

HFUS 3 BOU 252200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 115

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 25 APR 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 24/2100 TO 25/2100Z: SOLAR ACTIVITY HAS BEEN LOW FOR THE PAST 24 HOURS. THE LARGEST EVENT WAS A C6/SN FROM REGION 4157 (S04E59) AT 25/0442Z (SN FLARE IN REGION 4156 COINCIDENT IN TIME). REGION 4157 IS NOW OBSERVED AS A STABLE CLASS E GROUP. REGION 4156 (S16E41) HAS PRODUCED NUMEROUS CLASS C SUBFLARES AND GROWTH IS BEING REPORTED. NEARBY REGION 4154 (S13E30) HAS BEEN STABLE IN AREA BUT A SMALL DELTA IS FORMING IN ITS TRAILER SPOT. THE 4154/4156 COMPLEX COULD BE CONSIDERED A LARGE CLASS F GROUP WITH A BGD MAGNETIC CONFIGURATION AND ANOMOLOUS NORTH-SOUTH EXTENT. THERE HAVE BEEN REPORTS OF INTERACTION OF THE TWO GROUPS IN THIS COMPLEX AND THE MAGNETIC STRENGTHS OF THE AREA HAVE BEEN OBSERVED TO DOUBLE IN THE LAST 24 HOURS. REGION 4150 (S12W09) IS SLOWLY DECAYING AND BECOMING MORE BIPOLAR. A SMALL REGION EMERGED AT N19E34 AND WAS NUMBERED 4160.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE GENERALLY LOW. THE POSSIBILITY EXISTS FOR A LARGE AREA, LONG DURATION, MID-HIGH CLASS M FLARE FROM THE 4154/4156 COMPLEX. THE FREQUENCY OF OCCURRENCE OF THIS CLASS OF EVENT SHOULD BE LOW. INFREQUENT LOW CLASS M FLARES ARE POSSIBLE FROM REGIONS 4150 AND 4157. NO SIGNIFICANT ACTIVE REGIONS ARE EXPECTED TO RETURN.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 24/2100Z TO 25/2100Z: THE GEOMAGNETIC FIELD HAS REMAINED AT ACTIVE TO MINOR STORM LEVELS FOR THE PAST 24 HOURS WITH LOCAL NIGHTTIME SECTORS EXPERIENCING THE STRONGEST SUBSTORM ACTIVITY.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD SHOULD CONTINUE TO RESPOND TO THE CORONAL HOLE RELATED HIGH SPEED SOLAR WIND STREAM WITH ACTIVE TO MINOR STORM CONDITIONS FOR THE NEXT THREE DAYS. THE FIELD SHOULD BECOME PREDOMINANTLY ACTIVE ON 28 APR AS THIS DISTURBANCE BEGINS TO SUBSIDE. NIGHTTIME SECTORS SHOULD CONTINUE TO EXPERIENCE STRONG SUBSTORM ACTIVITY.

III. EVENT PROBABILITIES 26 APR-28 APR

CLASS M 40/40/40

CLASS X 05/05/05

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 25 APR 144

PREDICTED 26 APR-28 APR 143/138/136

90 DAY MEAN 25 APR 121

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 24 APR 043/049

ESTIMATED AFR/AP 25 APR 024/035

PREDICTED AFR/AP 26 APR-28 APR 020/020-020/020-016/020

SOLTERWARN

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