

HFXS 1 BOU 211300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 052A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 21 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/1200Z TO 21/1200Z: SOLAR ACTIVITY WAS MODERATE DURING THE PAST 24 HOURS. A FILAMENT DISAPPEARANCE ASSOCIATED WITH REGION 3614 (S12E53) PRODUCED AN M1/2B AT 201810Z (MAX). 3614 IS STILL AN UNIMPRESSIVE REGION AND DOES NOT APPEAR LIKELY TO REPEAT THIS PERFORMANCE SOON. REGION 3607 (N04W50) HAS BEEN TRANQUIL EXCEPT FOR SEVERAL SMALL C FLARES. THIS REGION IS COMPOSED OF PREDOMINATELY POSITIVE POLARITIES AT THIS TIME BUT TIGHT GRADIENTS STILL PERSIST IN THE SOUTHEAST PORTIONS. THE PENUMBRA ON THE PERIPHERY OF THE MAIN CENTROID HAS DECAYED SIGNIFICANTLY AND THE SPIRAL FORMATION IS LESS PRONOUNCED THAN YESTERDAY. SLOW DECAY IN REGION 3610 (N13W04) CONTINUES. NEW REGIONS SINCE 201200Z INCLUDE 3616 (N17E12), 3617 (N08E65) AND 3618 (S08E72). OLD REGION 3573, WHICH WAS DYNAMIC ON ITS LAST TRANSIT, SHOULD BE BACK ON THE VISIBLE DISK TODAY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD BE AT MODERATE LEVELS AS REGION 3607 REMAINS A THREAT FOR ENERGETIC ACTIVITY.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS UNSETTLED TO ACTIVE DURING THE PAST 24 HOURS. A GRADUAL QUIETING TREND IS EXPECTED TO CONTINUE AND QUIET TO UNSETTLED CONDITIONS SHOULD DOMINATE THE NEXT THREE DAYS.

III. EVENT PROBABILITIES 22 FEB-24 FEB

CLASS M 95/75/75

CLASS X 50/25/25

PROTON 50/15/15

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 20 FEB 175

ESTIMATED 21 FEB 178

PREDICTED 22 FEB-24 FEB 185/190/190

90 DAY MEAN 20 FEB 200

V. GEOMAGNETIC A INDICES

OBSERVED AFR 19 FEB 028 AP 20 FEB 020

ESTIMATED AFR 20 FEB 015 AFR/AP 21 FEB 012/018

PREDICTED AFR/AP 22 FEB-24 FEB 007/018-010/018-010/018

SOLTERWARN

BT

HXUS BOU 211300

PREDM 09522 07523 07524

PREDX 05022 02523 02524

PREDP 05022 01523 01524

PCAF 00222

TENCM 18522 19023 19024

AFRED 00722 01023 01024

AFAPF 01822 01823 01824

KKK 21244 33333 34433

BT

HFUS 3 BOU 212200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 052B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 21 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 21/1200Z TO 21/2100Z: SOLAR ACTIVITY HAS BEEN LOW FOR THE PAST 9 HOURS. REGION 3607 (N04W57) HAS PRODUCED ONLY SMALL SUBFLARES AND HAS LOST MUCH OF ITS MAGNETIC COMPLEXITY. HOWEVER, IT STILL RETAINS THE POTENTIAL FOR A MAJOR FLARE DURING THIS PHASE OF DECAY. REGION 3610 (N14W11) HAS GROWN GAINING NEW LEADER POLARITY SPOTS JUST SOUTH OF ESTABLISHED TRAILER SPOTS. ALSO, AN ACTIVE ARCH FILAMENT SYSTEM IS IN PROGRESS AT THAT LOCATION. AN ERUPTIVE PROMINENCE FROM THE NORTHEAST LIMB REACHING OUT TO .4 RADII WAS OBSERVED NEAR 1900Z. NEW REGIONS NUMBERED TODAY WERE 3619 (S12E78), AN H-TYPE SPOT, AND 3620 (S13W61), AN A-TYPE SPOT WHICH DEVELOPED ON THE DISK.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO TREND TOWARD LOWER LEVELS AS REGION 3607 DECAYS AND APPROACHES WEST LIMB PASSAGE. HOWEVER, THE PROMISE OF RETURNING REGIONS WHICH WERE ACTIVE LAST ROTATION REQUIRES ELEVATED EVENT PROBABILITIES AND 10 CM FLUX ESTIMATES.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETLED TO SLIGHTLY ACTIVE FOR THE PAST NINE HOURS. UNSETLED CONDITIONS ARE EXPECTED TO PREVAIL THROUGHOUT THE FORECAST PERIOD.

III. EVENT PROBABILITIES 22 FEB-24 FEB

CLASS M 95/75/55

CLASS X 50/25/15

PROTON 50/15/05

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 FEB 169

PREDICTED 22 FEB-24 FEB 175/180/185

90 DAY MEAN 21 FEB 200

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 20 FEB 017/020

ESTIMATED AFR/AP 21 FEB 018/018

PREDICTED AFR/AP 22 FEB-24 FEB 010/018-010/018-010/012

SOLTERWARN

BT

HXUS BOU 212200

PREDM 09522 07523 05524

PREDX 05022 02523 01524

PREDP 05022 01523 00524

PCAF 00222

TENCM 17522 18023 18524

AFRED 01022 01023 01024

AFAPP 01822 01823 01224

BT