

HFUS 1 BOU 201300  
 FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
 SDF NUMBER 324A  
 JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
 ISSUED 1300Z 20 NOV 1981  
 IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
 10/1200Z TO 20/1200Z: SOLAR ACTIVITY CONTINUES AT A LOW LEVEL.  
 THE LARGEST EVENT RECORDED DURING THE PAST 24 HOURS WAS AN  
 UNCORRELATED C2 X-RAY BURST AT 1045Z MAXIMUM. THE COUNT OF  
 SPOTTED REGIONS HAS NOW DECREASED TO SIX GROUPS. REGION 3471  
 (N13E03) IS NOW THE MOST IMPRESSIVE OF THESE WITH VERY RAPID  
 GROWTH AND INCREASING MAGNETIC COMPLEXITY REPORTED IN RECENT  
 HOURS. EVEN WITH THIS SIGNIFICANT GROWTH, IT MANAGED TO PRODUCE  
 ONLY ONE SUBFLARE. REGION 3467 (S17W53) HAS REACHED MATURITY  
 AND HAS PRODUCED MINOR SUBFLARES. SOME SURGING HAS BEEN  
 REPORTED AT THE NORTHEAST LIMB, WHILE THE REMAINING DISK  
 REGIONS HAVE CHANGED LITTLE IN THE PAST 24 HOURS.  
 IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD REMAIN LOW.  
 REGIONS 3471 AND 3467 ARE EXPECTED TO PRODUCE ONLY C-CLASS  
 EVENTS UNLESS REGION 3471'S GROWTH CONTINUES AT THE PRESENT  
 RATE, WHICH IS DOUBTFUL.  
 II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS  
 BEEN MOSTLY UNSETTLED DURING THE PAST 24 HOURS EXCEPT FROM  
 0900Z TO 1200Z WHEN A BRIEF ACTIVE PERIOD WAS OBSERVED. THE  
 FIELD IS FORECAST TO RETURN TO UNSETTLED LEVELS FOR THE  
 REMAINDER OF THE ZULU DAY. ACTIVE CONDITIONS ARE EXPECTED FOR  
 THE 21ST.  
 III. EVENT PROBABILITIES 21 NOV-23 NOV  
 CLASS M 20/20/20  
 CLASS X 01/01/01  
 PROTON 01/01/01  
 PCAF GREEN  
 IV. OTTAWA 10.7 CM FLUX  
 OBSERVED 19 NOV 161  
 ESTIMATED 20 NOV 153  
 PREDICTED 21 NOV-23 NOV 152/143/143  
 90 DAY MEAN 19 NOV 226  
 V. GEOMAGNETIC A INDICES  
 OBSERVED AFR 13 NOV 024 AP 19 NOV 013  
 ESTIMATED AFR 19 NOV 012 AFR/AP 20 NOV 012/013  
 PREDICTED AFR/AP 21 NOV-23 NOV 015/015-015/015-010/012  
 SOLTERWARN  
 BT

HXUS BOU 201300  
 PRED4 02021 02022 02023  
 PREDX 00121 00122 00123  
 PREDP 00121 00122 00123  
 PCAFT 00121  
 FENCM 15221 14522 14323  
 AFRED 01521 01522 01023  
 AFAPF 01521 01522 01223  
 CKK 32243 33223 34333  
 BT

HFUS 3 BOU 202200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 324B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 2200Z 20 NOVEMBER 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
20/1200Z TO 20/2100Z:

SOLAR ACTIVITY HAS BEEN LOW FOR THE PAST 9 HOURS. THE  
LARGEST EVENT REACHED M1 FOR A FEW SECONDS AT 1530Z AS AN  
IMPULSIVE SB FLARE IN REGION 3467 (S17W62). THIS EVENT  
PRODUCED A DARK SURGE AND ITS QUICK, INTENSE X-RAY BURST  
CAUSED A SUDDEN INCREASE IN ELECTRON CONTENT IN THE EARTH'S  
IONOSPHERE. THE FLARE OCCURRED ON THE SOUTH PERIMETER OF  
THE LARGE TRAILING SPOT IN REGION 3467. THE SPOT GROUP HAS  
BECOME MORE INTENSE THAN YESTERDAY BUT ITS AREA IS NEARLY  
THE SAME. REGION 3471 (N13W04) HAS BECOME A DELTA CONFIG-  
URATION, WITH THE ENTIRE GROUP CONSISTING OF A SINGLE SMALL  
MASS OF PENUMBRA. THE GROUP AXIS IS HIGHLY INCLINED TO WHAT  
IS A NORMAL ORIENTATION. ONLY SUBFLARES HAVE OCCURRED HERE.  
THE SUNSPOT NUMBER AND INTEGRATED SOLAR FLUX VALUES CONTINUE  
A STEADY DECLINE.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO REMAIN LOW.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED FOR THE PAST 9 HOURS.  
SLIGHTLY ACTIVE CONDITIONS ARE EXPECTED FOR THE NEXT TWO  
DAYS DUE TO MINOR ACTIVITY NEAR A CORONAL HOLE NOW ALIGNING  
WITH THE SUN-EARTH CONNECTION LONGITUDE. A PROLONGED QUIET  
INTERVAL IS EXPECTED TO COMMENCE OF THE THIRD DAY.

III. EVENT PROBABILITIES: 21-23 NOV

CLASS M 20/20/20

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 20 NOV 156

PREDICTED 21-23 NOV 152/146/143

90 DAY MEAN 20 NOV 225

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 19 NOV 13/13

ESTIMATED AFR/AP 20 NOV 14/14

PREDICTED AFR/AP 21-23 NOV 15/15 15/15 10/12

SOLTERWARN

BT