS BEEN HIGH THROUGHOUT THE PAST 24 HOURS. REGION 2779 (S12E71) 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-SHAPED 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 4.15 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 HOURS PERIOD.

15. 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.

16. THE GEOMAGNETIC FIELD HAS BEEN QUIET DURING THE PAST 24 HOURS. THE FIELD IS EXPECTED TO BECOME UNSETTLED 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.

17. EVENT PROBABILITIES: 07-09 NOV 1980

CLASS M 90/90/90

CLASS X 45/45/45

PROTON 20/25/35

PCAF 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 A 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

SOLTERWARN

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HFUS 1 B OIL 062200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 311B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 06 NOVEMBER 1980

IA. 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 COSTELLI U 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.

IB. 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 UNSETTLED 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 THROUGH 09 NOVEMBER DUE TO CURRENT ACTIVITY.

III. EVENT PROBABILITIES 07 NOVEMBER - 09 NOVEMBER

CLASS M 98/98/90

CLASS X 60/60/50

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 196

V. GEOMAGNETIC A 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

SOLTERWARN

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