

MFUS 3 BOU 192200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 079

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 19 MAR 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 18/2100 TO 19/2100Z: SOLAR ACTIVITY HAS BEEN LOW DURING THE PAST 24 HOURS. SMALL C-CLASS XRAY BURSTS HAVE OCCURRED THROUGH THE PERIOD, BUT NONE HAVE BEEN LARGER THAN C1 IN SIZE. OPTICALLY, ALL FLARES OBSERVED DURING THE PERIOD WERE SUB-CLASS IN SIZE FROM EITHER REGION 2115 (S12W11) OR REGION 2116 (S07E12). SINCE 1400Z ALL XRAY BURSTS WERE UNCORRELATED DUE TO WEATHER AT MOST OF THE WESTERN HEMISPHERE OBSERVATORIES. INFORMATION RECEIVED BEFORE 1400Z INDICATED REGION 4115 WAS CONTINUING TO GROW SLOWLY WITH STRONG ARCH FILAMENTS VISIBLE. PENUMBRAL GROWTH IN THE LEADER PORTION OF THIS REGION IS NOW DEVELOPING BACK TOWARDS THE TRAILER PORTION OF THE GROUP. REGION 4116 CONTINUES TO DISPLAY SLOW DECAY IN BOTH ITS LEADER AND TRAILER SPOTS ALONG WITH A RELAXING MAGNETIC GRADIENT. REGION 4120 (S13E06) HAS GROWN SLOWLY TO A D-TYPE BETA SPOT GROUP, BUT HAS REMAINED QUIET DURING THE PERIOD. NO NEW GROUPS WERE SITED DURING THE PERIOD, AND THE EAST LIMB HAS REMAINED QUIET.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD RETURN TO THE MODERATE LEVEL WITH ISOLATED M-CLASS ACTIVITY PROBABLE FROM BOTH 4115 AND 4116.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 18/2100Z TO 19/2100Z: THE GEOMAGNETIC FIELD HAS BEEN AT ACTIVE TO MINOR STORM LEVELS FOR THE 24 HOUR PERIOD. EARLY IN THE PERIOD, HIGH-LATITUDE SITES WERE REPORTING LEVELS NEAR MAJOR STORM CONDITIONS, BUT RECENT OBSERVATIONS INDICATE THE FIELD HAS RETURNED TO ACTIVE LEVELS FOR BOTH MID AND HIGH LATITUDE REGIONS.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD SHOULD REMAIN AT ACTIVE TO OCCASIONAL MINOR STORM LEVELS THROUGH THE NEXT 30 HOURS, FOLLOWED BY UNSETTLED LEVELS FOR THE DURATION OF THE FORECAST PERIOD.

III. EVENT PROBABILITIES 20 MAR-22 MAR

CLASS M 70/70/70

CLASS X 05/05/05

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 19 MAR 119

PREDICTED 20 MAR-22 MAR 121/124/125

90 DAY MEAN 19 MAR 135

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 18 MAR 014/019

ESTIMATED AFR/AP 19 MAR 024/035

PREDICTED AFR/AP 20 MAR-22 MAR 025/020-016/020-010/020

SOLTERWAERN

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