

HFUS 1 BOU 261300  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 116A  
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 1200UT 26 APRIL 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
25/1200UT TO 16/1200UT:

SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 24 HOURS.  
REGION 3049 (N16W80) PRODUCED A M2/SB EVENT AT 25/1553UT A  
STRONG SHORT WAVE FADE AT 12 MHZ WAS RECORDED WITH THIS EVENT.  
(A BRIGHT SURGE (NO2E90) REACHED OUT TO .16 RADII BETWEEN  
25/1752-1835UT, NO X-RAY CORRELATION.) AT 26/0620UT REGION 3049  
PRODUCED A M1/SB. A X1/2B EVENT OCCURRED FROM REGION 3049  
WITH START 26/1045UT, FIRST MAXIMUM M5/1B AT 26/1119UT, THEN  
A SLOW RISE TO X1 AT 26/1218UT. A TEN FLARE OF 8962 FLUX  
UNITS OBSERVED AT 10.7 CM AND 15000 FLUX UNITS AT 1415 MHZ AT  
26/1154UT. SOME DECAY IN REGION 3049 IS BEING REPORTED. REGION  
3067 (NOAE47) PRODUCED A C9/IN EVENT AT 25/1951 UT A C8/SF AT  
26/0020UT A C6/SN AT 26/0314UT AND A VERY IMPULSIVE M4/1B WITH  
SIGNIFICANT DISCRETE RADIO BURSTS AT CENTIMETRIC WAVELENGTHS  
(20 FLUX UNITS AT 2695 MHZ) A SPRAY OUT TO .29 RADII ALSO OBSERVED  
WITH THE EVENT. REGION 3067 CONTINUES TO EXHIBIT GROWTH AND AN  
INCREASE IN MAGNETIC COMPLEXITY.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH. REGION 3049  
CONTINUES TO SHOW CHANGE AND RETAINS THE POTENTIAL FOR AN ISOLATED  
X-CLASS EVENT. REGION 3067 HAS SHOWN IT IS CAPABLE OF M-CLASS  
ACTIVITY AND IF GROWTH CONTINUES THEN X-CLASS EVENTS BECOME MORE  
PROBABLE. THE X1 EVENT AT 26/1218 MAY HAVE PRODUCED PROTONS.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD WAS UNSETLED TO ACTIVE UNTIL 26/0812 WHEN  
A SUDDEN COMMENCEMENT, OF 60 GAMMAS OCCURRED, FROM 0930UT THE  
FIELD HAS BEEN AT MINOR STORM LEVELS. THE FIELD IS EXPECTED TO BE  
AT MINOR STORM LEVELS UNTIL 26/1900UT WHEN MAJOR STORM CONDITIONS  
ARE EXPECTED. THE ACTIVITY WILL CONTINUE THROUGH 27 APRIL  
THEN BE AT MINOR STORM LEVELS UNTIL 29 APRIL. THE PROTON EVENT  
THAT BEGAN 24/1445 UT IS DECREASING HOWEVER IT REMAINS INPROGRESS  
AND IS EXPECTED TO CONTINUE FOR THE NEXT 12 HOURS, HOWEVER THE  
X1 EVENT THAT OCCURRED AT 26/1218UT MAY HAVE PRODUCED PROTONS WHICH  
WOULD CONTINUE THE EVENT FOR THE NEXT 36 HOURS. THE PCA EVENT  
ALSO CONTINUES TO BE NEAR EVENT THRESHOLDS AND IS EXPECTED TO  
CONTINUE FOR THE NEXT 12-18 HOURS UNLESS THE PROTONS ARRIVE.

III. EVENT PROBABILITIES: 27 - 29 APRIL

CLASS M 90/90/90

CLASS X 20/10/10

PROTON 20/10/05

PCAF IN PROGRESS

IV. OTTAWA 10.7 FLUX

OBSERVED 25 APR 210

ESTIMATED 26 APR 210

PREDICTED 27-29 APR 190/180/180

90 DAY MEAN 25 APR 213

V. GEOMAGNETIC A INDICES

OBSERVED AFR 24 APR 20 AP 25 APR 21

ESTIMATED AFR 25 APR 15 AFR/AP 26 APR 36/40

PREDICTED AFR/AP 27-29 APR 65/75 30/50 21/30

SOLTERWARN

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HFUS 3 BOU 262200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 116B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200 UT 26 APRIL 1981

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 26/1200 UT TO 26/2200 UT : ACTIVITY SINCE THE X1/2B EVENT AT 1218Z HAS BEEN MODERATE TO LOW. SPECTACULAR LOOPS HAVE PERSISTED THROUGHOUT THIS PERIOD ABOVE REGION 3049 (N16W85) AS AN AFTERMATH OF THE X1 FLARE THIS REGION PRODUCED AN M2/SN FLARE AT 1801Z. CLASS C EVENTS HAVE OCCURRED IN REGION 3067 (N02E41) WHERE SPOT GROWTH AND AN ACTIVE FILAMENT MAKE THIS AREA MORE COMPLEX. LARGE SURGES AT N02E90 MARK THE RETURN OF AN ACTIVITY COMPLEX (3031-3025-3026) THAT WAS A SOURCE OF MAJOR ACTIVITY LAST MONTH.

I B. SOLAR ACTIVITY FORECAST : ADDITIONAL MAJOR EVENTS ARE LIKELY AT WEST LIMB AS REGION 3049 COMPLETES LIMB TRANSIT. REGION 3067 APPEARS CAPABLE OF EVOLVING TO A MAJOR ACTIVITY CENTER. ACTIVITY AT NE LIMB MAY BECOME STRONGER DURING THIS PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST : THE GEOMAGNETIC ACTIVITY ROSE TO MAJOR STORM LEVEL 12-16Z BUT SUBSIDED THEREAFTER. MAJOR STORM CONDITIONS ARE EXPECTED FOR THE NEXT 36 HOURS.

III. EVENT PROBABILITIES 27 APRIL - 29 APRIL

CLASS M 90/90/90

CLASS X 20/10/10

PROTON 20/10/05

PCAF IN PROGRESS

IV. OTTAWA 10.7 CM FLUX

OBSERVED 26 APRIL 196

PREDICTED 27-29 APRIL 190/180/180

90-DAY MEAN 26 APRIL 213

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 25 APRIL 14/21

ESTIMATED AFR/AP 26 APRIL 38/60

PREDICTED AFR/AP 27-29 APRIL 65/75 - 30/50 - 21/30

SOLTERWARN

BT