

WFUS 1 ROU 291300
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 363A
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 1300Z 29 DEC 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
28/1200Z TO 29/1200Z: SOLAR ACTIVITY BECAME MODERATE DUE TO AN
M1/1N FLARE IN REGION 3533 (N06E60), MAXIMUM AT 28/2120Z.
REGION 3520 (S25W27) APPEARS TO HAVE DEVELOPED A WEAK DELTA.
REGION 3521 (S22W49) HAS GROWN IN AREA BY MORE THAN 50 PERCENT
AND IS A D GROUP. REGION 3530 (N18E15) HAS DEVELOPED RAPIDLY TO
A D GROUP OF ABOUT 100 MILLIONTHS. REGION 3533 (N06E60) WAS
NUMBERED TODAY. ALL OF THESE ARE SIMPLE GROUPS MAGNETICALLY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY MAY INCREASE
SLIGHTLY WITH THE SLIGHT INCREASE IN THE NUMBER OF REGIONS WITH
SIGNIFICANT FLARE POTENTIAL. OCCASIONAL M LEVEL FLARES MAY
OCCUR GIVING MODERATE LEVELS OF ACTIVITY INTERMITTENTLY.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD IS
AT MINOR STORM LEVELS FOLLOWING A SSC OF 24 GAMMA AT 29/0455Z.
THE FIELD IS EXPECTED TO CONTINUE AT ACTIVE LEVELS WELL THROUGH
THE UT DAY 30 DECEMBER. AN ACTIVITY SEQUENCE INVOLVING A C2/1N
FLARE IN REGION 3523 (S08E06) ON 27 DECEMBER FOLLOWED BY A
FILAMENT ERUPTION AND A LARGE AREA HYDR FLARE WITH C5 XRAY
ENHANCEMENT IS THE PROBABLE SOURCE OF CURRENT MAGNETIC
ACTIVITY. A WEAK TYPE II EMISSION WAS OBSERVED WITH THE
SEQUENCE. LOW ENERGY PARTICLES WERE OBSERVED ARRIVING EARLY IN
THIS FORECAST PERIOD AND ~~PCA~~ THRESHOLDS HAVE BEEN REACHED FOR
PCA IN RECENT HOURS.

III. EVENT PROBABILITIES 30 DEC-01 JAN

CLASS M 40/50/50
CLASS X 01/01/01
PROTON 01/01/01
PCAF IN PROGRESS

IV. OTTAWA 10.7 CM FLUX
OBSERVED 28 DEC 189
ESTIMATED 29 DEC 200
PREDICTED 30 DEC-01 JAN 208/214/219
90 DAY MEAN 28 DEC 214

V. GEOMAGNETIC A INDICES
OBSERVED AFR 27 DEC 006 AP 28 DEC 012
ESTIMATED AFR 28 DEC 013 AFR/AP 29 DEC 036/028
PREDICTED AFR/AP 30 DEC-01 JAN 026/022-018/018-012/009

SOLTERWARN
BT

HXUS BOU 291300
PREDM 04030 05031 05001
PREDX 00130 00131 00101
PREDP 00130 00131 00101
PCAF 00430
TENCM 20830 21431 21901
AFRED 02630 01831 01201
AFAPF 02230 01831 00901
KKK 55454 34433 34333
BT

GZLOU

KBOU

HFUS 3 BOU 292200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 363B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 29 DEC 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
29/1200Z TO 29/2100Z: SOLAR ACTIVITY HAS BEEN LOW THE PAST 9
HOURS WITH ONLY ONE FLARE, A C2/SF AT 29/2050Z REPORTED IN
SMALL REGION 3525 (S21W27). HOWEVER, OBSERVING CONDITIONS HAVE
BEEN LIMITED. REGION 3530 (N17E12) CONTINUES TO GROW IN AREA
BUT ITS STRUCTURE REMAINS MAGNETICALLY SIMPLE. REGION 3531
(N24E59) CONTAINS A LARGE SCATTERED PLAGE AND 3 SMALL SPOT
GROUPS. A SMALL NEW REGION IS REPORTED AT N19 EAST LIMB, WHERE
MINOR SURGE ACTIVITY HAS BEEN OBSERVED, BUT HAS NOT BEEN
NUMBERED.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO
REMAIN LOW WITH ISOLATED M CLASS EVENTS POSSIBLE.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS
BEEN AT MINOR STORM LEVELS SINCE 29/0455Z WHEN A SUDDEN
COMMENCEMENT OF 24 GAMMAS WAS OBSERVED IN BOULDER. UNSETTLED
CONDITIONS ARE EXPECTED DURING THE FORECAST PERIOD. LOW ENERGY
PARTICLES COUNTS HAVE RETURNED TO BACKGROUND LEVELS.

III. EVENT PROBABILITIES 30 DEC-01 JAN

CLASS M 30/30/30

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 29 DEC 190

PREDICTED 30 DEC-01 JAN 195/200/205

90 DAY MEAN 29 DEC 214

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 28 DEC 012/012

ESTIMATED AFR/AP 29 DEC 030/034

PREDICTED AFR/AP 30 DEC-01 JAN 015/017-010/013-008/009

SOLTERWARN

BT

NNNN