

HFUS 3 BOU 172200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 077.

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 17 MAR 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 16/2100 TO 17/2100Z: SOLAR ACTIVITY WAS MODERATE DURING THE PAST 24 HOUR PERIOD. REGION 4443 (N15E53) PRODUCED A M1/1N EVENT AT 17/0926Z. IT REMAINED A CHO CLASSIFICATION IN WHITE LIGHT, BUT ITS AREA DECREASED SLIGHTLY. THIS DECREASE WAS CONTRARY TO THE CUSTOMARY AREA INCREASE AS REGIONS ROTATE INTO BETTER SEEING POSITION ON THE DISC. THE MAGNETIC GRADIENT WAS ONLY .23. THIS COMPARED TO REGION 4438'S (S04W47) GRADIENT OF .29. REGION 4438 CONTINUED TO GROW IN AREA, LONGITUDINAL EXTENT, SPOT NUMBER, AND MAGNETIC CONFIGURATION (BETA-GAMMA). IT PRODUCED SEVERAL SMALL C-LEVEL X-RAY EVENTS WITH ASSOCIATED SUB-FLARES.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE MODERATE THROUGHOUT THE FORECAST PERIOD. REGION 4443 AND 4438 TOGETHER PROVIDE A SLIGHT CHANCE OF HIGH LEVEL ACTIVITY. REGION 4433 (S10W88) STILL PROVIDES A VERY SLIGHT CHANCE OF SATELLITE LEVEL PROTON EVENTS FOR THE FIRST DAY, AS WELL AS CONTRIBUTING TO THE SLIGHT PROBABILITY OF X-LEVEL X-RAYS. IT ROTATES OFF ON THE 19TH TO BE REPLACED IN POTENTIAL ACTIVITY BY RETURNING REGION 4423 (S12,L-051) AT 20/0000Z. THIS REGION PRODUCED THREE M-LEVEL AND 12 C-LEVEL X-RAY EVENTS ON ITS LAST ROTATION. ONE IMPORTANCE TWO FLARE WAS ALSO REPORTED.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 16/2100Z TO 17/2100Z: GEOMAGNETIC ACTIVITY WAS ACTIVE DURING THE PAST 24 HOUR PERIOD. STORM LEVELS WERE REPORTED AT HIGH LATITUDES. THIS WAS ATTRIBUTED TO THE DISAPPEARING FILAMENTS OF THE 12TH AND 14TH.

IIB. GEOPHYSICAL ACTIVITY FORECAST: GEOMAGNETIC ACTIVITY IS EXPECTED TO BE ACTIVE THROUGHOUT THE FIRST AND SECOND DAYS (18, 19 MAR). STORM LEVELS ARE EXPECTED AT MID AND HIGH LATITUDES THROUGHOUT THE FIRST DAY, AND THE NIGHT PERIODS OF THE SECOND. THE LEVEL OF ACTIVITY IS EXPECTED TO DROP TO UNSETTLED TO ACTIVE FOR THE THIRD DAY (20 MAR). THIS ACTIVITY IS ATTRIBUTED TO THE CONTINUATION OF THE DISAPPEARING FILAMENT EFFECT UNTIL IT TAPERS OFF THE THIRD FULL DAY (19 MAR) OF THE DISTURBANCE.

III. EVENT PROBABILITIES 18 MAR-20 MAR

CLASS M 85/85/85

CLASS X 20/20/20

PROTON 10/05/05

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 17 MAR 134

PREDICTED 18 MAR-20 MAR 140/149/160

90 DAY MEAN 17 MAR 120

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 16 MAR 016/019

ESTIMATED AFR/AP 17 MAR 023/025

PREDICTED AFR/AP 18 MAR-20 MAR 020/020-016/015-014/015

SOLTERWARN

BT