

HFUS 3 BOU 231343

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 297A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1200UT 23 OCTOBER 1980

IA. SOLAR ACTIVITY RETURNED TO MODERATE AS RAPID DEVELOPMENT OF REGION 2751 (N19W39) WAS ACCCOMPANIED BY A PAIR OF CLASS M EVENTS IN THE PAST 12 HOURS. THE M3 EVENT WITH MAX AT 0743Z PRODUCED A STRONG TYPE IV RADIO BURST WITH 10 CM FLUX OF 640 F.U. AND 245 MHZ BURST OF 290 F.U. THE IB OPTICAL FLARE MAY HAVE BEEN VISIBLE IN WHITE LIGHT. THE SPOT GROUP IN REGION 2751 HAS DEVELOPED AT LEAST ONE STRONG DELTA CONFIGURATION AS SPOT COUNT AND AREA INCREASED. SIGNIFICANT BUT LESSER SPOT GROWTH HAS OCCURRED IN REGION 2756 (S07W57) AND REGION 2744 (S17E01). THE COMPLEX OF REGIONS 2744 AND 2748 (S13W12) REMAINS IMPRESSIVELY LARGE AND BRIGHT BUT THE MAGNETIC CONFIGURATION CONTINUES COMPLEX ONLY IN MINOR PORTIONS OF THE COMPLEX. A LARGE FILAMENT ERUPTED FROM NEAR N33W45 FOLLOWING THE M1 FLARE IN NEARBY REGION 2751 AT 0007Z.

IB. LOW ENERGY PROTONS ARE EXPECTED TO ARRIVE 1300-1600Z TODAY FROM THE M3 FLARE. ADDITIONAL CLASS M EVENTS ARE EXPECTED DURING THE NEXT 3 DAYS.

II. A MINOR MAGNETIC STORM IS IN PROGRESS. THE SOURCE OF THIS DISTURBANCE IS UNKNOWN; PERHAPS AN EQUATORIAL CORONAL HOLE HAS DEVELOPED DURING THE PAST FEW DAYS. THE STORM IS EXPECTED TO CONTINUE FOR ANOTHER 12-24 HOURS. AN ADDITIONAL DISTURBANCE MAY COMMENCE LATE ON 25 OCTOBER AS A RESULT OF THE M3 FLARE AND THE LARGE-SCALE CORONAL DISTURBANCE ACCOMPANYING IT.

III. EVENT PROBABILITIES: 24-26 OCTOBER

CLASS M 90/90/90

CLASS X 20/20/20

PROTON 70/30/30

PCAF RED

IV. OTTAWA 10.7 FLUX

OBSERVED 22 OCTOBER 209

ESTIMATED 23 OCTOBER 212

PREDICTED 24-26 OCTOBER 210/207/205

V. GEOMAGNETIC INDICES

OBSERVED AFR 21 OCTOBER 07 AP 22 OCTOBER 24

ESTIMATED AFR 22 OCTOBER 20 AFR/AP 23 OCTOBER 35/39

PREDICTED AFR/AP 24-26 OCTOBER 17/20 18/23 12/15

SOLTERWARN

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HFUS - I BOU 232200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO  
SD F NUMBER 29 B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200Z 23 OCTOBER 1980

I A. SOLAR ACTIVITY WAS MODERATE DURING THE PAST 24 HOURS.  
AN M1/1B AND AN M3/1B FLARE REACHED MAXIMUM AT 23/0010 AND  
~743 UT, RESPECTIVELY. THE SECOND OF THESE FLARES WAS  
ACCOMPANIED BY A TYPE IV RADIO NOISE STORM AND A 640 FLUX  
UNIT BURST AT 2695 MHZ, AS WELL AS STRONG SHORTWAVE FADES TO  
15 MHZ. AN M1/SB WAS ALSO NOTED WITH MAXIMUM AT 1036 UT.  
OTHERWISE ELEVEN C-CLASS SUBFLARES WERE REPORTED.

I B. SOLAR ACTIVITY IS EXPECTED TO CONTINUE MODERATE.

II. A MINOR GEOMAGNETIC STORM BEGAN GRADUALLY AT ABOUT  
22/1800 UT AND HAD SUBSIDED TO ACTIVE TO UNSETTLED LEVELS  
BY 23/1800 UT. MID LATITUDE K-VALUES EQUAL TO 6 WERE SEEN  
BETWEEN 09 TO 12 HOURS UT AND 12 TO 15 HOURS UT. MILDLY  
ACTIVE CONDITIONS CAN BE EXPECTED FOR THE NEXT 4 HOURS.

III. EVENT PROBABILITIES 24 OCTOBER - 26 OCTOBER

CLASS M 75/65/55

CLASS X 10/05/05

PREDICTON 20/10/05

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 23 OCTOBER 198

PREDICTED 24-26 OCTOBER 196/196/193

90-DAY MEAN 23 OCTOBER 184

V. GEOMAGNETIC INDICES

OBSERVED AFR/AP 22 OCTOBER 20/24

ESTIMATED AFR/AP 23 OCTOBER 38/39

PREDICTED AFR/AP 24-26 OCTOBER 17/17 - 18/18 - 12/12

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