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KMSC

HAUS BOU 160400Z

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDF NUMBER 720A ISSUED 0400Z 16 AUG 1970

CLASS M FLARES ARE EXPECTED DURING THE NEXT 13 HOURS.

A. SOLAR ACTIVITY THE PAST 24 HOURS HAS CONSISTED OF SUBFLARES FROM THE N21W53 AND N16W90 REGIONS AND FREQUENT IMP 2 SURGES FROM N16W90. WE ESTIMATE THAT TEN SMALL CLASS M EVENTS OCCURRED WITH SIX OF THEM ORIGINATING IN THE NW LIMB REGION. THE MAGNETICALLY COMPLEX REGION NEAR N08E57, FROM WHICH WE BELIEVE THE CURRENT PROTON EVENT ORIGINATED, HAS BEEN RELATIVELY STABLE. SPOT AND PLAGE GROWTH ARE REPORTED IN REGIONS NEAR S09W33 AND S17W04. THE ATS-1 SATELLITE IS CURRENTLY REGISTERING PROTON FLUXES OF THE ORDER OF 2000 AND 40 PARTICLES PER SQ CM PER SEC IN THE 5-21 AND 21-70 MEV RANGES RESPECTIVELY. THE GEOMAGNETIC FIELD REMAINS QUIET AND NEUTRON MONITOR COUNTING RATES SHOW NO SIGNIFICANT DECREASE AS YET.

B. THE SOLAR ACTIVITY FORECAST REMAINS UNCHANGED FROM SDF 719B. THE CURRENT NEAR-EARTH PROTON FLUXES ARE EXPECTED TO SLOWLY DECLINE, BUT ONE OR TWO ADDITIONAL GRADUAL ENHANCEMENTS OF ABOUT THE SAME MAGNITUDE ARE LIKELY DURING THE FORECAST PERIOD. RIOMETER ABSORPTION IS NOT EXPECTED TO EXCEED 2DB. FROM ANALYSES OF DATA FROM PIONEERS 6 AND 8 WE EXPECT A SEQUENCE OF GEOMAGNETIC DISTURBANCES TO BEGIN AT OR BEFORE 16/2300Z. BETWEEN 16/2300Z AND 17/2200Z THE DISTURBANCES WILL BE OF SUBSTORM INTENSITY. BETWEEN 17/2200 AND 18/0700Z A SUDDEN COMMENCEMENT OF ABOUT 50 GAMMAS IS EXPECTED, FOLLOWED BY OR PERHAPS MERGED WITH A SECOND SC OF 100-150 GAMMAS BETWEEN 18/0700 AND 18/1000Z. ONE OR BOTH OF THESE SUDDEN COMMENCEMENTS WILL MARK THE ONSET OF A MAJOR MAGNETIC STORM. ESTIMATES OF THE BOULDER A-INDEX ARE 20-25 FOR 17 AUG AND 60-70 FOR 18 AUG.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 16 AUG/0400Z ENDING 19 AUG/0400Z

CLASS M OR GREATER 95/95/95

CLASS X 35/20/20

PROTON EVENTS 20/20/10

D. OTTAWA 10.7 CM FLUXES FOR 15/1700Z AND 15/2000Z WERE BOTH 165.

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HAUS BOU 161745Z

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDF NUMBER 720B ISSUED 1700Z 16 AUG 1970

CLASS M FLARES EXPECTED DURING THE NEXT 11 HOURS.

A. THERE HAVE BEEN NUMEROUS CLASS M EVENTS THE PAST 24 HOURS PARTLY DUE TO THE HIGH X-RAY BACKGROUND. A BORDERLINE CLASS X EVENT BEGAN AT 15/2321Z WHICH CAUSED A MAJOR IONOSPHERIC DISTURBANCE. THE EVENT WAS A SB FLARE LOCATED AT N17W90. SINCE THIS EVENT THE NW LIMB REGION HAS PRODUCED 4 STRONG CLASS M EVENTS AND POSSIBLY A FIFTH AT 16/1541Z; A 1B FLARE OCCURRED THEN ASSOCIATED WITH MODERATE SIDS. SMALL SUBFLARES HAVE BEEN OBSERVED FROM THE N08E47 REGION WHERE THE PLAGE IS AT NORMAL INTENSITY BUT AN EXTREMELY ACTIVE FILAMENT LIES WESTWARD OF THE REGION. TWO REGIONS AT S08W38 AND S11E31 HAVE GROWN TO CLASS/AREA OF D/200 PLUS. ATS-1 DETECTORS CONTINUE TO BE ENHANCED; THE 21-70 MEV CHANNEL IS SHOWING A SLOW DECLINE AND THE 5-21 MEV CHANNEL IS HOLDING STEADY AT 2000 PARTICLES/CM2/SEC. THE GEOMAGNETIC FIELD IS QUIET AND NEUTRON COUNTS ARE NORMAL.

B. THE NW LIMB REGION PRESENTLY IS CENTERED 10 DEGREES PAST THE WEST LIMB AND CAPABLE OF A FEW MORE CLASS M FLARES IN THE NEXT 12 HOURS; AFTER THIS PERIOD TOTAL CLASS M FLARE PRODUCTION IS EXPECTED TO DROP ALTHOUGH IT MIGHT BE WISE TO REMAIN ALERTED FOR A PROTON EVENT FROM THIS REGION FOR ANOTHER 24 HOURS. THE N08E47 REGION APPEARS STABILIZED BUT STILL CAPABLE OF SPORADIC ENERGETIC FLARES. LIMB ACTIVITY IN THE FORM OF LOOP STRUCTURE AND SUBFLARES INDICATES A NEW REGION NEAR NE14. REFER TO FORECAST 720A, PART B FOR THE GEOMAGNETIC FORECAST.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 16 AUG/1700Z ENDING 19 AUG/1700Z.

CLASS M OR GREATER 95/90/85

CLASS X 30/20/20

PROTON EVENTS 30/20/20

D. OTTAWA 10.7 CM FLUX FOR 16/1400Z WAS 165. PREDICTED 10.7 CM FLUX FOR 17-19 AUG IS 158/160/162.

E. MAGNETIC A-FREDERICKSBURG FOR 15 AUG WAS 08. FOR 16 AUG ABOUT 10 PREDICTED AP FOR 17-19 AUG, 28/50/35.

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