

HFUS 1 BOU 221400  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 112 A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 1200UT 22 APR 1981

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
21/1200UT TO 22/1200UT:

SOLAR ACTIVITY WAS LOW DURING THIS PERIOD. A C7 EVENT AT  
21/1913UT WAS THE LARGEST XRAY EVENT. THE BACKGROUND XRAY  
FLUX AND 10CM FLUX HAVE BOTH DECLINED DURING THE PAST FEW DAYS.  
THE MOST INTERESTING REGION HAS BEEN 3049 (N15W26), WHICH HAS  
GROWN RAPIDLY IN SPOT AREA (NOW 630 MILLIONTHS), DEVELOPED A  
DELTA MAGNETIC CONFIGURATION, AND IS PRODUCING FREQUENT SUBFLARE  
ACTIVITY.

II. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE. THE SUN IS IN A  
GENERAL STATE OF DECLINE, EXCEPT FOR REGION 3049, WHICH,  
BASED ON ITS RAPID GROWTH, IS VERY LIKELY TO PRODUCE A MAJOR  
FLARE IN THE NEXT 24 HOURS.

III. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN ACTIVE AND IS FORECAST TO REMAIN  
AT ACTIVE LEVELS, BASED ON CORONAL HOLE PASSAGES AND FLARES  
THAT OCCURRED ON 19-20 APRIL.

IV. EVENT PROBABILITIES: 23 - 25 APR

CLASS M 80/80/80

CLASS X 15/15/15

PROTON 05/10/15

PCAF GREEN

V. OTTAWA 10.7 FLUX

OBSERVED 21 APR 194

ESTIMATED 22 APR 193

PREDICTED 23-25 APR 190/186/182

90 DAY MEAN 21 APR 211

VI. GEOMAGNETIC A INDICES

OBSERVED AFR 20 APR 43 AP 21 APR 43

ESTIMATED AFR 21 APR 24 AFR/AP 22 APR 25/32

PREDICTED AFR/AP 23-25 APR 15/15 15/15 18/20

SOLTERWARN

BT

HFUS 3 BOU 222200  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 112B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200UT 22 APRIL 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
22/1200UT TO 22/2200UT:

SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 10 HOURS.  
THE X-RAY FLUX BEGAN TO RISE AT 1800Z, REACHING M2 AT 1825Z  
AND A SECONDARY RISE TO M3 AT 1855Z. OPTICALLY, A BRIGHT KNOT  
WAS OBSERVED NEAR NW13 AT 1840Z. THIS WAS FOLLOWED BY FAINT  
LOOPS, CORONAL RAIN, AND VARIOUS EJECTA FORMS. REGION 3052 WAS  
THE LAST REGION TO TRANSIT WEST LIMB IN THIS AREA. HOWEVER, THIS  
ACTIVITY PROBABLY CAME FROM THE REGIONS 3035/3038 COMPLEX THAT  
PRECEDED REGION 3052 IN WEST LIMB TRANSIT. REGION 3049 (N14W30)  
PRODUCED A M1/1N WITH X-RAY MAX AT 2007Z. THE SUNSPOT STRUCTURE,  
PRIMARILY IN PENUMBRA, CONTINUES TO GROW IN THIS REGION. THE  
NEUTRAL LINE IS COMPLEX AND THE DELTA CONFIGURATION REMAINS.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN AT ACTIVE TO MINOR STORM LEVEL  
THIS ZULU DAY. THE FIELD IS EXPECTED TO BE GENERALLY ACTIVE  
THROUGH THE NEXT THREE DAYS.

III. EVENT PROBABILITIES: 23 - 25 APRIL

CLASS M 80/80/80

CLASS X 15/15/15

PROTON 05/10/15

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 22 APR 189

PREDICTED 23-25 APR 185/180/175

90 DAY MEAN 22 APR 211

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 21 APR 28/43

ESTIMATED AFR/AP 22 APR 29/42

PREDICTED AFR/AP 23-25 APR 15/25 15/15 18/20

SOLTERWARN

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