

HFUS 3 BDU 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, LONGITUDNAL 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

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