

HXUS 1 BOU 111300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 042A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 11 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 10/1200Z TO 11/1200Z: SOLAR ACTIVITY CONTINUES AT A MODERATE LEVEL WITH CLASS M FLARES BEING OBSERVED. REGION 3594 (S10 W18) PRODUCED AN M3/2B AT 10/1856UT AND REGION 3603 (S09 W02) FOLLOWED WITH AN M3/1B AT 10/2002UT. THE FLARE IN REGION 3603 WAS VERY IMPULSIVE AND WAS ACCCOMPANIED BY A DARK SURGE RUNNING TO THE SE. SOME REORGANIZATION CONTINUES IN THIS COMPLEX, HOWEVER, THE TREND SEEMS TO BE TOWARD SIMPLIFICATION.

MAGNETICALLY, REGION 3594 CONTINUES AS A BETA-GAMMA-DELTA. THE REMAINING DISK REGIONS ARE BASICALLY STABLE OR DECLINING. REGION 3602 (N15 E33), THE SOURCE OF YESTERDAY'S M3/3B, REMAINS A SIMPLE H TYPE SPOT GROUP, ALTHOUGH, SOME TRANSIENT SPOTS WERE REPORTED WEST OF THE H TYPE SPOT EARLIER IN THE DAY. MINOR ACTIVITY IS BEING REPORTED ON THE WEST LIMP IN THE AREA OF DEPARTED REGIONS 3592, 3595, AND 3583. SOME SURGE ACTIVITY WAS OBSERVED ON THE EAST LIMB BETWEEN SE05-NE10.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE AT A MODERATE LEVEL THROUGH THE FORECAST PERIOD. MAJOR FLARES REMAIN A GOOD POSSIBILITY FROM THE 3594/3603 COMPLEX. THIS AREA SHOULD BE MONITORED FOR REJUVENATION.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS ACTIVE TO MINOR STORM LEVELS EARLY IN THE PERIOD. THE SOURCE OF THIS DISTURBANCE IS BEING ATTRIBUTED TO FLARES EARLIER IN THE WEEK FROM REGION 3576 (NOW BEYOND THE WEST LIMB). THE FIELD IS NOW AT UNSETTLED LEVELS AND IS EXPECTED TO REMAIN SO THRU THE EARLY PART OF THE FORECAST PERIOD. ACTIVE CONDITIONS ARE AGAIN EXPECTED ON 12 FEB AS A RESULT OF RECENT FLARE ACTIVITY.

III. EVENT PROBABILITIES 12 FEB-14 FEB

CLASS M 95/95/95

CLASS X 25/25/25

PROTON 25/25/25

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 10 FEB 219

ESTIMATED 11 FEB 210

PREDICTED 12 FEB-14 FEB 199/191/187

90 DAY MEAN 10 FEB 199

V. GEOMAGNETIC A INDICES

OBSERVED AFR 09 FEB 013 AP 10 FEB 025

ESTIMATED AFR 10 FEB 030 AFR/AP 11 FEB 015/024

PREDICTED AFR/AP 12 FEB-14 FEB 012/020-025/025-015/020

SOLTERWARN

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HXUS BOU 111300

PREDM 09512 09513 09514

PREDX 02512 02513 02514

PREDP 02512 02513 02514

PCAF 00212

TENCM 19912 19113 18714

AFRED 01212 02513 01514

AFAPF 02012 02513 02014

KKK 32223 32223 35443

BT

HFUS 3 BOU 112200  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 042B  
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 11 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 11/1200Z TO 11/2100Z: SOLAR ACTIVITY WAS NEAR THE MODERATE LEVEL DURING THE PAST NINE HOURS, BUT WITH A SLIGHT DECREASE IN THE OVERALL LEVEL COMPARED TO THE PREVIOUS 24 HOURS. REGIONS 3603 (S09W08) AND 3594 (S10W25) HAVE BEEN THE PRIME PRODUCERS OF THE ACTIVITY, BUT ALL FLARES HAVE BEEN SUBFLARES ASSOCIATED WITH C-CLASS X-RAY EVENTS. THE LARGEST WAS A C7/SN IN REGION 3594 AT 1613Z MAXIMUM. REGION 3603 HAS SIMPLIFIED SOMEWHAT, WHILE REGION 3594 CONTINUES TO RESTRUCTURE BUT RETAINS ITS MAGNETIC COMPLEXITY WITH A BETA GAMMA DELTA CLASS SPOT GROUP. BOTH THESE REGIONS ARE APPEARING TO EXPEND THEIR ENERGY IN FREQUENT SMALL BURSTS RATHER THAN ISOLATED LARGE EVENTS. NEW REGION 3607 (N03E80) HAS APPEARED AT EAST LIMB, BUT HAS BEEN QUIET THIS PERIOD. THIS REGION IS APPARENTLY THE RETURN OF OLD SESC REGION 3557 (N04, CAR 093, DAO/AREA 290 ON 27 JAN) WHICH PRODUCED SEVERAL FLARES LAST ROTATION. THE REMAINING DISK REGIONS HAVE BEEN QUIET.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE MODERATE WITH AN ISOLATED X-CLASS EVENT POSSIBLE FROM THE 3594/3603 COMPLEX.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS ACTIVE EARLY IN THE PERIOD, BUT SHORTLY AFTER 1500Z A STRONG MAIN PHASE STORM WAS OBSERVED AT BOULDER WITH A K VALUE OF SIX (6) RECORDED FOR THE 15-18Z PERIOD. THIS RESPONSE COULD POSSIBLY BE RELATED TO THE X1/1B FLARE IN REGION 3576 AT 08/1253Z. THE FIELD CONTINUED AT MINOR STORM TO ACTIVE LEVELS THROUGH THE REMAINDER OF THE PERIOD. ACTIVE CONDITIONS ARE EXPECTED THROUGH THE NEXT THREE DAYS IN RESPONSE TO RECENT FLARE ACTIVITY.

III. EVENT PROBABILITIES 12 FEB-14 FEB

CLASS M 95/95/85

CLASS X 25/25/15

PROTON 25/25/15

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 11 FEB 221

PREDICTED 12 FEB-14 FEB 215/205/190

90 DAY MEAN 11 FEB 199

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 10 FEB 032/025

ESTIMATED AFR/AP 11 FEB 028/028

PREDICTED AFR/AP 12 FEB-14 FEB 020/020-025/025-015/020

SOLTERWARN

BT

HXUS BOU 112200

PREDM 09512 09513 08514

PREDX 02512 02513 01514

PREDP 02512 02513 01514

PCAF 00212

TENCM 21512 20513 19014

AFRED 02012 02513 01514

AFAPP 02012 02513 02014

RT