

HFUS 3 BOU 252200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 146

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 25 MAY 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 24/2100 TO 25/2100Z: SOLAR ACTIVITY WAS MODERATE THIS PERIOD DUE TO AN M1/SB EVENT FROM REGION 4492 (S10W20) AT 0837UT MINOR RADIO WAS OBSERVED WITH THIS EVENT. REGION 4494 (S09W00) HAS STARTED TO PRODUCE SMALL C CLASS EVENTS. REGION 4492 HAS EXHIBITED STRONG GROWTH IN ITS CENTRAL PORTION WHERE A DELTA IS BEING OBSERVED. THE MAGNETIC GRADIENT OF THE GROUP HAS MORE THAN DOUBLED DURING THE PAST 24 HOURS, A DELTA MAY ALSO BE IN THE TRAILER SECTION OF THE GROUP. NO NEW GROUPS WERE NUMBERED TODAY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO INCREASE TO MODERATE TO HIGH LEVELS DURING THIS FORECAST PERIOD. THE CONTINUED INCREASE IN MAGNETIC GRADIENTS ALONG WITH AN INCREASE IN FLARE PRODUCTION FROM REGION 4494 SHOULD PRODUCE AT LEAST ONE LARGE FLARE DURING THE NEXT 3 DAYS.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 24/2100Z TO 25/2100Z: THE GEOMAGNETIC FIELD HAS BEEN GENERALLY UNSETTLED TO SLIGHTLY ACTIVE AT BOTH THE HIGH LATITUDE AND MID LATITUDE SITES. THE PROTON EVENT WHICH BEGAN AT 1045UT ON 24 MAY AND REACHED A MAXIMUM OF 31 PARTICLES AT GREATER THAN 10MEV/SEC/CM<sup>2</sup>/STER ON 24 MAY AT 1140UT WENT BELOW EVENT THRESHOLD OF 10 PARTICLES AT GREATER THAN 10MEV/SEC/CM<sup>2</sup>/STER ON 25 MAY AT 0045UT.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO BE GENERALLY UNSETTLED UNTIL LATE ON 27 MAY WHEN THE EFFECTS OF A NEGATIVE POLARITY CORONAL HOLE ARE EXPECTED. IF REGION 4492 PRODUCES A LARGE X CLASS EVENT THEN A MAJOR GEOMAGNETIC DISTURBANCE SHOULD BE EXPECTED 30 TO 50 HOURS AFTER THE X RAY EVENT.

III. EVENT PROBABILITIES 26 MAY-28 MAY

CLASS M 60/60/60

CLASS X 15/10/15

PROTON 40/30/40

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 25 MAY 125

PREDICTED 26 MAY-28 MAY 128/130/132

90 DAY MEAN 25 MAY 129

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 24 MAY 028/033

ESTIMATED AFR/AP 25 MAY 015/020

PREDICTED AFR/AP 26 MAY-28 MAY 010/015-010/015-020/020

SOLTERWARN

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