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HAUS BOU 240615Z

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDF NUMBER 697A ISSUED 0400Z 24 JULY 1970

THE NEXT 13 HOURS SHOULD BE CHARACTERIZED BY AT LEAST ONE CLASS-C FLARE PER HOUR WITH ONE, PERHAPS TWO, SMALL M EVENTS.

A. WHAT WAS NO DOUBT A CLASS-X FLARE BEGAN ABOUT 23/1831Z NEAR N10E10- OPTICAL CLASS 1 OR 2 B. THE ASSOCIATED U-SHAPED MICROWAVE BURST SPECTRUM WAS CHARACTERIZED BY AN EXTREMELY HIGH FLUX ON ITS LOW-FREQUENCY WING. (THE PEAK EMISSION AT 1400MHZ AS REPORTED BY CARNARVON, AUST EXCEEDED 20 THOUSAND TIMES THE QUIET SUN VALUE.) INTENSITY 2 DEKAMETER TYPE IV EMISSION AS WELL AS IMPORTANCE 3 SPA'S WERE REPORTED BY SAGAMORE HILL OBSERVATORY. APPROXIMATELY 2.5 HOURS AFTER FLARE ONSET (ABOUT 2100Z) THE AEROSPACE EXPERIMENT ONBOARD ATS-1 BEGAN TO DETECT PROTONS. IT IS NOT YET CLEAR IF THE EVENT HAS PASSED THROUGH A MAXIMUM. CURRENT FLUXS STAND AT 300 AND 4 PART/CM²/SEC FOR THE 5-21 AND 21-70 MEV WINDOWS RESPECTIVELY. THE EVENT IS CLEARLY A BORDERLINE CASE IN TERMS OF GROUND-BASED DETECTION. AS OF ABOUT 23/2340Z ONLY THE THULE AND FORT YUKON 30MHZ RIOMETERS HAD A MEASURALBE RESPONSE-ONE OF THE ORDER OF A FEW TENTHS OF A DB. THE ALDRA, NORWAY VLF PATH BOTH IN BOULDER AND ANCHORAGE GAVE EVIDENCE OF ONLY A GRADUAL ADVANCE BEGINNING ABOUT 2140Z. IN ADDITION THE PIONEER 6 SPACECRAFT RECEIVED A HEALTHY RESPONSE ON THREE OF ITS FOUR SOLAR COSMIC RAY SENSORS. IT MUST BE KEPT IN MIND, HOWEVER, THAT THE ACTIVE CENTER RESPONSIBLE IS ON PIONEER 6'S "WEST LIMB". COUNTING RATES ON SIMPSON'S DETECTORS WERE OF THE FOLLOWING RELATIVE MAGNITUDE CLN 0.6-13 MEV, GREATER THAN 3 ORDERS OF MAGNITUDE ABOVE BACKGROUND; 13-70, ABOUT THE SAME; AND 70-190, ROUGHLY A FACTOR OF 100 ABOVE BACKGROUND. NO RECENT DATA ON THE PHYSICALLY CLOSER SPACE PLATFORM, PIONEER 8, ARE AVAILABLE. THE ACTIVE CENTER IS NOW LOCATED NEAR N03CM. WHILE ITS CENTRAL PORTION COUNTINUES TO DECLINE THREE SMALL DELTA CONFIGURATIONS HAVE BEEN INFERRED-ONE IN THE LEADER AND 2 IN THE FOLLOWER. THE MOST RECENT OBSERVATIONS INDICATE PLAGE FLUCTUATIONS TO THE NW OF THE LARGE FOLLOWING PENUMBRA; OVERALL APPEARANCE OF THE PLAGE IS DULL. THERE HAVE BEEN NO SIGNIFICANT GEOMAGNETIC FIELD FLUCTUATIONS DURING THE PAST 24 HOURS. THREE-HOUR RANGE INDICES ARE RUNNING BETWEEN 1 AND 3 AT BOULDER.

B. A SIMILAR EVENT, PERHAPS MORE EFFECTIVE DUE TO THE INCREASINGLY FAVORABLE GEOMETRY, IS EXPECTED SOMETIME DURING THE NEXT 3 DAYS.

IN ADDITION THE 23/1831Z FLARE SHOULD GIVE RISE TO A MAGNETIC DISTURBANCE-ONE BEGINNING ABOUT 24/0500Z. This should be 25/0500Z May forecast. Write C. FLARE AND PROTON EVENT PROBABILITES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 24 JULY/0400Z ENDING 27 JULY/0400Z.

CLASS M OR GREATER 95/95/95

CLASS X 60/80/60

PROTON EVENTS 50/80/50

D. OTTAWA 10.7 CM FLUXES FOR 23/1700Z AND 23/2000Z WERE 159 AND 164 RESPECTIVELY.

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FROM SPACE DISTURBANCE FORECAST CENTER ESSA BOULDER COLO
SDF NUMBER 697B ISSEUD 1700Z 24 JULY 1970

A MAJOR XRAY FLARE EXPECTED IN THE NEXT 12 TO 24 HOURS
A. THE LARGE ACTIVE REGION WHICH PRODUCED THE X FLARE AT
23/1823Z CONTINUES AS THE MOST INTERESTING AND BRIGHTEST
FEATURES. ADDITIONALLY THE REGION NEAR N18E43 IS BECOMING
MORE COMPLEX MAGNETICALLY AND PRODUCING APERIODIC M TYPE
FLARES. THE MAGNETIC FIELD IS DISTURBED BUT NOT YET TO
STORM INTENSITY.

B. THE REGION NOW NEAR N08W08-PARTICULARLY THE WESTERN
PORTION AND THE REGION NEAR N18E43 SHOULD PRODUCE MANY M
TYPE FLARES AND SEVERAL X TYPE FLARE PRIOR TO WEST LIMB
PASSAGE. THE PROBABILITY OF GROUND DETECTED FLARE ASSOCIATED
PROTON EVENTS AND MINOR GEO-MAGNETIC STORMS IS QUITE HIGH.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24
HOUR PERIODS BEGINNING 24 JULY/1700Z ENDING 27 JULY/1700Z.

CLASS M OR GREATER 95/95/95

CLASS X 80/80/60

PROTON EVENTS 60/60/60

D. OTTAWA 10.7CM FLUX FOR 24/1400Z WAS 162. PREDICTED 10.7CM
FLUX FOR 25-27 JULY IS 175/185/190.

E. MAGNETIC A-FREDERICKSBURG FOR 23 JULY WAS 10. FOR 24 JULY
ABOUT 30. PREDICTED AP FOR 25-27 JULY 25/35/20.

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