

HFUS 3 BOU 202200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 079

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 20 MAR 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 19/2100 TO 20/2100Z: SOLAR ACTIVITY HAS CONTINUED LOW. THE LARGEST EVENT DURING THE PAST 24 HOURS WAS AN UNCORRELATED C2 XRAY BURST AT 0454Z MAXIMUM. MINOR SUBFLARES HAVE BEEN OBSERVED FROM REGIONS 4115 (S13W25) AND 4116 (S07W02), WITH 4115 THE MOST ACTIVE OF THE TWO REGIONS. THIS REGION HAS ALMOST DOUBLED IN SPOT AREA AND HAS INCREASED IN COMPLEXITY TO A BETA-GAMMA DELTA. THE DELTA MAGNETIC CONFIGURATION IS LOCATED IN A LARGE EAST-WEST PENUMBRA WHERE LEADER POLARITY HAS MERGED WITH WEAKER TRAILER POLARITY SPOTS. A WELL DEVELOPED ARCH FILAMENT SYSTEM HAS BEEN REPORTED NEAR THE DELTA ALONG WITH PLAGE FLUCTUATIONS. REGION 4116 IS CONTINUING TO DISPLAY SLOW DECAY, BUT RETAINS MINOR MAGNETIC COMPLEXITY. NEW REGION 4121 (S14E20) DEVELOPED ON THE DISK AS A SIMPLE B-TYPE GROUP. A SMALL FILAMENT DISAPPEARED AT 1804Z FROM A LOCATION S06E13.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD REMAIN GENERALLY LOW, HOWEVER, AN ISOLATED M-CLASS XRAY EVENT IS POSSIBLE FROM REGION 4115 DURING THE FORECAST PERIOD.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 19/2100Z TO 20/2100Z: THE GEOMAGNETIC FIELD HAS BEEN AT ACTIVE TO INTERMITTENT MINOR STORM CONDITIONS FOR THE 24 HOUR PERIOD.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD SHOULD GRADUALLY TREND TOWARDS UNSETTLED CONDITIONS THROUGH THE NEXT 12 HOURS AS THE CORONAL HOLE INFLUENCE BEGINS TO LESSEN. UNSETTLED LEVELS SHOULD THEN PERSIST FOR THE DURATION OF THE FORECAST PERIOD.

III. EVENT PROBABILITIES 21 MAR-23 MAR

CLASS M 50/40/40

CLASS X 05/05/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 20 MAR 122

PREDICTED 21 MAR-23 MAR 124/125/125

90 DAY MEAN 20 MAR 135

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 19 MAR 024/032

ESTIMATED AFR/AP 20 MAR 021/030

PREDICTED AFR/AP 21 MAR-23 MAR 016/020-010/020-010/015

SOLTERWARN

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