

HFUS 1 BOU 041300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 035A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 04 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 03/1200Z TO 04/1200Z: SOLAR ACTIVITY HAS BEEN HIGH FOR THE PAST 24 HOURS. SEVEN M-CLASS X-RAY EVENTS HAVE OCCURRED, THE LARGEST BEING AN M5 ASSOCIATED WITH EAST LIMB LOOPS APPARENTLY FROM REGION 3594 (S09E75). THIS REGION IS STILL ROTATING OVER THE LIMB BUT IS PRESENTLY SEEN TO BE AN E-TYPE SPOT GROUP. THIS REGION HAS BEEN IDENTIFIED AS THE SOURCE OF THREE OTHER M-CLASS EVENTS IN THIS REPORTING PERIOD. REGION 3583 (S18W09) PRODUCED AN M1/1N FLARE WHICH MAXED AT 0615Z. 3583 HAS SHOWN STEADY GROWTH AND IS INTERACTING WITH NEIGHBORING REGION 3584 (S13W04). A MAGNETIC DELTA MAY HAVE FORMED IN ITS CENTRAL PORTION. REGION 3576 (S13W41) HAS RECENTLY PRODUCED ONLY SUBFLARES. ITS LARGE LEADER SPOT IS FRAGMENTING BUT IT HAS DEVELOPED A LARGE INTERIOR SPOT WHICH CONTAINS UMBRA OF BOTH POLARITIES. IT CONTINUES TO THREATEN MAJOR ACTIVITY. REGION 3573 (N10W48) HAS DECAYED IN BOTH WHITE LIGHT AND H ALPHA BUT ITS MAGNETIC INVERSION LINE STILL HAS NUMEROUS KINKS AND BRIGHT POINTS, FLUCTUATING PLAGE, AND AN ARCH FILAMENT SYSTEM HAVE BEEN REPORTED HERE. REGIONS 3589 (S06E27) AND 3577 (S14W81) BOTH PRODUCED M EVENTS YESTERDAY AND ARE EACH CAPABLE OF REPEATING THAT PERFORMANCE. REGION 3592 (N16W03) IS A GROWING, TRAILER DOMINANT REGION THAT MAY BECOME ERUPTIVE SOON.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN HIGH WITH A GOOD PROBABILITY OF MAJOR FLARES FROM REGIONS 3576 AND 3594. IN ADDITION, REGION 3583 SHOULD PRODUCE M-CLASS X-RAY EVENTS, AND ISOLATED SIGNIFICANT FLARES ARE POSSIBLE FROM REGIONS 3589, 3577, AND 3573.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN AT ACTIVE TO MINOR STORM LEVELS FOR THE PAST 24 HOURS. THESE DISTURBED CONDITIONS ARE EXPECTED TO INTENSIFY OVER THE NEXT 24 HOURS IN RESPONSE TO THE X1/2B FLARE ON 03 FEB.

GEOMAGNETIC ACTIVITY SHOULD THEN SUBSIDE BY THE END OF THE FORECAST PERIOD. THE SATELLITE PROTON EVENT WHICH BEGAN ON 31 JANUARY CONTINUES IN PROGRESS. FLUX VALUES DROPPED TO NEAR THE EVENT THRESHOLD OF 10 AT 0345Z, BUT HAVE SINCE STABILIZED NEAR 30 PARTICLES/CM²/SEC/STER. IN THE ABSENCE OF FURTHER MAJOR FLARE ACTIVITY, THE PROTON EVENT IS EXPECTED TO END WITHIN THE NEXT 24 HOURS.

III. EVENT PROBABILITIES 05 FEB-07 FEB

CLASS M 95/95/95

CLASS X 50/50/50

PROTON 30/30/30

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 03 FEB 279

ESTIMATED 04 FEB 270

PREDICTED 05 FEB-07 FEB 270/270/270

90 DAY MEAN 03 FEB 198

V. GEOMAGNETIC A INDICES

OBSERVED AFR 02 FEB 048 AP 03 FEB 029

ESTIMATED AFR 03 FEB 021 AFR/AP 04 FEB 030/035

PREDICTED AFR/AP 05 FEB-07 FEB 050/040-035/030-015/015

SOLTERWARN

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HFXS 3 BOU 042200
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 035B
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 04 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 04/1200Z TO 04/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE. AN M4 XRAY MAX OCCURRED AT 04/1337Z WITH EMISSION ACROSS THE DISCRETE CENTIMETRIC FREQUENCIES INCLUDING 620 F.U. AT 245 MHZ. REGION 3576 (S14W48) PRODUCED AN M1/1B FLARE MAX 04/1532Z AND AN M2/1B MAX 04/1909Z. REGION 3594 (S10E67) HAS SHOWN ACTIVITY THIS PERIOD LIMITED TO C CLASS XRAY. THE LARGEST EVENT WAS A C7/1N MAX 04/1825Z. REGION 3594 IS A LARGE E TYPE REGION WITH BETA GAMMA MAGNETIC CHARACTER. LIMITED ANALYSIS APPEARS TO INDICATE LARGE GRADIENTS ALONG A N-S NEUTRAL LINE WITH THE POSSIBILITY OF A DELTA IN THE TRAILER PART. REGION 3578 (S11W66) HAS SHOWN ACTIVITY COINCIDENT WITH ACTIVITY IN REGION 3576. REGION 3576 REMAINS COMPLEX MAGNETICALLY WITH LARGE GRADIENTS.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD REMAIN HIGH. MAJOR FLARES ARE LIKELY FROM REGIONS 3576 AND 3594. SIGNIFICANT FLARES ARE STILL POSSIBLE FROM REGIONS 3573 (N11W54) AND 3577 (S15W88).

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE. THE SATELLITE PROTON EVENT ENDED 04/1430Z. THE GEOMAGNETIC ACTIVITY IS EXPECTED TO INTENSIFY WITHIN THE NEXT FEW HOURS DUE TO THE X1/2B FLARE OF 03 FEB.

III. EVENT PROBABILITIES 05 FEB-07 FEB

CLASS M 95/95/95

CLASS X 50/50/50

PROTON 30/30/30

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 04 FEB 262

PREDICTED 05 FEB-07 FEB 265/260/250

90 DAY MEAN 04 FEB 198

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 03 FEB 029/029

ESTIMATED AFR/AP 04 FEB 036/040

PREDICTED AFR/AP 05 FEB-07 FEB 050/040-035/030-015/015

SOLTERWARN

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HXUS BOU 042200
PREDM 09505 09506 09507
PREDX 05005 05006 05007
PREDP 03005 03006 03007
PCAFT 00205
TENCM 26505 26006 25007
AFRED 05005 03506 01507
AFAPF 04005 03006 01507
BT