

HFUS 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 ACCOMPANIED 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 IAR 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

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HXUS BOU 201300

PREDM 09521 09522 09523

PREDX 07021 03022 03023

PREDP 07521 03022 03023

PCAFT 00221

TENCM 18521 19022 19523

AFRED 01221 01022 00823

AFAPF 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 UNSETTLED TO SLIGHTLY ACTIVE FOR THE PAST 9 HOURS.
UNSETTLED 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

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HXUS BOU 202200

PREDM 09521 09522 09523

PREDX 07021 03022 03023

PREDP 07521 03022 03023

PCAFT 00221

TENCM 18521 19022 19523

AFRED 01221 01022 00823

AFAPF 01821 01822 01823

BT