

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 034A
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 1300Z 03 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
02/1200Z TO 03/1200Z: SOLAR ACTIVITY HAS BEEN HIGH FOR THE PAST
24 HOURS. THE LARGEST EVENT WAS AN X1/2B FLARE FROM 3576
(S13W29) WHICH MAXED AT 0128Z. THE EVENT WAS ACCOMPANIED BY A
RADIO BURST OF 1500 FLUX UNITS AT 10 CM, A MAJOR TYPE II SWEEP,
AND TYPE IV RADIO CONTINUUM THAT LASTED 153 MINUTES. THE FLARE
DEVELOPED GRADUALLY FROM AN ENHANCED AREA SOUTH WEST OF THE
LARGE LEADER SPOT INTO A PARALLEL RIBBON STRUCTURE THAT
EXTENDED TO INCLUDE THE TRAILER OF 3578 (S11W49). DISK LOOPS
WERE OBSERVED FOLLOWING THE FLARE. REGION 3576 CONTINUES TO
GROW ESPECIALLY IN ITS CENTRAL PORTION AND IT RETAINS ITS
EXTREMELY COMPLEX MAGNETIC STRUCTURE. HOWEVER, 3576 MAY SOON
HAVE TO COMPETE FOR ATTENTION WITH A NEW REGION WHICH HAS NOT
YET ROTATED OVER THE EAST LIMB. A LONG DURATION M3 X-RAY EVENT
MAXING AT 1451Z WAS ASSOCIATED WITH LOOPS AT SE10 AND A BSL TO
.20 R AT SE15. THE SOUTHEAST LIMB HAS CONTINUED TO PROVIDE A
SPECTACULAR SHOW WITH SEVERAL REPORTS OF LOOPS, SPRAYS TO .4 R,
AND CORONAL RAIN. A BRIGHT AREA IS BEGINNING TO ADVANCE ONTO
THE DISK BUT SPOTS ARE NOT YET VISIBLE. REGION 3573 (N10W37)
HAS DECAYED SIGNIFICANTLY SINCE YESTERDAY AND IS NO LONGER
EXPECTED TO PRODUCE MAJOR ACTIVITY. BESIDES 3576, THE OTHER
MOST IMPORTANT REGIONS ON THE DISK ARE 3577 (S14W67) WHICH
PRODUCED A PARALLEL-RIBBON M3/2B FLARE AT 1852Z, AND 3583
(S18E03) WHICH IS GROWING AND OF BETA-GAMMA MAGNETIC
COMPLEXITY. NEW REGION 3592 (N16E08) HAS GROWN RAPIDLY EAST OF
REGION 3582 (N15W07), AND REGION 3593 (S16E68) IS A SINGLE
SPOT WHICH MAY BE THE RETURN OF OLD REGION 3544.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
HIGH WITH GOOD PROBABILITIES OF MAJOR ACTIVITY FROM 3576 AND
THE NEW REGION BEHIND THE EAST LIMB.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS
AT STORM LEVELS AT THE BEGINNING OF THIS PERIOD BUT HAS QUIETED
DOWN TO ACTIVE LEVELS. ~~AN IMPULSE IN THE GEOMAGNETIC FIELD WAS
RECORDED AT 0134Z. ISEE-3 DATA WAS NOT AVAILABLE BUT PIONEER
VENUS OBSERVED AN INTERPLANETARY SHOCK AT 2224Z. THIS SHOCK IS
PRESUMABLY FROM THE X2/3B FLARE OF 01 FEB. HOWEVER, THERE IS
NOT YET ANY INDICATION OF THE GEOMAGNETIC STORM WHICH HAD BEEN
FORECAST FROM THAT FLARE. TODAY'S X1/2B FLARE IS EXPECTED TO
PRODUCE MINOR STORM CONDITIONS BEGINNING ON 04 FEB AND ENDING
ON 06 FEB. THE SATELLITE PROTON EVENT CONTINUES IN PROGRESS.
LEVELS HAVE DECLINED THROUGHOUT THE REPORTING PERIOD WITH NO
ENHANCEMENT FROM THE X1/2B FLARE. AT 1200Z ON 3 FEB THE
OBSERVED FLUX WAS 75 PROTONS/CM2/SEC/STER AT SATELLITE
ALTITUDES. IF NO NEW PARTICLES ARE RECEIVED, THE PROTON EVENT
WILL PROBABLY END LATE TODAY OR EARLY TOMORROW.~~ 0129

