

HFUS 1 BOU 211300  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 111A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 1300Z 21 APR 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
20/1200Z TO 21/1200Z: SOLAR ACTIVITY HAS BEEN VERY LOW FOR THE  
PAST 24 HOURS. FLUCTUATIONS IN THE X-RAY BACKGROUND FLUX HAVE  
NOT EXCEEDED  $1E-3$  ERG/CM<sup>2</sup>/SEC (C1) AND NO OPTICAL FLARES HAVE  
BEEN OBSERVED. REGION 3696 (S19W53) HAS DECAYED TO A SIMPLE  
B-TYPE GROUP ALTHOUGH THERE IS STILL A GOOD MAGNETIC GRADIENT  
NEAR THE LEADER SPOT WHERE THE DELTA WAS YESTERDAY. THE MOST  
INTERESTING GROUPS ON THE DISK ARE THE CLOSELY-SPACED REGIONS  
3701 (N05E50), 3702 (N12E50), AND 3703 (N20E44). REGIONS 3701  
AND 3702 SHARE A COMMON NEUTRAL LINE AND THERE IS AN ACTIVE  
DARK FILAMENT BETWEEN THEM. REGION 3703 CONTAINS A STRONG ARCH  
FILAMENT SYSTEM IN ITS CENTER. DARK SURGES HAVE BEEN OBSERVED  
FROM ALL THREE REGIONS. WHILE THESE REGIONS ARE STILL  
MAGNETICALLY SIMPLE, THIS IS THE THIRD DISK TRANSIT OF AN  
ACTIVE CENTER AT THAT LOCATION AND THE PREVIOUS TWO REGIONS,  
3625 AND 3659, EACH PRODUCED SIGNIFICANT FLARES. ALL OTHER  
REGIONS ON THE VISIBLE DISK ARE SIMPLE AND NO LIMB ACTIVITY IS  
OCCURRING.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE  
LOW. UNLESS CONSIDERABLE DEVELOPMENT OCCURS IN THE  
3701/3702/3703 COMPLEX, SIGNIFICANT FLARES ARE UNLIKELY.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS  
BEEN UNSETTLED TO ACTIVE FOR THE PAST 24 HOURS. THESE  
CONDITIONS ARE EXPECTED TO CONTINUE AND INTENSIFY TOMORROW IN  
RESPONSE TO A HIGH SPEED SOLAR WIND STREAM PRESENTLY IMPACTING  
THE EARTH. GEOMAGNETIC ACTIVITY SHOULD DECREASE ON 23 APRIL,  
BECOMING QUIET BY THE END OF THE FORECAST PERIOD.

III. EVENT PROBABILITIES 22 APR-24 APR

CLASS M 15/15/15

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 20 APR 143

ESTIMATED 21 APR 146

PREDICTED 22 APR-24 APR 150/154/158

90 DAY MEAN 20 APR 202

V. GEOMAGNETIC A INDICES

OBSERVED AFR 19 APR 008 AP 20 APR 020

ESTIMATED AFR 20 APR 019 AFR/AP 21 APR 015/016

PREDICTED AFR/AP 22 APR-24 APR 018/017-012/012-007/010

SOLTERWARN

BT

HXUS BOU 211300

PREDM 01522 01523 01524

PREDX 00122 00123 00124

PREDP 00122 00123 00124

PCAFT 00122

TENCM 15022 15423 15824

AFRED 01822 01223 00724

AFAPF 01722 01223 01024

KKK 33443 32333 43332

BT

HFUS 3 BOU 212200  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 111B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 2200Z 21 APR 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
21/1200Z TO 21/2100Z: SOLAR ACTIVITY HAS CONTINUED AT A VERY LOW  
LEVEL AGAIN THIS PERIOD. ARCH FILAMENT SYSTEMS HAVE BEEN  
OBSERVED IN REGIONS 3702 (N12E46) AND 3703 (N19E39). ONLY ONE  
OPTICAL FLARE HAS BEEN OBSERVED DURING THE PAST 41 HOURS, A SF  
FROM REGION 3702 AT 1251UT ON 21 APRIL.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO  
CONTINUE AT A LOW LEVEL DURING THE FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS  
BEEN ACTIVE. THE FIELD IS EXPECTED TO CONTINUE AT ACTIVE LEVELS  
UNTIL LATE ON 22 APRIL WHEN UNSETTLED CONDITIONS ARE EXPECTED.

III. EVENT PROBABILITIES 22 APR-24 APR

CLASS M 15/15/15

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 APR 144

PREDICTED 22 APR-24 APR 150/154/158

90 DAY MEAN 21 APR 201

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 20 APR 020/020

ESTIMATED AFR/AP 21 APR 021/025

PREDICTED AFR/AP 22 APR-24 APR 018/012-012/012-007/010

SOLTERWARN

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HXUS BOU 212200

PREDM 01522 01523 01524

PREDX 00122 00123 00124

PREDP 00122 00123 00124

PCAFT 00122

TENCM 15022 15423 15824

AFRED 01822 01223 00724

AFAPF 01222 01223 01024

BT