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HFUS 3 BOU 212200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 080

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 21 MAR 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/2100 TO 21/2100Z: SOLAR ACTIVITY HAS REMAINED AT A LOW LEVEL DESPITE THE DYNAMICS DISPLAYED BY REGION 4115 (S12W37) DURING THE PAST 24 HOURS. THIS REGION WHICH HAS SHOWN BOTH GROWTH AND DECAY IN VARIOUS PORTIONS OF ITS LARGE SPOT GROUP, HAS ONLY MANAGED SEVERAL C1/SUBFLARES DURING THE PERIOD. AN ARCH FILAMENT SYSTEM WAS OBSERVED NEAR THE CENTER OF THE REGION EARLY IN THE PERIOD, BUT PENUMBRAL DECAY HAS BEEN THE GENERAL TREND THROUGH THE PERIOD. THE REGION REMAINS A BETA-GAMMA DELTA GROUP WITH STRONG MAGNETIC GRADIENTS ALONG THE EAST-WEST NEUTRAL LINE. REGION 4116 (S07W15) HAS BEEN STABLE AND QUIET DURING THE PERIOD. MINOR GROWTH AND WEAK ARCH FILAMENTS WERE REPORTED WITH REGIONS 4120 (S13E38) AND 4121 (S13E08). A NEW EMERGING FLUX REGION (EFR) WAS OBSERVED AT S22E09 AND NUMBERED 4122. IT IS A SMALL AND SIMPLE A-TYPE GROUP.

IB. SOLAR ACTIVITY FORECAST: BASED ON ITS COMPLEXITY, REGION 4115 SHOULD PRODUCE AT LEAST ONE ISOLATED M-CLASS XRAY EVENT DURING THE NEXT THREE DAYS. THE OVERALL LEVEL OF ACTIVITY HOWEVER, WILL REMAIN LOW.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 20/2100Z TO 21/2100Z: THE GEOMAGNETIC FIELD WAS AT ACTIVE TO BRIEF MINOR STORM LEVELS FOR THE BEGINNING OF THE PERIOD (20/2200Z TO 21/0600Z), BUT GRADUALLY TRENDED TOWARDS ACTIVE LEVELS FOR HIGH-LATITUDE SITES AND UNSETTLED CONDITIONS (MID-LATITUDES) BY THE END OF THE PERIOD. THIS TREND INDICATES THE EFFECTS OF THE CORONAL HOLE INDUCED ACTIVITY IS ENDING.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD SHOULD BE GENERALLY UNSETTLED (OCCASIONALLY ACTIVE AT HIGH-LATITUDES) DURING THE FORECAST PERIOD. A SMALL FILAMENT WHICH Erupted FROM S06E13 AT 20/1804Z COULD PRODUCE A MINOR MAGNETIC RESPONSE ON THE 24TH.

III. EVENT PROBABILITIES 22 MAR-24 MAR

CLASS M 40/40/30

CLASS X 05/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 MAR 117

PREDICTED 22 MAR-24 MAR 118/119/121

90 DAY MEAN 21 MAR 134

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 20 MAR 021/033

ESTIMATED AFR/AP 21 MAR 013/020

PREDICTED AFR/AP 22 MAR-24 MAR 010/020-010/015-010/025

SOLTERWARN

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