

HFUS 1 BOU 221300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 053A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 22 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

21/1200Z TO 22/1200Z: SOLAR ACTIVITY HAS BEEN LOW DURING THE PAST 24 HOURS. THE LARGEST EVENT OBSERVED DURING THE PERIOD WAS A C4/SB AT 22/0912Z MAXIMUM FROM REGION 3607 (N04W65). THIS FLARE HAD LITTLE ASSOCIATED RADIO EMISSION WITH IT. REGION 3607 CONTINUES TO SHOW EVIDENCE OF DECAY, AND NOW APPEARS TO BE A MAGNETICALLY SIMPLE BETA OR BETA/GAMMA GROUP DOMINATED BY MOSTLY POSITIVE POLARITY SPOTS. THE LARGE PENUMBRAL AREA WHICH CAUSED THE COMPACT CLASSIFICATION HAS NOW SPLIT IN TWO SEPARATE SEGMENTS. NO OTHER REGIONS HAVE BEEN HEARD FROM DURING THE PERIOD, BUT REGION 3610 (N14W19) HAS DISPLAYED SOME RESTRUCTURING AND MINOR GROWTH. A NEW REGION REPORTED NEAR THE SE LIMB AT S14E88 COULD VERY LIKELY BE THE RETURN OF OLD ACTIVE REGION 3576. TWO SMALL SPOTS AND STABLE PLAGE INDICATE THIS REGION IS PROBABLY NO LONGER A THREAT.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO RETURN TO THE MODERATE LEVEL BRIEFLY PRIOR TO REGION 3607'S TRANSIT. THIS REGION'S HISTORY INDICATES A MODERATE SIZED FLARE IS PROBABLE DURING THE NEXT 24 HOURS. THE LEVEL OF FLARE ACTIVITY IS THEN EXPECTED TO DROP DURING THE REMAINING TWO DAYS OF THE PERIOD. THE RETURN OF ACTIVE LONGITUDES SHOULD CAUSE A SLOW RISE IN THE 10.7CM SOLAR FLUX AFTER WE LOOSE THE CONTRIBUTION FROM REGION 3607.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS AT LOW ACTIVE LEVELS DURING THE PAST 24 HOURS. A GENERAL DECREASING TREND HAS BEEN NOTICED DURING THE PAST 12 HOURS. THE FIELD IS EXPECTED TO FINALLY REACH THE UNSETTLED CATEGORY AND REMAIN AT THIS LEVEL FOR THE PERIOD.

III. EVENT PROBABILITIES 23 FEB-25 FEB

CLASS M 75/55/40

CLASS X 25/15/05

PROTON 15/05/01

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 FEB 169

ESTIMATED 22 FEB 158

PREDICTED 23 FEB-25 FEB 152/158/163

90 DAY MEAN 21 FEB 200

V. GEOMAGNETIC A INDICES

OBSERVED AFR 20 FEB 017 AP 21 FEB 018

ESTIMATED AFR 21 FEB 018 AFR/AP 22 FEB 015/018

PREDICTED AFR/AP 23 FEB-25 FEB 010/018-010/012-008/012

SOLTERWARN

BT

HXUS BOU 221300

PREDM 07523 05524 04025

PREDX 02523 01524 00525

PREDP 01523 00524 00125

PCAF 00223

TENCM 15223 15824 16325

AFRED 01023 01024 00825

AFAPF 01823 01224 01225

KKK 32233 22222 33322

BT

HFXUS 3 BOU 222200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 053B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 22 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 22/1200Z TO 22/2100Z: SOLAR ACTIVITY HAS BEEN LOW FOR THE PAST NINE HOURS. REGION 3607 (N03W72) HAS DECLINED TO A COMPLEX UNIPOLAR SPOT GROUP AND HAS PRODUCED ONLY OCCASIONAL SUBFLARES. ITS ASSOCIATED PLAGE RETAINS SUFFICIENT COMPLEXITY TO PRODUCE AN ISOLATED CLASS M EVENT. MINOR GROWTH HAS OCCURRED IN REGION 3610 (N13E17) BUT ITS SIZE REMAINS SMALL. A TINY REGION AT S34W13 (REGION 3621) HAS REVERSED POLARITIES AS IF IT IS A MEMBER OF SOLAR CYCLE 22. ADDITIONAL PLAGE AND A SMALL SPOT NEAR SE LIMB MARK THE RETURN OF REGION 3576. RADIO SCAN INDICATES ADDITIONAL ACTIVITY MAY APPEAR AT THE LIMB IN THE NEXT DAY OR TWO.

IB. SOLAR ACTIVITY FORECAST: SOLAR INDICES ARE EXPECTED TO BE LITTLE CHANGED AS WEST LIMB PASSAGE OF REGION 3607 MAY BE COMPENSATED BY RETURNING REGIONS. FLARE ACTIVITY IS EXPECTED TO DROP TO A LOW LEVEL WITH THE LOSS OF REGION 3607.

II. GEOPHYSICAL SUMMARY AND FORECAST: ACTIVE TO MINOR STORM CONDITIONS HAVE DOMINATED THIS PERIOD. CONDITIONS ARE EXPECTED TO CONTINUE ACTIVE FOR ANOTHER 12 HOURS. CONDITIONS ARE EXPECTED TO BE UNSETTLED FOR THE NEXT THREE DAYS.

III. EVENT PROBABILITIES 23 FEB-25 FEB

CLASS M 55/40/30

CLASS X 15/05/05

PROTON 05/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 22 FEB 167

PREDICTED 23 FEB-25 FEB 170/163/168

90 DAY MEAN 22 FEB 201

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 21 FEB 022/018

ESTIMATED AFR/AP 22 FEB 025/030

PREDICTED AFR/AP 23 FEB-25 FEB 015/020-010/015-008/012

SOLTERWARN

BT

HFXUS BOU 222200

PREDM 05523 04024 03025

PREDX 01523 00524 00525

PREDP 00523 00124 00125

PCAF 00123

TENCM 17023 16324 16825

AFRED 01523 01024 00825

AFAPP 02023 01524 01225

BT