

HFUS 1 BOU 231300  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 2044

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 1300Z 23 JULY 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
22/1200Z TO 23/1200Z:

SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 24 HOURS.  
TWO M-CLASS EVENTS WERE RECORDED FROM REGION 3224 (N17W20),  
A M1/2N AT 02/2246UT AND VERY SLOW RISING M1/SB STARTED AT  
03/0947UT REACHING MAXIMUM AT 1045UT. SHORT WAVE FADE THROUGH  
22MHZ WAS RECORDED WITH THE 1045-UT EVENT. REGION 3224 ALSO  
PRODUCED SEVERAL LARGE C-CLASS EVENTS THIS PERIOD. REGION 3234  
(S12E59) HAS EXHIBITED LITTLE CHANGE IN STRUCTURE THIS PERIOD.  
REGION 3221 (S08E09) HAS CONTINUED STABLE. REGION 3224 HAS  
SHOWN SOME CHANGE AND FREQUENT BRIGHT POINTS.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO CONTINUE MODERATE DURING THE  
FORECAST PERIOD. WITH THE INTERNAL CHANGES IN REGION 3224  
SEVERAL M-CLASS EVENTS ARE EXPECTED WITH A CHANCE FOR AN  
ISOLATED X-CLASS EVENT. REGIONS 3234 AND 3221 SHOULD PRO-  
DUCE AN OCCASIONAL M-CLASS EVENT HOWEVER IF RAPID CHANGE  
SHOULD START IN EITHER REGION THEN AN X-CLASS EVENT FROM  
ONE OF THE REGIONS IS TO BE EXPECTED.

IJ. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN GENERALLY ACTIVE. A SUDDEN  
COMMENCEMENT STARTED AT 23/0647UT. THE GEOMAGNETIC FIELD IS  
EXPECTED TO BE ACTIVE WITH SHORT PERIODS NEAR MINOR STORM  
CONDITIONS FOR THE NEXT 24-36 HOURS THEN UNSETTLED FOR THE  
REMAINDER OF THE FORECAST PERIOD. THE SATELLITE PROTON EVENT  
WHICH BEGAN 20/1430UT WITH MAXIMUM AT 20/1825UT ENDED AT  
21/1615UT.

III. EVENT PROBABILITIES: 24-26 JULY

CLASS M 95/95/95

CLASS X 30/30/30

PROTON 10/15/15

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 22 JULY 229

ESTIMATED 23 JULY 232

PREDICTED 24-26 JULY 235/235/230

90 DAY MEAN 22 JULY 177

V. GEOMAGNETIC A INDICES

OBSERVED AFR 21 JULY 10 AP 22 JULY 20

ESTIMATED AFR 22 JULY 17 AFR/AP 23 JULY 18/18

PREDICTED AFR/AP 24-26 JULY 15/15 12/15 12/15

SOLTERWARN

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HFUS 3 BOU 232200  
FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO  
SDF NUMBER 04B  
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200Z 23 JULY 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 23/1200Z  
TO 23/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE SINCE 23/1200Z  
DUE TO A VERY SLOW RISE, LONG LIVED M1/SP FROM REGION 3221  
(S07E01), REACHING A MAXIMUM APPROXIMATELY 23/2050Z. THIS FLARE  
WAS CHARACTERIZED BY UMBRAL COVERAGE AND IS STILL IN PROGRESS  
AT FORECAST TIME. REGIONS 3221, 3224 (N17W29), AND 3234  
(S13E54) HAVE ALL RETAINED THEIR DELTA MAGNETIC CONFIGURATIONS.  
HOWEVER, THE MAGNETIC GRADIENT IN REGION 3224 HAS RELAXED.  
TWO NEW SMALL REGIONS WERE NUMBERED TODAY, 3238 (N20E56) AND  
3239 (N12E67).

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO  
REMAIN MODERATE. AN ISOLATED X-CLASS X-RAY EVENT IS STILL  
POSSIBLE FROM REGIONS 3221, 3224, OR 3234.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD  
HAS BEEN ACTIVE TODAY. K-INDICES OF 4 AND 5 HAVE BEEN OBSERVED  
AT BOULDER. ACTIVE CONDITIONS ARE EXPECTED TO SUBSIDE EARLY  
24 JULY, BECOMING UNSETTLED FOR THE FORECAST PERIOD.

III. EVENT PROBABILITIES 24 JULY - 26 JULY:

CLASS M	95/95/95
CLASS X	30/30/30
PROTON	10/15/15
PCAF	YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED	23 JULY 229
PREDICTED	24-26 JULY 230/230/225
90-DAY MEAN	23 JULY 178

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP	22 JULY 23/20
ESTIMATED AFR/AP	23 JULY 28/45
PREDICTED AFR/AP	24-26 JULY 15/15 - 12/15 - 12/15

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