

HFXS 1 BOU 201300  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 051A  
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 1300Z 20 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 19/1200Z TO 20/1200Z: SOLAR ACTIVITY HAS BEEN MODERATE. TWO LONG LIVED EVENTS WERE PRODUCED BY REGION 3607 (N04W37) DURING THE PAST 24 HOURS. AN M1/2B AT 191348Z (MAX) AND AN M3/2B AT 200946Z (MAX). BOTH OF THESE EVENTS WERE ACCCOMPANIED BY SMALL RADIO BURSTS THROUGHOUT THE FIXED FREQUENCY SPECTRUM. THEY WERE LONG LIVED BUT INTEGRATED X-RAY FLUXES WERE SMALL, INDICATING THAT ENERGY OUTPUT WAS ALSO SMALL. REGION 3607 HAS DEVELOPED A SPIRAL SHAPE IN ITS LARGE SPOT GROUP AND THIS IS A FORMATION THAT IS HISTORICALLY ASSOCIATED WITH PROTON PRODUCING REGIONS. REGION 3610 (N13E08) IS SLOWLY DECAYING, SPOT AREA IS DECLINING, MAGNETIC STRUCTURE IS SIMPLIFYING AND IN GENERAL THE REGION IS BECOMING LESS OF A THREAT. REGIONS 3613 (N06E55), 3614 (S12E65) AND 3615 (S09W20) WERE NUMBERED DURING THE PAST 24 HOURS.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE MODERATE. REGION 3607 APPEARS CAPABLE OF INDEPENDENTLY MAINTAINING THIS LEVEL.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS GENERALLY ACTIVE DURING THE PAST 24 HOURS. UNSETTLED CONDITIONS ARE EXPECTED DURING THE COMING 24 HOURS.

III. EVENT PROBABILITIES 21 FEB-23 FEB

CLASS M 95/95/95

CLASS X 70/30/30

PROTON 75/30/30

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 19 FEB 179

ESTIMATED 20 FEB 180

PREDICTED 21 FEB-23 FEB 185/190/195

90 DAY MEAN 19 FEB 200

V. GEOMAGNETIC A INDICES

OBSERVED AFR 18 FEB 024 AFR 19 FEB 032

ESTIMATED AFR 19 FEB 025 AFR/AP 20 FEB 018/020

PREDICTED AFR/AP 21 FEB-23 FEB 012/018-010/018-008/018

SOLTERWARN

BT

HXUS BOU 201300  
PREDM 09521 09522 09523  
PREDX 07021 03022 03023  
PREDP 07521 03022 03023  
PCAFF 00221  
TENCM 18521 19022 19523  
AFRED 01221 01022 00823  
AFAPP 01821 01822 01823  
KKK 22244 33333 34433  
BT

HFUS 3 BOU 202200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 051B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 20 FEB 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/1200Z TO 20/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 9 HOURS. REGION 3614 (S12E60) PRODUCED A SLOW-RISE M1/2B PARALLEL RIBBON EVENT WHICH MAXED AT 1810Z. IT WAS ASSOCIATED WITH AN ERUPTIVE FILAMENT WHICH BECAME A BRIGHT SURGE OBSERVED OUT TO .8 RADII ABOVE THE EAST LIMB.

ACCOMPANYING RADIO NOISE WAS MINOR BUT INCLUDED A WEAK TYPE II SWEEP. WHITE LIGHT REPORTS STILL CARRY 3614 AS AN H-TYPE SPOT. REGION 3607 (N04W43) CONTINUES TO MENACE BUT IT HAS PRODUCED ONLY SUBFLARES SINCE ITS M3/2B FLARE EARLIER TODAY. SOME DECAY IS EVIDENT SINCE YESTERDAY IN BOTH WHITE LIGHT AND H-ALPHA BUT SPOT ROTATION IS OCCURRING AND SIGNIFICANT MAGNETIC GRADIENTS ARE PRESENT. ITS BEHAVIOR IN THE NEXT FEW HOURS SHOULD BE CLOSELY MONITORED. REGION 3610 (N13E01) CONTINUES TO DECAY QUIETLY. THREE NEW REGIONS WERE NUMBERED TODAY. THEY ARE REGION 3616 (N17E19), A RAPIDLY EMERGING C-TYPE GROUP, REGION 3617 (N08E72), AN A-TYPE SPOT, AND REGION 3618 (S08E79), AN H-TYPE SPOT MARKING THE RETURN OF OLD REGION 3578.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE HIGH WITH REGION 3607 STILL CAPABLE OF A MAJOR PROTON-PRODUCING FLARE. FURTHER M-CLASS FLARE ACTIVITY MAY BE FORTHCOMING FROM REGION 3614.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETLED TO SLIGHTLY ACTIVE FOR THE PAST 9 HOURS. UNSETLED CONDITIONS ARE EXPECTED TO PREVAIL FOR THE NEXT 3 DAYS.

III. EVENT PROBABILITIES 21 FEB-23 FEB

CLASS M 95/95/95

CLASS X 70/30/30

PROTON 75/30/30

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 20 FEB 175

PREDICTED 21 FEB-23 FEB 185/190/195

90 DAY MEAN 20 FEB 200

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 19 FEB 028/032

ESTIMATED AFR/AP 20 FEB 015/020

PREDICTED AFR/AP 21 FEB-23 FEB 012/018-010/018-008/018

SOLTERWARN

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HXUS BOU 202200

PREDM 09521 09522 09523

PREDX 07021 03022 03023

PREDP 07521 03022 03023

PCAF1 00221

TENCM 18521 19022 19523

AFRED 01221 01022 00823

AFAPF 01821 01822 01823

BT