

HFUS 3 BOU 182200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 077

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 18 MAR 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 17/2100 TO 18/2100Z: SOLAR ACTIVITY HAS CONTINUED MODERATE THIS PERIOD WITH REGION 4116 (S07E25) PRODUCING M1/SB FLARES AT 18/0153Z AND 18/0441Z. THIS REGION EXHIBITS LITTLE CHANGE IN ITS SUNSPOT AREA AND STRUCTURE AND MIXED POLARITIES REMAIN IN THE TRAILER. REGION 4115 (S13E01) HAS PRODUCED SEVERAL SUBFLARES DURING THE PAST 24 HOURS AND GROWTH IS OCCURRING. OVERALL MAGNETIC GRADIENTS ARE INCREASING IN THIS REGION AND LOCALIZED AREAS IN THE NORTHERN PORTION ARE EXHIBITING HIGH GRADIENTS. A SMALL EMERGING CLASS B GROUP WAS NUMBERED 4119 (N11E03) AND NEW REGION 4120 (S13E74) HAS ROTATED INTO VIEW AS A SMALL CLASS C GROUP WITH MINOR SURGING.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE MODERATE. CLASS M FLARES ARE PROBABLE FROM REGION 4116. REGION 4115 SHOULD BEGIN TO PRODUCE LOW LEVEL CLASS M FLARES IN THE NEAR FUTURE. MAJOR FLARES FROM THESE REGIONS ARE NOT EXPECTED AT THIS TIME. NO SIGNIFICANT ACTIVE REGIONS ARE EXPECTED TO RETURN TO THE DISK DURING THE FORECAST PERIOD.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 17/2100Z TO 18/2100Z: THE GEOMAGNETIC FIELD WAS GENERALLY UNSETTLED UNTIL NEAR 18/1700Z WHEN HIGH LATITUDE STATIONS BEGAN TO EXPERIENCE MINOR STORM CONDITIONS. AT MID LATITUDES THE FIELD REMAINED UNSETTLED TO SLIGHTLY ACTIVE.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO BE AT ACTIVE TO NEAR MINOR STORM LEVELS FOR 19-20 MAR IN RESPONSE TO A CORONAL HOLE RELATED HIGH SPEED SOLAR WIND STREAM. AS IS COMMON WITH THIS TYPE OF DISTURBANCE, LOCAL NIGHTTIMES SHOULD BE THE MOST DISTURBED PERIODS. GENERALLY ACTIVE CONDITIONS ARE FORECAST FOR 21 MAR.

III. EVENT PROBABILITIES 19 MAR-21 MAR

CLASS M 85/90/90

CLASS X 05/05/05

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 18 MAR 119

PREDICTED 19 MAR-21 MAR 125/130/135

90 DAY MEAN 18 MAR 136

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 17 MAR 012/013

ESTIMATED AFR/AP 18 MAR 014/020

PREDICTED AFR/AP 19 MAR-21 MAR 025/025-025/020-016/020

SOLTERWARN

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