

HFUS 3 BOU 082200  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 128

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 2200Z 08 MAY 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 07/2100  
TO 08/2100Z: SOLAR ACTIVITY INCREASED DRAMATICALLY DURING THE  
PAST 24 HOURS WITH THE OCCURRENCE OF TWO MAJOR EVENTS. THE  
FIRST; AN X3/2B WAS OBSERVED AT 07/2208Z MAXIMUM, WHILE THE  
SECOND AND PROBABLY THE MORE SPECTACULAR OF THE TWO OCCURRED AT  
08/0333Z MAXIMUM. BOTH HAD STRONG DISCRETE FREQUENCY RADIO  
BURSTS ASSOCIATED WITH THEM AND BOTH WERE OBSERVED NEAR THE  
CENTRAL PORTION OF REGION 4171 (S30E51 CURRENTLY). THE SECOND  
FLARE REACHED X1 IN XRAY, BUT WAS A LONG DURATION EVENT LASTING  
ALMOST NINE HOURS OPTICALLY. STRONG TYPE II/IV RADIO SWEEPS  
WERE OBSERVED WITH BOTH EVENTS. THE 10.7CM BURST ASSOCIATED  
WITH THE FIRST EVENT WAS RECORDED AT 610 FLUX UNITS WHILE THE  
SECOND PRODUCED 990FU. REGION 4171 HAS CONTINUED TO DISPLAY AN  
ACTIVE INVERSION LINE AND CONTINUOUS PLAGE FLUCTUATIONS, BUT  
HAS REMAINED RELATIVELY QUIET SINCE THESE TWO EVENTS. REGION  
4167 (N13W61) HAS DISPLAYED SOME MINOR GROWTH AND IS NOW A  
BETA-GAMMA SPOT AREA, BUT HAS ONLY MANAGED MINOR ACTIVITY.  
REGION 4173 (S11E04) HAS DISPLAYED RAPID GROWTH DURING THE PAST  
12 HOURS, BUT HAS REMAINED QUIET. NO NEW REGIONS WERE NUMBERED  
TODAY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD BE MODERATE  
TO HIGH THROUGH THE FORECAST PERIOD. REGION 4171 APPEARS TO BE  
THE TYPE OF REGION TO STORE ENERGY AND RELEASE IT ALL AT ONCE  
IN THE FORM OF A LARGE ENERGETIC EVENT. IF THIS IS TRUE,  
ISOLATED X-CLASS EVENTS ARE POSSIBLE, ESPECIALLY IF ITS CURRENT  
COMPLEXITY REMAINS INTACT. GROWTH TRENDS IN SOME OF THE OTHER  
DISK REGIONS COULD INCREASE THE M-CLASS FLARE PRODUCTION.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 07/2100Z TO 08/2100Z:  
THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS  
EXPECTED TO BECOME ACTIVE TO MINOR STORM LEVELS BY EARLY IN THE  
UT DAY ON THE 9TH. THE EXPECTED STORM FROM THE FILAMENT  
ERUPTION SHOULD BE THE SOURCE OF THIS ACTIVITY. ACTIVE  
CONDITIONS SHOULD CONTINUE THROUGH THE DURATION OF THE FORECAST  
WITH AN INCREASE ON THE 11TH IN RESPONSE TO TODAY'S ACTIVITY.

III. EVENT PROBABILITIES 09 MAY-11 MAY

CLASS M 80/80/80

CLASS X 30/30/30

PROTON 10/10/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 08 MAY 125

PREDICTED 09 MAY-11 MAY 127/129/130

90 DAY MEAN 08 MAY 118

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AD 08 MAY