

HFXS 1 BOU 101300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 041A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 10 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 09/1200Z TO 10/1200Z: SOLAR ACTIVITY WAS AT A MODERATE LEVEL WITH THREE CLASS M FLARES OBSERVED IN THE PAST 24 HOURS. THE LARGEST EVENT WAS AN M9 AT 09/1412UT AND HAS BEEN ASSOCIATED WITH LOOPS ON THE WEST LIMB IN THE AREA OF REGION 3592 (N14 W88). REGION 3592 APPEARS TO BE GROWING AS IT MAKES ITS WEST LIMB TRANSIT. REGION 3583 (S19 W85) PRODUCED AN M1 AT 10/0313UT. BOTH 3583 AND 3592 HAVE BEEN PRODUCTIVE WITH SURGE ACTIVITY. A SURPRISE M3/3B OCCURRED AT 10/0051UT FROM REGION 3602 (N15 E45). THIS FLARE WAS ACCCOMPANIED BY TYPE II/IV SWEEP, A CASTELLI U SPECTRUM, AND PARALLEL RIBBONS. A FILAMENT IN THE AREA OF REGION 3602 DISAPPEARED AROUND 0625UT. REGION 3594 (S09 W03) AND ITS TRAILING REGION 3603 (S08 E11) HAVE BEEN RELATIVELY QUIET. 3594 APPEARS TO BE FRAGMENTING IN WHITE LIGHT AND IS SHOWING SOME SIMPLIFICATION IN MAGNETIC MAPS. THE NEUTRAL LINE IS GENERALLY EW AND THE NUMBER AND EXTENT OF OPPOSITE POLARITY INTRUSIONS HAVE DECREASED. THE EAST LIMB IS QUIET.

IR. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO CONTINUE AT A MODERATE LEVEL. REGION 3594 RETAINS ITS POTENTIAL AND IS LIKELY TO PRODUCE AT LEAST ONE MAJOR EVENT IN ITS DECLINING PHASE. ADDITIONAL EVENTS FROM REGIONS AT OR BEYOND THE WEST LIMB ARE POSSIBLE. EVEN THOUGH REGION 3576 IS OUT OF VIEW IT CAN STILL PRODUCE GEO-EFFECTIVE EVENTS. REGION 3602 IS NOT EXPECTED TO BE A MAJOR FLARE PRODUCER UNLESS NEW GROWTH OCCURS. THE EAST LIMB IS EXPECTED TO BE QUIET FOR SEVERAL DAYS AS NO SIGNIFICANT REGIONS ARE DUE TO RETURN.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETLED TO QUIET. THE FIELD IS EXPECTED TO BE BASICALLY UNSETLED EARLY IN THE FORECAST PERIOD. THERE IS A SLIGHT CHANCE FOR MORE ACTIVE CONDITIONS ON 13 FEB AS A RESULT OF THE FLARE AND DISAPPEARING FILAMENT IN 3602.

III. EVENT PROBABILITIES 11 FEB-13 FEB

CLASS M 95/95/95

CLASS X 20/20/20

PROTON 15/15/15

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 09 FEB 238

ESTIMATED 10 FEB 229

PREDICTED 11 FEB-13 FEB 221/213/206

90 DAY MEAN 09 FEB 199

V. GEOMAGNETIC A INDICES

OBSERVED AFR 08 FEB 016 AP 09 FEB 015

ESTIMATED AFR 09 FEB 015 AFR/AP 10 FEB 011/015

PREDICTED AFR/AP 11 FEB-13 FEB 010/015-014/012-020/012

SOLTERWARN

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HFXS BOU 101300

PREDM 09511 09512 09513

PREDX 02011 02012 02013

PREDP 01511 01512 01513

PCAF 00211

TENCM 22111 21312 20613

AFRED 01011 01412 02013

AFAPF 01511 01212 01213

KKK 32233 22222 33332

BT

HFXUS 3 BOU 102200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 041B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 10 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 10/1200Z TO 10/2100Z: SOLAR ACTIVITY REMAINS MODERATE. REGION 3594 (S10W11) PRODUCED A LONG LASTING M3/2B FLARE AT 1856Z MAXIMUM. THIS FLARE COVERED PART OF THE LEADING UMBRA OF THE SPOT GROUP, BUT WAS NOT IMPRESSIVE IN RADIO EMISSION WITH ONLY MINOR DISCRETE FREQUENCY BURSTS REPORTED. REGION 3603 (S09E04) PRODUCED A MUCH MORE IMPRESSIVE M3/1B AT 2002Z MAXIMUM. THIS FLARE WAS VERY IMPULSIVE, RISING FROM A C4 X-RAY BACKGROUND TO THE M3 LEVEL IN ONLY 20 SECONDS. ASSOCIATED WITH THIS FLARE WAS A CASTELLI U-SHAPED BURST SPECTRUM, A TYPE II SLOW DRIFT (IMPORTANCE 3) AND A UNCONFIRMED TYPE IV SWEEP. CURRENT MAGNETOGrams SHOW EVIDENCE OF AT LEAST TWO DELTA CONFIGURATIONS IN REGION 3594 AND SOME INTERACTION BETWEEN 3594 AND 3603. THE REMAINING DISK REGIONS ARE SMALL AND INACTIVE COMPARED TO THIS CONGLOMERATE. NO ACTIVITY HAS BEEN OBSERVED AT THE EAST LIMB DURING THE PERIOD.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD REMAIN MODERATE WITH A GOOD POSSIBILITY OF HIGH LEVELS DURING THE FORECAST PERIOD DUE TO THE POTENTIAL OF REGIONS 3594 AND 3603.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN AT OR NEAR MINOR STORM LEVELS FOLLOWING A SLOW ONSET AT AROUND 0900Z. THE PROBABLE CAUSE IS THE RECENT FLARE ACTIVITY, BUT IT IS DIFFICULT TO ASSIGN IT TO ONE PARTICULAR FLARE. ACTIVE TO OCCASIONAL MINOR STORM LEVELS ARE EXPECTED FOR THE NEXT 24 HOURS, FOLLOWED BY A GRADUAL SETTLING UNTIL THE 13TH, WHEN THE EFFECTS OF TODAY'S ACTIVITY SHOULD BE OBSERVED.

III. EVENT PROBABILITIES 11 FEB-13 FEB

CLASS M 95/95/95

CLASS X 25/30/30

PROTON 25/30/30

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 10 FEB 219

PREDICTED 11 FEB-13 FEB 210/205/200

90 DAY MEAN 10 FEB 199

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 09 FEB 013/015

ESTIMATED AFR/AP 10 FEB 030/028

PREDICTED AFR/AP 11 FEB-13 FEB 015/015-014/012-025/025

SOLTERWARN

BT

HFXUS BOU 102200

PREDM 09511 09512 09513

PREDX 02511 03012 03013

PREDP 02511 03012 03013

PCAF1 00211

TENCM 21011 20512 20013

AFRED 01511 01412 02513

AFAPP 01511 01212 02513

BT