

HFUS 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 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 18/2100 TO 19/2100Z: SOLAR ACTIVITY HAS BEEN LOW. REGION 4438 (S04W74) PRODUCED THE LARGEST EVENT; A C4/SB AT 0147Z (MAX). HOWEVER, THIS REGION CONTINUES A SLOW DECAY AND THE FREQUENCY OF FLARE OUTPUT IS DECREASING. A C3/1N AT 1928Z (X-RAY MAX) OCCURRED IN THE PLAGE NORTH OF THE SUNSPOT STRUCTURE OF REGION 4446

(N13E56). THOUGH IT HAS PRODUCED ONLY C1 FLARES, REGION 4443 (N14E29) CURRENTLY IS THE MOST SIGNIFICANT DISK REGION. THE SUNSPOT STRUCTURE IS MAINLY ONE LARGE PENUMBRA CONTAINING A DELTA CONFIGURATION WITH MODERATE MAGNETIC GRADIENT. EXTENSIVE PLAGE EXISTS NORTH, WEST, AND SOUTH OF THIS PENUMBRA. REGION 4448 (N07E05) HAS EMERGED DURING THE PAST 24 HOURS. OLD ACTIVE REGION 4423 (S12) IS DUE TO RETURN AT EAST LIMB DURING THE NEXT FEW HOURS. SURGING HAS OCCURRED ON THE SE LIMB THROUGHOUT THE DAY WITH AN ERUPTIVE PROMINENCE REPORTED THERE THIS AFTERNOON.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE LOW. HOWEVER, AN OCCASIONAL CLASS M EVENT IS POSSIBLE WITH REGION 4443 THE MOST LIKELY REGION TO PRODUCE ENERGETIC FLARES.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 18/2100Z TO 19/2100Z: THE GEOMAGNETIC FIELD AT MID LATITUDES HAS BEEN UNSETTLED TO ACTIVE. K-VALUES OF 5 WERE RECORDED AT HIGH LATITUDES WITH INDIVIDUAL SUBSTORM ACTIVITY.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO BE GENERALLY UNSETTLED. HOWEVER, SUBSTORM ACTIVITY, PRIMARILY IN THE LOCAL NIGHT TIME SECTOR, IS EXPECTED TO PRODUCE SHORT PERIODS OF ACTIVE LEVELS.

III. EVENT PROBABILITIES 20 MAR-22 MAR

CLASS M 50/50/50

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 19 MAR 128

PREDICTED 20 MAR-22 MAR 127/127/127

90 DAY MEAN 19 MAR 121

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 18 MAR 014/015

ESTIMATED AFR/AP 19 MAR 015/015

PREDICTED AFR/AP 20 MAR-22 MAR 010/015-012/015-008/015

SOLTERWARN

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