

HFUS 3 BOU 132200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 103

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 13 APR 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 12/2100 TO 13/2100Z: SOLAR ACTIVITY REMAINS LOW. ONLY SUBFLARE ACTIVITY HAS BEEN OBSERVED DURING THE PAST 24 HOURS FROM A VARIETY OF SMALL REGIONS. ALL OF THESE HAVE FAILED TO REACH THE C-CLASS XRAY LEVEL. REGION 4142 (S08E35) IS THE ONLY DISK REGION SHOWING MUCH PROMISE. IT IS A GROWING SPOT GROUP WITH AN ARCH FILAMENT SYSTEM AND OCCASIONAL PLAGE FLUCTUATIONS. THIS REGION HAS DEVELOPED A WEAK BETA-GAMMA MAGNETIC COMPLEXITY DUE TO THE FORMATION OF AN ISOLATED POLE IN THE EASTERN PORTION OF THE SPOT GROUP. MAGNETIC GRADIENTS IN THIS LOCATION HAVE STRENGTHENED CONSIDERABLY IN THE PAST 12 HOURS. REGIONS 4137 (S09W78) AND 4144 (N22E55) ALSO PRODUCED MINOR SUBFLARES, BUT HAVE DISPLAYED LITTLE SPOT DYNAMICS DURING THE PERIOD.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD REMAIN LOW. REGION 4142 IS EXPECTED TO PRODUCE C-CLASS XRAY EVENTS DURING THE FORECAST PERIOD.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 12/2100Z TO 13/2100Z: THE GEOMAGNETIC FIELD HAS BEEN AT ACTIVE TO MINOR STORM LEVELS SINCE 00Z ON THE 13TH. A SUDDEN COMMENCEMENT OF 66 GAMMAS WAS RECORDED ON THE BOULDER MAGNETOMETER AT 1100Z. THE SUSPECTED SOURCE OF THIS ACTIVITY IS A NORTHERN EXTENSION OF A SOUTH POLAR CORONAL HOLE WHICH NOW IS IN A PRIME LOCATION FOR GEO-RELATED EFFECTS.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE FIELD IS EXPECTED TO REMAIN AT ACTIVE LEVELS (MINOR STORM CONDITIONS AT HIGH LATITUDES) THROUGH THE NEXT THREE DAYS.

III. EVENT PROBABILITIES 14 APR-16 APR

CLASS M 01/01/01

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 13 APR 108

PREDICTED 14 APR-16 APR 109/110/111

90 DAY MEAN 13 APR 122

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 12 APR 011/013

ESTIMATED AFR/AP 13 APR 025/035

PREDICTED AFR/AP 14 APR-16 APR 020/035-025/030-020/025

SOLTERWARN

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