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KMSC HAUS BOU 230524Z

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDF NUMBER 696A ISSUED 0400Z 23 JULY 1970

A CLASS-X FLARE IS LIKELY AND CLASS-M FLARES ARE EXPECTED
WITHIN THE NEXT 13 HOURS.

A. SOLAR ACTIVITY DURING THE PAST 11 HOURS HAS NOT MET EARLIER EXPECTATIONS; THE MOST SIGNIFICANT EVENT RECORDED WAS AN ENERGETIC SUB-BRILLIANT FLARE THAT WAS PRODUCED BY THE LARGE N08E12 REGION AT 22/1937Z. THIS FLARE WAS ACCCOMPANIED BY A TEN CENTIMETER RADIO BURST OF APPROXIMATELY 130 FLUX UNITS ABOVE BACKGROUND AND BY A CLASS-C X-RAY BURST. THE N08E12 REGION NOW HAS AN AREA OF APPROXIMATELY 970 MILLIONTHS, POSSESSES STRONG MAGNETIC FIELD GRADIENTS BOTH IN THE LEADER AND TRAILER PENUMBRAE, AND RETAINS ITS THREATENING APPEARANCE. THE 184 MHZ NOISE STORM THAT BEGAN ON JULY 21 WAS OBSERVED TO CONTINUE AT HIGH INTENSITY TO LOCAL SUNSET AT APPROXIMATELY 22/0150Z HERE IN BOULDER. OTHER DISK REGIONS HAVE NEITHER PRODUCED ENERGETIC ACTIVITY NOR SHOWN SIGNIFICANT DEVELOPMENT WITHIN THE PAST 11 HOURS. THE GEOMAGNETIC FIELD HAS REMAINED UNSETTLED SINCE THE PREVIOUS SDFC FORECAST.

B. THE N08E12 REGION IS EXPECTED TO PRODUCE SIGNIFICANT ENERGETIC ACTIVITY WITHIN THE NEXT 72 HOURS; CLASS-X FLARES ARE LIKELY AND SPORADIC CLASS-M FLARES ARE VIRTUALLY CERTAIN TO OCCUR. AT LEAST ONE PROTON FLARE IS ANTICIPATED FROM THIS REGION, AND THE CHANCES THAT SUCH A PROTON EVENT WILL BE DETECTED NEAR EARTH ARE INCREASING STEADILY AS THE REGION NOW AT N08E12 IS ROTATED WESTWARD. THE GEOMAGNETIC FIELD IS EXPECTED TO REMAIN UNSETTLED.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 23 JULY/0400Z ENDING 26 JULY/0400Z.

CLASS M OR GREATER 95/95/95

CLASS X 70/70/70

PROTON EVENTS 50/55/60

D. OTTAWA 10.7 CM FLUXES FOR 22/1700Z AND 22/2000Z WERE 159 AND 160 RESPECTIVELY.

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HAUS BOU 231700Z

FROM SPACE DISTURBANCE FORECAST CENTER ESSA BOULDER COLO

SDF NUMBER 696B ISSUED 1700Z 23 JULY 1970

A CLASS X FLARE AND A COUPLE OF CLASS M FLARES ARE EXPECTED
IN THE NEXT 24 HOURS.

A. A CLASS M FLARE OCCURRED AT 23/1050Z LOCATION N08E08.
THE REGION PRODUCED TWO SMALLER FLARES JUST BEFORE THE 1050Z
FLARE. WITH THE FLARE A RADIO NOISE STORM BEGAN. THE IONO-
SPHERE WAS NOT DISTURBED BY THIS EVENT. THE REGION IS NOW
EXPERIENCING SOME DECLINE IN STRUCTURE. THE CONTINUOUS
PENUMBRA SEEN YESTERDAY HAS NOW BROKEN INTO FOUR SECTIONS
AND MAGNETIC FIELD GRADIENTS IN THE LEADER HAVE DECLINED.

SATELLITE PROTON COUNTS, 5-20 MEV, HAVE RISEN TO 20CTS/CM²/SEC
ABOVE BACKGROUND SINCE 23/0900Z. GROUND BASED NEUTRON MONITORS
ARE PRESENTLY 2.7 PERCENT BELOW NORMAL, THEY STARTED DECLINING
APPROXIMATELY 23/0700Z. PIONEER 7 SATELLITE SAW A LARGE ENHANCE-
MENT OF LOW ENERGY PROTONS AT 23/0204Z THAT MOST LIKELY ORIG-
INATED FROM THE 22/0013Z. ^{FLARE} THE SATELLITE IS APPROXIMATELY 100
DEGREES BEHIND THE EARTH SUN LINE.

THE GEOMAGNETIC FIELD IS QUIET.

B. THE NE REGION ALTHOUGH BELIEVED TO BE ENTERING ITS DECAY
STAGE IS STILL EXPECTED TO PRODUCE ONE OR MORE MAJOR FLARES IN
THE NEXT 3 DAYS. AN ACTIVE FILAMENT NEAR THE N23E56 REGION
INDICATES A LIKELIHOOD OF SOME CLASS C ACTIVITY FROM THIS OLD
CENTER. THE GEOMAGNETIC FIELD IS EXPECTED TO SHOW PERIODS OF
UNSETLED CONDITIONS.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24
HOUR PERIODS BEGINNING 23 JULY/1700Z ENDING 26 JULY/1700Z.

CLASS M OR GREATER 95/95/95

CLASS X 65/60/55

PROTON EVENTS 50/50/50

D. OTTAWA 10.7CM FLUX FOR 23/1400Z WAS 154. PREDICTED 10.7CM
FLUX FOR 24-26 JULY IS 160/165/170.

E. MAGNETIC A-FREDERICKSBURG FOR 22 JULY WAS 16. FOR 23 JULY
ABOUT 13. PREDICTED AP FOR 24-26 JULY IS 16/16/16.

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