

HFUS 3 BOU 172200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 107

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 17 APR 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 16/2100 TO 17/2100Z: SOLAR ACTIVITY REMAINS LOW. ONLY MINOR SUBFLARES HAVE BEEN OBSERVED DURING THE PAST 24 HOURS WITH NO XRAY RESPONSES REACHING THE C-CLASS XRAY LEVEL. REGION 4146 (N08E40) HAS PRODUCED MOST OF THIS SUBFLARE ACTIVITY, BUT HAS DISPLAYED SLOW DECAY IN BOTH WHITE LIGHT AND H-ALPHA. REGION 4148 (S29W40) HAS NOW BECOME THE DOMINATE DISK REGION WITH VERY RAPID GROWTH DURING THE PAST 24 HOURS. THE WHITE LIGHT SPOT SIZE HAS APPEARED TO DOUBLE IN SIZE DURING THE PAST FEW HOURS. THIS REGION CONTAINS A STRONG ARCH FILAMENT SYSTEM ALONG WITH A STRENGTHENING MAGNETIC FIELD GRADIENT AND A BETA-GAMMA MAGNETIC CONFIGURATION. REGION 4145 (S07W15) AND REGION 4149 (S11W02) HAVE ALSO SHOWN SOME SLOW GROWTH DURING THE PERIOD WITH ARCH FILAMENTS VISIBLE. NO NEW DISK REGIONS WERE NUMBERED TODAY. SURGING FROM THE SOUTHEAST LIMB (SE12) INDICATES ANOTHER REGION IS DUE TO ROTATE OVER, POSSIBLY THE GROUP WHICH PRODUCED THE ACTIVITY SEVERAL DAYS AGO.

IB. SOLAR ACTIVITY FORECAST: THE LEVEL OF ACTIVITY IS EXPECTED TO REMAIN LOW; HOWEVER, AN ISOLATED M-CLASS EVENT IS POSSIBLE FROM REGION 4148, AND IF ITS PRESENT GROWTH TRENDS CONTINUE THE PROBABILITY WILL INCREASE DURING THE 3 DAY PERIOD.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 16/2100Z TO 17/2100Z: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE DURING THE PERIOD WITH BRIEF MINOR STORM CONDITIONS RECORDED AT HIGH LATITUDES EARLY IN THE PERIOD (16/22Z TO 17/09Z).

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE FIELD IS EXPECTED TO BE UNSETTLED TO ACTIVE (HIGH LATITUDES) WITH ONLY LOW UNSETTLED CONDITIONS FORECAST FOR MID-LATITUDES.

III. EVENT PROBABILITIES 18 APR-20 APR

CLASS M 10/10/10

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 17 APR 113

PREDICTED 18 APR-20 APR 118/120/120

90 DAY MEAN 17 APR 120

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 16 APR 025/035

ESTIMATED AFR/AP 17 APR 017/020

PREDICTED AFR/AP 18 APR-20 APR 012/015-010/015-010/015

SOLTERWARN

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