

HFUS 3 BOU 212200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO
SDF NUMBER 142

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 21 MAY 1984

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/2100Z TO 21/2100Z: SOLAR ACTIVITY HAS BEEN VERY HIGH THIS PERIOD. THE LARGEST EVENT OF THE PERIOD WAS AN X15/2B FLARE WHICH OCCURRED AT 2224 UT ON 20 MAY. THIS EVENT WAS ACCOMPANIED BY LARGE BURSTS THROUGHOUT THE RADIO SPECTRUM. THESE INCLUDED BURSTS AT 2695 AND 245 MHZ, OF 14000 AND 8500 FLUX UNITS, RESPECTIVELY. A TYPE IV RADIO SWEEP OF IMPORTANCE 2 WAS ALSO OBSERVED WITH THIS FLARE. ANOTHER FLARE AN X2/2B OCCURRED AT 2018 UT TODAY. INITIAL REPORTS SHOW THAT A TYPE II RADIO SWEEP WAS ASSOCIATED WITH THIS EVENT. NO OTHER REPORTS OF RADIO BURSTS ARE AVAILABLE AT THIS TIME. REGION 4492 (S10E34) WAS THE SOURCE REGION FOR BOTH OF THESE FLARES. THIS REGION HAS SHOWN GROWTH IN ITS TRAILER PORTION, AND REMAINS A F TYPE SPOT GROUP WITH A BETA GAMMA DELTA MAGNETIC CONFIGURATION. REGION 4494 (S09E54) HAS PRODUCED SEVERAL SMALL FLARES AND IS STABLE. ONE NEW REGION WAS NUMBERED THIS PERIOD, 4495 (S07W43), A B TYPE SPOT GROUP.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD BE MODERATE TO HIGH THROUGHOUT THE FORECAST PERIOD. REGIONS 4492 AND 4494 ARE THE MOST LIKELY CANDIDATES FOR SIGNIFICANT FLARE ACTIVITY.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 20/2100Z TO 21/2100Z: THE GEOMAGNETIC FIELD HAS BEEN AT STORM LEVELS, AT ALL LATITUDES, THIS PERIOD. THIS ACTIVITY IS PROBABLY DUE TO RECURRENT CORONAL HOLE STREAMS.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD SHOULD BE AT ACTIVE TO STORM LEVELS, AT ALL LATITUDES, THROUGHOUT THE FORECAST PERIOD.

III. EVENT PROBABILITIES 22 MAY - 24 MAY

CLASS M	90/90/90
CLASS X	40/40/40
PROTON	15/20/20
PCAF	RED

IV. OTTAWA 10.7 CM FLUX

OBSERVED	21 MAY 140
PREDICTED	22-24 MAY 142/148/150
90-DAY MEAN	21 MAY 130

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP	20 MAY 21/37
ESTIMATED AFR/AP	21 MAY 36/45
PREDICTED AFR/AP	22-24 MAY 40/40 - 30/30 - 20/30

SOLTERWARN

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