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HFUS 1 BOU 111400

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 101A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1200UT 11 APRIL 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

10/1200UT TO 11/1200UT:

SOLAR ACTIVITY HAS BEEN HIGH. A PROTON FLARE X2/3B OCCURRED IN REGION 3025 (N09W46) AT 10/1655UT. IT WAS ACCCOMPANIED BY TYPE II AND IV RADIO EMISSION, BURSTS OF 2600FU AT 8800 MHZ, 600 FU AT 2695 MHZ AND 110FU AT 245MHZ, CASTELLI U RADIO DISTRIBUTION AND AN IMPORTANCE³ SHORT WAVE FADE. THERE HAS BEEN GROWTH IN THIS REGION AND IN REGION 3026 (N08W33). THESE TWO REGIONS ARE VERY CLOSE TOGETHER AND THE FLARE OCCURRED ALONG THE NEUTRAL LINE BETWEEN THEM. REGION 3035 (N14E37) IS GROWING AND CONTAINS A DELTA CONFIGURATION IN A SPOT GROUP OF CLASS/AREA F/1240. IT PRODUCED AN M2/1B FLARE AT 10/1913UT. REGION 3027 (N18W16) CONTINUES TO DECAY. ALL OF THESE REGIONS CONTAIN COMPACT FLUCUATING PLAGES WITH BRIGHT POINTS AND SUBFLARES REPORTED THROUGHOUT THE DAY.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO REMAIN HIGH. REGIONS 3025, 3026 AND 3035 ARE CAPABLE OF FURTHER CLASS X PROTON FLARES AND ARE LIKELY TO PRODUCE CLASS M LEVEL ACTIVITY THROUGHOUT THE FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN QUIET TO UNSETLED. ACTIVE TO MINOR STORM CONDITIONS ARE EXPECTED FOR THE NEXT THREE DAYS WITH A SUDDEN COMMENCEMENT EXPECTED ABOUT 13/0000UT IN RESPONSE TO THE X2 FLARE AT 10/1755UT. A PROTON EVENT BEGAN AT 10/1830UT AND REACHED MAXIMUM AT 10/2300UT AT GREATER THAN 10 MEV WITH 40 PARTICLES/CM²/SEC/STER. IT IS DECLINING SLOWLY BUT SHOULD REMAIN ABOVE EVENT THRESHOLD FOR THE NEXT 24 HOURS.

III. EVENT PROBABILITIES: 12-14 APRIL

CLASS M 95/95/95

CLASS X 35/35/35

PROTON 35/35/35

PCAF RED

IV. OTTAWA 10.7 FLUX

OBSERVED 10 APRIL 276

ESTIMATED 11 APRIL 282

PREDICTED 12-14 APRIL 278/274/268

90 DAY MEAN 10 APRIL 202

V. GEOMAGNETIC INDICES

OBSERVED AFR 09 APRIL 11 AP 10 APRIL 09

ESTIMATED AFR 10 APRIL 09 AFR/AP 11 APRIL 13/25

PREDICTED AFR/AP 12-14 APRIL 30/35 45/55 20/20

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HEUS 3 BOU 112200
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDE NUMBER 101B
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200UT 11 APR 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
11/1200UT TO 11/2200UT:

SOLAR ACTIVITY WAS MODERATE DURING THIS PERIOD, BUT MUCH
QUIETER THAN YESTERDAY. THERE WERE THREE M-CLASS EVENTS:
(1) M1/1B, 1338UT, REGION 3038 (N09E46); (2) M1/SN, 1830UT,
REGION 3027 (N17W22); AND (3) M1/1B, 2004 UT, REGION 3035
(N06E31). AFTER A WEEK OF STEADY INCREASE, THE BACKGROUND
10 CM FLUX HAS STARTED TO DECLINE.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH. THERE
ARE STILL THREE OR FOUR REGIONS CAPABLE OF M-CLASS ACTIVITY.
IN PARTICULAR, REGION 3035 APPEARS ABLE TO PRODUCE AN X-CLASS
EVENT.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD BECAME DISTURBED AT ABOUT 1330 UT TODAY.
ACTIVE OR MINOR STORM LEVELS OF ACTIVITY ARE EXPECTED TO
PERSIST FOR 72 HOURS. AT 2100UT THE PROTON EVENT WAS STILL IN
PROGRESS, WITH 40 PARTICLES GT 10 MEV/CM²/SEC. A STEADY DE-
CLINE IN PROTON FLUX IS EXPECTED OVER THE NEXT 24 HOURS.

III. EVENT PROBABILITIES: 12-14 APR

CLASS M 95/95/95

CLASS X 35/35/35

PROTON 35/35/35

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 11 APR 271

PREDICTED 12-14 APR 265/260/255

90 DAY MFAN 11 APR 203

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 10 APR 11/09

ESTIMATED AFR/AP 11 APR 25/25

PREDICTED AFR/AP 12-14 APR 30/35 45/55 20/20

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