

HFUS , BOU 211300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 141A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1200UT 21 MAY 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/1200UT TO 21/1200UT:

SOLAR ACTIVITY HAS BEEN LOW. ACTIVITY IN THE PAST 24 HOURS HAS CONSISTED OF ONLY C2 X-RAY CLASS OR SMALLER SUBFLARES. REGIONS 3106 (N11W59) AND 3112 (N15W48) WERE THE SOURCES OF SEVERAL OF THESE SUBFLARES, WITH FIVE OTHER C-CLASS EVENTS NOT OBSERVED OPTICALLY. BOTH OF THESE REGIONS CONTINUE TO DECAY. REGION 3113 (S25W15) HAS MATURED AND IS NOW THE MOST DYNAMIC ON THE DISK, BUT HAS REMAINED QUIET DURING THE PAST 24 HOURS. NEW REGIONS 3117 (S08E68) AND 3118 (S09W46) ALONG WITH A NEW SPOT GROUP AT S30W05 HAVE EMERGED IN THE PAST 24 HOURS, BUT ALL ARE SMALL AND STABLE.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO REMAIN LOW. REGION 3113 COULD PRODUCE AN ISOLATED M-CLASS EVENT, BUT ONLY C-CLASS FLARES ARE EXPECTED FROM THE REMAINING DISK REGIONS. NO SIGNIFICANT REGIONS ARE EXPECTED AT EAST LIMB IN THE NEXT THREE DAYS.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN ACTIVE. UNSETTLED CONDITIONS ARE EXPECTED FOR THE REMAINDER OF THIS UT DAY, FOLLOWED BY ACTIVE LEVELS COMMENCING ON THE 22ND OF MAY AFTER 0600UT.

III. EVENT PROBABILITIES: 22 MAY - 24 MAY

CLASS M 50/45/40

CLASS X 05/05/05

PROTON 05/05/05

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 20 MAY 176

ESTIMATED 21 MAY 170

PREDICTED 22-24 MAY 165/162/160

90 DAY MEAN 20 MAY 215

V. GEOMAGNETIC A INDICES

OBSERVED AFR 19 MAY 15 AP 20 MAY 42

ESTIMATED AFR 20 MAY 29 AFR/AP 21 MAY 10/15

PREDICTED AFR/AP 22 - 24 MAY 20/25 - 20/25 - 15/15

SOLTERWARN

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HFUS 3 BOU 212200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 141 B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200 UT 21 MAY 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 21/1200 UT TO 21/2200 UT: SOLAR ACTIVITY REMAINS LOW. THE LARGEST EVENT OF THE PAST 10 HOURS WAS C3 FROM ACTIVITY AT EAST LIMB. A LARGE AREA OF WEAK PLAGE EXTENDS FROM N20 TO S15 ALONG THE LIMB WITH FIVE NEW BUT SMALL SPOT GROUPS. THE LARGEST NEW REGION IS 3121 AT N03E74 WITH A TYPE-D SPOT GROUP. RAPID GROWTH IS OCCURRING IN REGION 3123 (N17E45) WHICH FORMED ON THE DISK WITHIN THE PAST 6 HOURS. STEADY DECAY CONTINUES IN ACTIVITY COMPLEX 3106-3122 (N14W60) WHERE MINOR FLARES HAVE OCCURRED NEAR TWO ACTIVE FILAMENTS. REGION 3113 (S25W20) IS DECAYING SLIGHTLY AND NO LONGER HAS AN ACTIVE FILAMENT.

IB. SOLAR ACTIVITY FORECAST: ACTIVITY WILL REMAIN LOW UNTIL THERE IS EITHER SUBSTANTIAL GROWTH OF PRESENT REGIONS OR THE APPEARANCE OF LIMB ACTIVITY. NO REGIONS ARE ANTICIPATED TO PRODUCE CLASS M EVENTS OTHER THAN POSSIBLY REGION 3113.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED FOR THE PAST 10 HOURS. UNSETTLED CONDITIONS WILL PREVAIL FOR THE NEXT THREE DAYS WITH OCCASIONAL ACTIVE PERIODS NEAR LOCAL MIDNIGHT.

III. EVENT PROBABILITIES 22 MAY - 24 MAY

CLASS M 50/45/40

CLASS X 05/05/05

PROTON 05/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 MAY 176

PREDICTED 22-24 MAY 182/176/175

90-DAY MEAN 21 MAY 214

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 20 MAY 37/42

ESTIMATED AFR/AP 21 MAY 11/15

PREDICTED AFR/AP 22-24 MAY 15/20 - 15/20 - 10/15

SOLTERWARN

BT