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HAUS BOU 220410

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDF NUMBER 112A ISSUED 0400Z 22 APRIL 1971

CLASS M FLARES ARE EXPECTED DURING THE NEXT 13 HOURS.

A. DURING THE PAST 11 HOURS, ONLY CLASS C FLARES HAVE BEEN REPORTED. THE DEVELOPING REGION AT N20W43 IS THE MOST IMPRESSIVE DISK FEATURE, CONTAINING DYNAMIC PLAGE AND A MAGNETICALLY COMPLEX SPOT GROUP.

BRIGHT, FLUCTUATING PLAGE AND SPOT GROWTH ALSO HAVE BEEN OBSERVED RECENTLY AT N17W57. OCCASIONAL BRIGHTENINGS AND SUBFLARE ACTIVITY HAVE OCCURRED IN THE SLOWLY-GROWING REGION AT S10E27. DECAY IS IN PROGRESS AT S05W72, BUT AN ACTIVE FILAMENT IS PRESENT EAST OF THE MAIN H SPOT. OTHER GROUPS ARE UNIMPRESSIVE. THE GEOMAGNETIC FIELD HAS BEEN MODERATELY DISTURBED DURING THE PAST 11 HOURS, ESPECIALLY AT HIGH LATITUDES. PROTON COUNTING RATES ON THE AFS-1 SATELLITE PRESENTLY ARE ABOUT 15 PARTICLES/CM<sup>2</sup>/SEC AT 5-20 MEV AND 0.5 PARTICLES/CM<sup>2</sup>/SEC, THE NORMAL BACKGROUND LEVEL, AT 20-70 MEV.

B. SOLAR ACTIVITY IS EXPECTED TO INCREASE SLIGHTLY DURING THE 3-DAY FORECAST PERIOD AS REDEVELOPMENT CONTINUES IN THE NORTHWEST QUADRANT. THE PRESENT LEVEL OF MINOR GEOMAGNETIC DISTURBANCE IS EXPECTED TO CONTINUE UNTIL SOMETIME BETWEEN 1300 AND 1900Z TODAY, WHEN A MAGNETIC STORM OF WEAK TO MODERATE INTENSITY PROBABLY WILL BEGIN.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 22 APRIL/0400Z ENDING 25 APRIL/0400Z.

CLASS M OR GREATER 70/75/80

CLASS X 10/10/20

PROTON EVENTS 10/10/20

D. OTTAWA 10.7 CM FLUXES FOR 21/1700Z AND 21/2000Z WERE 128 AND 125 RESPECTIVELY.

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HAUS BOU 221700

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDF NUMBER 112B ISSUED 1700Z 22 APRIL 1971

ONE TO TWO SMALL CLASS M EVENTS ARE EXPECTED IN THE NEXT 11 HOURS.

A. FOUR SUBFLARES HAVE BEEN REPORTED IN THE PAST 13 HOURS. ALL WERE LOCATED IN THE N20W50 AND N20W61 REGIONS. THE MOST ENERGETIC WAS A CLASS C9 SUBNORMAL AT 22/0940Z. THESE REGIONS, ESPECIALLY THAT AT N20W50, CONSIST OF NUMEROUS SMALL SPOTS OF JUMBLED MAGNETIC POLARITIES. PLAGE AND ARCH FILAMENT GROWTH, WHICH IS INDICATIVE OF NEW FIELDS EMERGING FROM SUB PHOTOSPHERIC LEVELS, ARE REPORTED IN A DEVELOPING REGION NEAR S09W39, BUT THE REGION AS YET REMAINS INACTIVE. A SMALL H-TYPE SPOT NEAR S11E68 IS APPARENTLY ALL THAT REMAINS OF THE REGION WHICH PRODUCED THE PROTON EVENT OF 06 APRIL. AFTER DECAYING TO NEAR BACKGROUND LEVELS FOLLOWING THE MINI PROTON EVENT OF 20-21 APRIL, THE FLUX OF 21-70 MEV PROTONS AT AIS-1 ALTITUDES ONCE AGAIN BECAME ENHANCED AT 22/1220Z. CURRENT FLUX IS SLIGHTLY GREATER THAN 2 PARTICLES PER SQ CM PER SEC. THE 5-21 MEV FLUX IS VERY SLIGHTLY ENHANCED AND INCREASING SLOWLY. THE GEO-MAGNETIC FIELD HAS BEEN UNSETTLED WITH K-INDICES OF 3 AND 4 RECORDED AT FREDERICKSBURG AND 2 AND 3 AT BOULDER.

B. INFREQUENT SMALL TO MODERATE-SIZED CLASS M EVENTS ARE EXPECTED DURING THE NEXT THREE DAYS. THE N20W50, N20W61, AND TO A LESSER DEGREE THE S05W78, REGIONS ARE POTENTIAL SOURCES OF SUCH ACTIVITY. UNSETTLED GEOMAGNETIC CONDITIONS, POSSIBLY TO MINOR STORM INTENSITY, ARE EXPECTED DURING THE NEXT 24 HOURS.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 22 APRIL/1700Z ENDING 25 APRIL/1700Z.

CLASS M OR GREATER 70/75/80

CLASS X 08/10/15

PROTON EVENTS 08/10/15

D. OTTAWA 10.7 CM FLUX FOR 22/1400Z WAS 122. PREDICTED 10.7 CM FLUX FOR 23-25 APRIL IS 118/116/114.

E. MAGNETIC A-FREDERICKSBURG FOR 21 APRIL WAS 11. FOR 22 APRIL ABOUT 15 PREDICTED AP FOR 23-25 APRIL, 13/10/10.

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