

HFUS 1 BOU 181400

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 108A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1200UT 18 APRIL 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

17/1200UT TO 18/1200UT:

SOLAR ACTIVITY HAS BEEN HIGH. MAJOR EVENTS WERE: M5/1B 0138Z,
M3/1B 0609Z, M1/IN 0726Z AND X1 AT 1054Z. THE M-EVENTS OCCURRED
IN REGION 3038 (N10W43). NO OPTICAL COVERAGE EXISTED DURING THE
X1 EVENT. RADIO BURSTS WERE RELATIVELY WEAK WITH THESE EVENTS.
REGION 3038 IS A SMALL CLASS D SPOT GROUP WITH A COMPLEX STRUC-
TURE, INCLUDING SMALL DELTA CONFIGURATIONS. IT APPEARS TO HAVE
A PROPER MOTION TOWARD REGION 3035 (N15W54), WHICH CONTINUES AS
A LARGE CLASS E SPOT GROUP WITH COMPLEX STRUCTURE. REGION 3049
(N15E27) IS ALSO COMPLEX, HAS A POLARITY STRUCTURE REVERSED
FROM NORMAL AND HAS AN ASSOCIATED ACTIVE FILAMENT. ITS PROXIMITY
TO REGION 3051 (N25E31) ADDS TO ITS FLARE POTENTIAL. MAJOR GROWTH
IS OCCURRING IN REGION 3045 (S06W15) BUT THE MAGNETIC STRUCTURE
REMAINS SIMPLE IN THIS RELATIVELY ISOLATED REGION. GROWTH CON-
TINUES IN SMALL REGIONS 3053 (N2SW27) AND 3058 (N19W38). MINOR
SURGING NEAR S42E90 MARKS THE RETURN OF REGION 2999. OBSERVATIONS
THUS FAR INDICATE IT IS NO LONGER A SOURCE OF MAJOR ACTIVITY.

IB. SOLAR ACTIVITY FORECAST:

A HIGH LEVEL OF ACTIVITY IS EXPECTED UNTIL WEST LIMB PASSAGE
OF THE 3035-38 ACTIVITY COMPLEX ON 21 APRIL.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD WAS UNSETTLED EARLY IN THIS PERIOD AND
QUIET DURING THE MOST RECENT 12 HOURS. QUIET TO UNSETTLED
CONDITIONS ARE EXPECTED FOR THE NEXT THREE DAYS.

III. EVENT PROBABILITIES: 19-21 APRIL

CLASS M 95/95/95

CLASS X 30/20/10

PROTON 10/10/10

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 17 APRIL 241

ESTIMATED 18 APRIL 245

PREDICTED 19-21 APRIL 240/235/225

90 DAY MEAN 17 APRIL 209

V. GEOMAGNETIC A-FINDICES

OBSERVED AFR 16 APRIL 11 AP 17 APRIL 24

ESTIMATED AFR 17 APRIL 16 AFR/AP 18 APRIL 06/06

PREDICTED AFR/AP 19-21 APRIL 10/12 15/10 10/10

SOLTERWARN

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HEUS 3 BOU 182200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 1088

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200UT 18 APR 1981

I.A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
18/1200UT TO 18/2200UT:

SOLAR ACTIVITY HAS BEEN HIGH SINCE 18/1200UT DUE TO AN XI CLASS
X-RAY FLARE AT 18/2117UT. THERE WAS NO OPTICAL REPORT AT
FORECAST TIME. OTHER FLARES OCCURRING DURING THIS PERIOD HAVE
BEEN SMALL FROM REGIONS 3035 (N 15W59), 3043 (N23W06), 3048
(N18W00), AND 3052 (N14W35).

I.B. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE HIGH TO MODERATE FOR THE
FORECAST PERIOD DUE PRIMARILY TO THE ACTIVE NATURE OF REGION
3038 (N11W49).

I.I. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD WAS QUIET UNTIL 1500UT WHEN A SUDDEN
COMMENCEMENT OCCURRED, FOLLOWED BY A K-INDEX OF FOUR. UNSETLED
CONDITIONS ARE EXPECTED TO PREVAIL WITH PERIODS OF ACTIVE CON-
DITIONS FOR THE NEXT THREE DAYS.

III. EVENT PROBABILITIES: 19 APR - 21 APR

CLASS M 95/95/95

CLASS X 30/20/10

PROTON 20/10/10

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 18 APR 227

PREDICTED 19-21 APR 220/215/200

90 DAY MEAN 18 APR 210

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 17 APR 21/24

ESTIMATED AFR/AP 18 APR 13/15

PREDICTED AFR/AP 19-21 APR 13/12 12/10 12/15

SOLTERWARN

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