

HFUS 3 BOU 212200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 141

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 21 MAY 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/2100 TO 21/2100Z: SOLAR ACTIVITY HAS BEEN LOW. REGION 4183 (N18E26) PRODUCED SEVERAL SUBFLARES BUT THE OVERALL OPTICAL AND RADIO INTENSITIES OF THIS REGION DECLINED DURING THE PERIOD. THE DELTA CONFIGURATION IN 4183 HAS FADED BUT THERE ARE ENOUGH MIXED POLARITIES TO WARRANT A BETA GAMMA CLASSIFICATION. REGION 4174 (N10W52) ENTERED A RAPID GROWTH PHASE LATE YESTERDAY AND NEARLY QUADRUPLED ITS AREA DURING THE LAST 24 HOURS. HOWEVER, THIS REGION RETAINS A SIMPLE BIPOLAR MAGNETIC STRUCTURE WITH LOW FIELD GRADIENTS.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD BE LOW TO MODERATE FOR THE NEXT THREE DAYS. REGION 4183 STILL RETAINS THE CAPABILITY OF PRODUCING CLASS M FLARES. THE POSSIBILITY OF A MAJOR FLARE FROM THIS REGION EXISTS BUT IS SLIGHT. A SMALL REGION (4167) WHICH WAS GROWING JUST PRIOR TO ITS WEST LIMB TRANSIT LAST ROTATION IS DUE TO RETURN ON 24 MAY AND COULD POSSIBLY BE ACTIVE.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 20/2100Z TO 21/2100Z: THE GEOMAGNETIC FIELD WAS UNSETTLED TO SLIGHTLY ACTIVE UNTIL NEAR 21/1200Z WHEN ACTIVE TO MINOR STORM CONDITIONS BEGAN AT ALL LATITUDES. THIS ACTIVITY APPEARS TO BE THE BEGINNING OF THE EXPECTED CORONAL HOLE DISTURBANCE.

IIB. GEOPHYSICAL ACTIVITY FORECAST: ACTIVE TO MINOR STORM CONDITIONS ARE FORECAST TO CONTINUE FOR THE DURATION OF THE FORECAST PERIOD. AS WITH MOST CORONAL HOLE RELATED ACTIVITY, LOCAL NIGHTTIME SECTORS SHOULD EXPERIENCE THE MOST DISTURBED CONDITIONS. LOW-MID LATITUDE SITES SHOULD BEGIN TO SEE UNSETTLED TO ACTIVE CONDITIONS ON 24 MAY.

III. EVENT PROBABILITIES 22 MAY-24 MAY

CLASS M 50/50/50

CLASS X 05/05/05

PROTON 05/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 MAY 146

PREDICTED 22 MAY-24 MAY 148/150/150

90 DAY MEAN 21 MAY 124

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 20 MAY 010/012

ESTIMATED AFR/AP 21 MAY 025/020

PREDICTED AFR/AP 22 MAY-24 MAY 025/030-020/025-016/020

SOLTERWARN

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