

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 022A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 1300Z 22 JAN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
21/1200Z TO 22/1200Z: SOLAR ACTIVITY INCREASED TO MODERATE
LEVELS DURING THIS 24 HOUR PERIOD, WITH THE FIRST M-CLASS EVENT
SINCE 13 JAN OCCURRING AT 22/0448Z. THIS EVENT, AN M2/1B FROM
REGION 3550 (N02W84), WAS A SOMEWHAT SPECTACULAR FLARE.

MATERIAL WAS PROJECTED FROM THE DISK IN THE FORM OF A BRIGHT
SURGE TO A HEIGHT OF 0.75 SOLAR RADII, FOLLOWED BY A PROLONGED
PERIOD OF CORONAL RAIN AS THE MATERIAL FELL BACK TO THE
SURFACE. TYPE II, III, AND V RADIO SIGNATURES WERE OBSERVED
WITH THE EVENT, AS WELL AS A BURST OF 1300 FU AT 8800 MHZ.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
LOW, BUT THERE STILL EXISTS A FAIR CHANCE OF ANOTHER ISOLATED
M-CLASS EVENT DURING THE NEXT 3 DAYS. THE 3549/3550 COMPLEX IS
ROTATING PAST THE WEST LIMB, WHICH WILL LEAVE OUR SIDE OF THE
SUN WITH ONLY SIMPLE SPOTTED REGIONS FOR AT LEAST A COUPLE OF
DAYS.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS
BEEN AT ACTIVE LEVELS FOR OVER 24 HOURS NOW. WE ARE UNCERTAIN
AS TO THE SOURCE OF THIS ACTIVITY, UNLESS THE EFFECTS OF THE
CORONAL HOLE WE HAD EXPECTED FOR 23 JAN SIMPLY CAME ONE DAY
EARLIER. IN ANY CASE, THE FORECAST CALLS FOR ACTIVE CONDITIONS
TO CONTINUE FOR ANOTHER 36 HOURS BEFORE SETTLING DOWN ON 24
JAN.

III. EVENT PROBABILITIES 23 JAN-25 JAN

CLASS M 50/40/30
CLASS X 02/01/01
PROTON 02/01/01
PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 JAN 169
ESTIMATED 22 JAN 163
PREDICTED 23 JAN-25 JAN 160/164/168
90 DAY MEAN 21 JAN 196

V. GEOMAGNETIC A INDICES

OBSERVED AFR 20 JAN 007 AP 21 JAN 010
ESTIMATED AFR 21 JAN 014 AFR/AP 22 JAN 015/012
PREDICTED AFR/AP 23 JAN-25 JAN 020/020-012/015-008/012

SOLTERWARN
BT

HXUS BOU 221300
PREDM 05023 04024 03025
PREDX 00223 00124 00125
PREDP 00223 00124 00125
PCAFT 00123
TENCM 16023 16424 16825
AFRED 02023 01224 00825
AFAPF 02023 01524 01225
KKK 33344 33333 43332
BT

HFUS 3 BOU 222200
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 022B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 22 JAN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
22/1200Z TO 22/2100Z: SOLAR ACTIVITY HAS BEEN LOW THIS PERIOD.
ONLY SMALL TO MID C CLASS FLARES HAVE BEEN OBSERVED. LITTLE
DATA HAVE BEEN RECEIVED. GROWTH HAS OCCURRED IN REGION 3557
(N05W06), AND AT A SLACKENED RATE IN 3569 (S08E36). A SUNSPOT
GROUP EMERGED JUST SOUTH OF 3557 ON 20 JANUARY AND TODAY HAS
BEEN NUMBERED 3570 (S04W07). THE LARGE PLAGE AREA AT CENTRAL
MERIDIAN HAS DISPLAYED SPOT EVOLUTION SUCH THAT REAL TIME GROUP
IDENTIFICATION HAS BEEN DIFFICULT.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD BE GENERALLY
LOW WITH CLASS M FLARES POSSIBLE FROM WEST LIMB AND CENTRAL
MERIDIAN REGIONS. THE SLACKENED GROWTH RATE OF REGION 3569
INDICATES IT MAY NOT BECOME A CLASS M FLARE PRODUCING REGION.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS
BEEN ACTIVE. THE DISTURBANCE TODAY IS POSSIBLY RELATED TO A
HIGH SPEED CORONAL HOLE STREAM SINCE ISEE DATA INDICATE AN
INCREASE IN WIND SPEED AND LARGE DECREASE IN WIND DENSITY. DUE
TO THE WIDTH OF THE CORONAL HOLE, ACTIVE CONDITIONS SHOULD BE
EXPERIENCED THROUGH THE FIRST HALF OF TOMORROW. FOLLOWING THAT
GENERALLY UNSETTLED CONDITIONS SHOULD BE EXPERIENCED.

III. EVENT PROBABILITIES 23 JAN-25 JAN

CLASS M 50/40/30

CLASS X 02/01/01

PROTON 02/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 22 JAN 158

PREDICTED 23 JAN-25 JAN 153/148/148

90 DAY MEAN 22 JAN 196

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 21 JAN 013/010

ESTIMATED AFR/AP 22 JAN 019/028

PREDICTED AFR/AP 23 JAN-25 JAN 017/020-012/015-010/015

SOLTERWARN

BT

HXUS BOU 222200

PREDM 05023 04024 03025

PREDX 00223 00124 00125

PREDP 00223 00124 00125

PCAFT 00123

TENCM 15323 14824 14825

AFRED 01723 01224 01025

AFAPF 02023 01524 01525

BT