III. EVENT PROBABILITIES 04 FEB-06 FEB

CLASS M 90/90/90
CLASS X 50/50/50
PROTON 30/30/30
PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED	02 FEB	286
ESTIMATED	03 FEB	285
PREDICTED	04 FEB-06 FEB	295/305/310
90 DAY MEAN	02 FEB	198

V. GEOMAGNETIC A INDICES

OBSERVED AFR	01 FEB	036	AP 02 FEB	051
ESTIMATED AFR	02 FEB	050	AFR/AP 03 FEB	025/025
PREDICTED AFR/AP	04 FEB-06 FEB	035/030-050/040-035/030		

SOLTERWARN

BT

HXUS BOU 031300

PREDM 09004 09005 09006

PREDX 05004 05005 05006

PREDP 03004 03005 03006

PCAFT 00204

TENCM 29504 30505 31006

AFRED 03504 05005 03506

AFAPF 03004 04005 03006

KKK 44555 43334 56543

BT

END OF BUFFER
HFUS 3 BOU 032200
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 034B
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 03 FEB 1982
IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
03/1200Z TO 03/2100Z: SOLAR ACTIVITY HAS BEEN HIGH. REGION
3583(S18W03) PRODUCED AN M3/SN MAXIMUM 1159Z, ENDING IN THIS
PERIOD AT 1208Z. NEW REGION TODAY 3594 (S13E81) PROVIDED AN M2
EVENT MAX AT 1703Z. OPTICAL WAS UNCLASSIFIED DUE TO SEEING.
CENTIMETRIC OUTPUT OF 590 F.U. AT 245 MHZ AND 110 AT 2695 MHZ
ACCOMPANIED THIS EVENT. UNASSOCIATED M2 EVENTS, MAXIMA AT AT
1332Z AND 1739Z OCCURRED. AN M5 EVENT WITH AN M2 SECONDARY
PEAK, MAXIMA AT 2028Z AND 2038Z WAS ASSOCIATED WITH LOOPS
BEHIND THE LIMB AND AN IMPORTANCE 1B FLARE IN REGION 3594. THE
1B WAS ASSOCIATED WITH THE SECONDARY PEAK WAS OBSERVED IN THE
LEADER OF 3594. REGION 3576 (S13W35) REMAINS EXTREMELY COMPLEX
WITH 3 MAGNETIC DELTAS.
IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD REMAIN HIGH
WITH SIGNIFICANT ACTIVITY VERY LIKELY IN REGIONS 3576 AND 3594.
II. GEOPHYSICAL SUMMARY AND FORECAST: GEOMAGNETIC ACTIVITY HAS
REMAINED AT ACTIVE LEVELS THIS PERIOD. ENERGETIC PARTICLES AT
SATELLITE ALTITUDES CONTINUE ABOVE EVENT THRESHOLDS. FLUXES
HAVE DECLINED TO NEAR 30 PARTICLES/SEC-CM2-STER GREATER THAN
10 MEV. THE GEOMAGNETIC FIELD SHOULD RESUME MINOR STORM LEVELS
ON 4 FEB DUE TO THE X1/2B FLARE OF EARLY 3 FEB. THE PARTICLE
EVENT SHOULD END WITHIN THE NEXT FEW HOURS.
III. EVENT PROBABILITIES 04 FEB-06 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
PREDICTED 04 FEB-06 FEB 278/275/270
90 DAY MEAN 03 FEB 198
V. GEOMAGNETIC A INDICES
OBSERVED AFR/AP 02 FEB 048/051
ESTIMATED AFR/AP 03 FEB 025/025
PREDICTED AFR/AP 04 FEB-06 FEB 035/030-050/040-035/030
SOLTERWARN
BT

HXUS BOU 032200
PREDM 09504 09505 09506
PREDX 05004 05005 05006
PREDP 03004 03005 03006
PCAFT 00204
TENCM 27804 27505 27006
AFRED 03504 05005 03506
AFAPF 03004 04005 03006
BT