

WFUS 1 BOU 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 HYDRE 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  
 PCAFT 00430  
 TENCM 20830 21431 21901  
 AFRED 02630 01831 01201  
 AFAPF 02230 01831 00901  
 KKK 55454 34433 34333  
 BT

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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

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