

HFUS 3 BOU 222200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 053

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 22 FEB 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 21/2100
TO 22/2100Z: SOLAR ACTIVITY CHANGED ABRUPTLY TO A MODERATE LEVEL
WITH THE OCCURRENCE OF AN M4 X-RAY EVENT WHICH BEGAN AT 1920Z.
NO FLARE EMISSION WAS OBSERVED ON THE DISK; HOWEVER, A
PROMINENCE NEAR SE14 FIRST BECAME ACTIVE (WITH EXCESS EMISSION
EMBEDDED) AND THEN DISRUPTED. LOOPS WERE OBSERVED IN PROGRESS
AT 2015Z. DISCRETE FREQUENCY BURSTS RANGED FROM MINOR TO MAJOR
INTENSITY. ALGONQUIN OBSERVATORY REPORTED A BURST OF 186 FU AT
2800 MHZ FOR THIS EVENT. SINCE NO FLARE EMISSION WAS OBSERVED,
THE SITE FOR THIS EVENT MUST BE OLD REGION 4077, WHICH IS DUE
BACK ON 23 FEBRUARY. REGION 4096 (N22E44) EMERGED TODAY AND
SHOWS A TREND FOR CONTINUED GROWTH.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
MODERATE. OLD REGION 4077 PRODUCED TWO M EVENTS AND AN
X4/PROTON FLARE LAST ROTATION.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 21/2100Z TO 22/2100Z:
THE ACTIVE TO STORM LEVEL CONDITIONS DROPPED TO AN UNSETTLED
LEVEL AT BOTH MID AND HIGH LATITUDES NEAR 0600Z. THE FIELD HAS
BEEN MOSTLY UNSETTLED SINCE THEN.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS
EXPECTED TO BE UNSETTLED. THE ISOLATED NORTHERN HEMISPHERE
CORONAL HOLE IS NEAR CENTRAL MERIDIAN TODAY. ITS EFFECTS ARE
NOT EXPECTED TO IMPACT THE EARTH UNTIL LATE ON 25 FEBRUARY OR
EARLY ON 26 FEBRUARY.

III. EVENT PROBABILITIES 23 FEB-25 FEB

CLASS M 70/70/70

CLASS X 05/05/05

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 22 FEB 109

PREDICTED 23 FEB-25 FEB 119/130/138

90 DAY MEAN 22 FEB 159

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 21 FEB 027/037

ESTIMATED AFR/AP 22 FEB 015/020

PREDICTED AFR/AP 23 FEB-25 FEB 010/015-010/010-013/013-

SOLTERWARN

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