

HFUS 1 BOU 121300  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 043A  
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 1300Z 12 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
11/1200Z TO 12/1200Z: SOLAR ACTIVITY CONTINUES MODERATE. ONE  
CLASS M FLARE, AN M1 AT 11/1208UT, HAS OCCURRED. REGION 3594  
(S10 W33) AND ESPECIALLY 3603 (S09 W15) HAVE PRODUCED NUMEROUS  
C CLASS FLARES INCLUDING 1B OPTICAL EVENTS IN REGION 3603 AT  
11/1336UT, 11/2349UT AND 12/0546UT. RADIO BURSTS OF A FEW TENS  
OF FLUX UNITS AT CENTIMETRIC WAVELENGTHS AND LARGER FLUXES AT  
LONGER WAVELENGTHS HAVE ACCOMPANIED MOST OF THESE SMALL FLARES.  
TYPE III BURSTS HAVE BEEN OCCURRING FREQUENTLY THROUGH THE  
PERIOD. THE OBSERVATORIES REPORT THAT GRADUAL SIMPLIFICATION IS  
TAKING PLACE IN BOTH REGIONS. REGION 3607 (N03 E73) CONTINUES  
TO ROTATE INTO VIEW WITH ADDITIONAL SPOTS, POSSIBLY ANOTHER  
REGION, CLOSE BEHIND. PLAGE ASSOCIATED WITH THE SPOTS IS SMALL  
AND UNIMPRESSIVE THUS FAR. A LONG EAST-WEST FILAMENT AT ABOUT  
S45 W10 TO WEST LIMB ERUPTED AT 11/2200UT.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE  
MODERATE. IF NO NEW FLUX EMERGES IN REGIONS 3594/3603 AND IF  
THE EAST LIMB REGIONS REMAIN AS UNINTERESTING AS THEY APPEAR AT  
PRESENT, FLARE ACTIVITY IS EXPECTED TO BECOME MORE SPORADIC,  
BUT WITH A CONTINUING CHANCE OF A CLASS X FLARE.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC  
FIELD REMAINED ACTIVE THROUGH MOST OF THE PERIOD. MID- LATITUDE  
H TRACES RECOVERED TO NEAR-NORMAL INTENSITY BY 11/1300UT BUT  
ACTIVE CONDITIONS CONTINUED, ESPECIALLY IN THE D TRACE. A  
RAPID NEW DEPRESSION BEGAN ABOUT 12/2100UT AND CONTINUES IN  
PROGRESS. THOUGH NO NEW MAJOR SOLAR ACTIVITY HAS OCCURRED, THE  
GEOMAGNETIC FIELD IS EXPECTED TO REMAIN AT ACTIVE LEVELS  
THROUGH THE PERIOD.

III. EVENT PROBABILITIES 13 FEB-15 FEB

CLASS M 95/90/85

CLASS X 25/20/15

PROTON 25/20/15

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 11 FEB 221

ESTIMATED 12 FEB 211

PREDICTED 13 FEB-15 FEB 204/201/200

90 DAY MEAN 11 FEB 199

V. GEOMAGNETIC A INDICES

OBSERVED AFR 10 FEB 032

AP 11 FEB 028 33

ESTIMATED AFR 11 FEB 028

AFR/AP 12 FEB 020/020

PREDICTED AFR/AP 13 FEB-15 FEB

022/025-020/020-015/015

SOLTERWARN

BT

HXUS BOU 121300

PREDM 09513 09014 08515

PREDX 02513 02014 01515

PREDP 02513 02014 01515

PCAFT 00213

TENCM 20413 20114 20015

AFRED 02213 02014 01515

AFAPF 02513 02014 01515

KKK 23444 43444 44444

BT

HFUS 3 BOU 122200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 043B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 12 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 12/1200Z TO 12/2100Z: SOLAR ACTIVITY HAS CONTINUED AT THE MODERATE LEVEL. REGION 3594 (S10W39) PRODUCED AN M1/SN FLARE AT 12/1713Z MAXIMUM WITH ASSOCIATED MINOR DISCRETE FREQUENCY RADIO BURSTS. THE FLARE OCCURRED TO THE SOUTH AND WEST OF THE LARGEST CENTRAL PENUMBRA WHERE SOME SLOW DECAY IS TAKING PLACE. THIS REGION AND 3603 (S09W21) HAVE SHOWN A SIGNIFICANT DECREASE IN FLARE PRODUCTION COMPARED TO THE SAME TIME PERIOD YESTERDAY, INDICATING AN OVERALL RELAXING OF ALL PARAMETERS. REGION 3607 (N03E67) NOW EXHIBITS A WEAK DELTA MAGNETIC CONFIGURATION IN THE NORTHERN PORTION OF THE LARGE LEADER SPOT, BUT THUS FAR HAS REMAINED FAIRLY QUIET. THE TRAILING SPOTS BEHIND THIS LARGE LEADER COULD BE A SEPARATE REGION, BUT WILL BE ANALYZED FURTHER AS THEY BECOME MORE VISIBLE ON THE DISK. AT THE TIME OF THIS WRITING, REGION

3594 PRODUCED AN M4/1N AT 2138Z MAXIMUM. MORE INFORMATION ON THIS FLARE WILL BE INCLUDED IN THE 1300Z FORECAST.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE WITH THE POSSIBILITY OF A LARGE EVENT FROM THE 3594/3603 COMPLEX DURING ITS DECAY PHASE. THE SOLAR PARAMETERS (10.7CM FLUX, SPOT NUMBER, AND X-RAY BACKGROUND) ARE EXPECTED TO DECLINE DURING THE FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE DURING THE PERIOD WITH STRONG K VALUES OF FOUR RECORDED AT BOULDER. ACTIVE TO OCCASIONAL BRIEF PERIODS AT MINOR STORM LEVELS ARE EXPECTED DURING THE NEXT 24 HOURS, FOLLOWED BY GRADUALLY SETTLING CONDITIONS.

III. EVENT PROBABILITIES 13 FEB-15 FEB

CLASS M 95/85/75

CLASS X 25/15/10

PROTON 25/15/10

PCAF YELLO

IV. OTTAWA 10.7 CM FLUX

OBSERVED 12 FEB 210

PREDICTED 13 FEB-15 FEB 201/195/185

90 DAY MEAN 12 FEB 199

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 11 FEB 029/033

ESTIMATED AFR/AP 12 FEB 024/025

PREDICTED AFR/AP 13 FEB-15 FEB 022/025-020/020-015/015

SOLTERWARN

BT

HXUS BOU 122200

PREDM 09513 08514 07515

PREDX 02513 0151 01015

PREDP 02513 0151 01015

PCAFT 00213

TENCM 20113 19514 18515

AFRED 02213 02014 01515

AFAPF 02513 02014 01515

BT