

FUS 3 BOU 162200
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 106

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 16 APR 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 15/2100 TO 16/2100Z: SOLAR ACTIVITY HAS REMAINED LOW. ONLY MINOR SUBFLARES HAVE BEEN OBSERVED WITH LITTLE XRAY RESPONSE. REGION 4146 (N07E53) HAS NOW BECOME THE DOMINANT GROUP ON THE DISK DISPLAYING SLOW GROWTH, AN ARCH FILAMENT SYSTEM, AND FLUCTUATING PLAGE. THIS REGION SHOWS A STRENGTHENING MAGNETIC GRADIENT ALONG WITH A TRENDING TOWARDS A BETA-GAMMA MAGNETIC CONFIGURATION. IN WHITE LIGHT THIS REGION REMAINS A SMALL D-TYPE GROUP. REGION 4148 (S29W27) EMERGED YESTERDAY ON THE DISK, AND HAS GROWN RAPIDLY DURING THE PAST 24 HOURS. IT NOW IS A BRIGHT COMPACT PLAGE WITH A BETA-GAMMA MAGNETIC CONFIGURATION, BUT HAS YET TO PRODUCE ANY FLARE ACTIVITY. NEW REGION 4149 (S09E11) WAS NUMBERED TODAY AND IS A SMALL BUT GROWING A-TYPE GROUP. THE EXPECTED RETURN OF AN ACTIVE REGION TO THE SOUTHEAST LIMB (SE05) HAS YET TO MATERIALIZE.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD REMAIN LOW. IF PRESENT GROWTH TRENDS CONTINUE, BOTH REGIONS 4146 AND 4148 COULD PRODUCE A MODERATE SIZED EVENT DURING THE FORECAST PERIOD. PAST OBSERVED ACTIVITY FROM THE SOUTHEAST LIMB INDICATES AN ACTIVE REGION COULD CROSS THE LIMB DURING THE PERIOD.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 15/2100Z TO 16/2100Z: THE GEOMAGNETIC FIELD WAS AT MINOR TO MAJOR STORM LEVELS EARLY IN THE PERIOD (15/2200Z TO 16/0600Z), BUT HAS SINCE DECREASED TO ACTIVE LEVELS.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD SHOULD REMAIN AT ACTIVE LEVELS (OCCASIONAL MINOR STORM AT HIGH-LATITUDES) THROUGH THE NEXT 12 HOURS FOLLOWED BY UNSETTLED LEVELS FOR THE DURATION OF THE FORECAST PERIOD.

III. EVENT PROBABILITIES 17 APR-19 APR

CLASS M 10/10/10

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 16 APR 104

PREDICTED 17 APR-19 APR 106/108/109

90 DAY MEAN 16 APR 120

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 15 APR 033/055

ESTIMATED AFR/AP 16 APR 024/035

PREDICTED AFR/AP 17 APR-19 APR 015/020-012/015-010/015

SOLTERWARN

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