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HFUS BOU 232240

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 327 ISSUED 2200Z 23 NOV 1971

CLASS M FLARES ARE EXPECTED.

A. OLD SOL HAS BEEN MODERATELY ACTIVE THE PAST 24 HOURS. AN M4 FLARE /OPTICALLY IMPORTANCE ONE BRIGHT/ BEGINNING 23/0553Z IN REGION 354 /S18E39/ PRODUCED A TEN CM RADIO BURST REPORTED VARIOUSLY AS 300 TO 1500 FLUX UNITS OVER ANTECEDENT LEVELS. OPTICAL OBSERVATORIES HAVE REPORTED LITTLE IN THE WAY OF SIGNIFICANT CHANGES IN THE CURRENTLY VISIBLE DISK ACTIVE CENTERS. NO SIGNIFICANT NUMBER OF ENERGETIC PROTONS HAVE BEEN MEASURED IN NEAR-EARTH VICINITIES SINCE THE 22/1513Z FLARE. THE GEOMAGNETIC FIELD IS ACTIVE WITH A MINOR STORM IN PROGRESS.

B. A MODERATE OR GREATER LEVEL OF SOLAR ACTIVITY IS EXPECTED. REGION 355 /N13E50/ IS REPORTED BY MT. WILSON AS HAVING SUBSTANIAL FOLLOWER SPOTS /UP TO 2200 GAUSS/ IN ITS LEADER AND A DELTA WITH A POTENTIAL DIFFERENCE OF 2500 GAUSS IN THE FOLLOWER. AS A RESULT, IT IS EXPECTED TO PRODUCE SEVERAL MORE FLARES OF CLASS M5 TO X3 INCLUDING ONE OR TWO IN THE NEXT THREE DAYS. REGION 354/S18E48/ HAS SHOWN SOME DEVELOPMENT, BUT IS BASICALLY SIMPLE BIPOLAR. IT SHOULD PRODUCE SEVERAL FLARES UP TO CLASS M5 INTENSITY DURING ITS DISK PASSAGE. A POTENTIAL INTERACTION OF REGIONS 342/S13W59/ AND 348/S12W65/ IS LIKELY DURING WEST LIMB PASSAGE OF THE COMPLEX AND THE RESULTING FLARES SHOULD RANGE UP TO CLASS M6 INTENSITY BUT WITH ENHANCED PROSPECTS OF A LARGE PARTICLE EVENT. AN INFERRED SECTOR BOUNDARY IS EXPECTED TO PASS THE EARTH IN 24-48 HOURS SO THAT GEOMAGNETIC ACTIVITY SHOULD SLACKEN IN THE NEXT 24 HOURS BUT AGAIN INCREASE AFTER THAT. A DELAYED PARTICLE EVENT IS EXPECTED TO BEGIN A SLOW RISE AFTER THE BOUNDARY PASSAGE. THE GEOMAGNETIC FIELD SHOULD BE DISTURBED TO STORMY DURING THE NEXT 7 DAYS.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 24/0000Z ENDING 26/2400Z.

CLASS M OR GREATER 85/85/85

CLASS X 20/20/20

PROTON EVENTS 15/20/25

D. OTTAWA 10<sup>-7</sup> CM FLUXES FOR 23/1400Z, 23/1700Z AND 23/2000Z WERE 125, 124 AND 123 RESPECTIVELY. PREDICTED 10.7 CM FLUX FOR 24-26 NOV IS 127/129/130.

E. MAGNETIC A-FREDERICKSBURG FOR 22 WAS 19. FOR 23 ABOUT 29 PREDICTED AP FOR 24-26 NOV, 15/25/20.

SOLTERWARN

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