

NNNUU0529

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NNNDM

KMSC

HAUS BOU 150530Z

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDF NUMBER 719A ISSUED 0400Z 15 AUG 1970

CLASS-M FLARES ARE EXPECTED DURING THE NEXT 13 HOURS.

A. EVENTS ON THE DISK HAVE BEEN OF SUBFLARE SIZE AND CLASS C ENERGETICS SINCE THE LAST MAJOR ERUPTION OF 14/1600Z. THE N18W80 SPOT GROUP STILL RETAINS ITS FLARE BRIGHT CHARACTER, BETA-GAMMA WITH DELTA MAGNETIC CONFIGURATION, AND AN ERUPTIVE SIGNATURE OF COPIOUS X-RAY PRODUCTION ACCCOMPANIED BY MINISCULE RADIO EMISSIONS. ON THE OTHER HAND THE SOURCE OF THIS WEEK'S CLASSIC EVENTS NOW LIES 20 DEGREES INSIDE THE EAST LIMB. THE HYDROGEN APPEARS ONLY MODERATELY BRIGHT, AND NO LIMB ACTIVITY IS VISIBLE. MAGNETICALLY IT IS CLASSED AS A SIMPLE BIPOLAR STRUCTURE. THE CONTINUOUS RISE ON ATS-1 LOW AND HIGH ENERGY WINDOWS REACHED ABOUT 15/0230Z WHAT THIS WARNING CENTER GENERALLY REFERS TO AS THE THRESHOLD LEVEL - AN INTENSITY AT WHICH A GROUND-BASED 30MHZ RIOMETER WOULD RECORD A ONE DB ABSORPTION. THE FLUXES AT THAT TIME WERE OF THE FOLLOWING MAGNITUDE: 5-21 MEV SLIGHTLY GREATER THAN 300 PART/CM<sup>2</sup>/SEC AND 21-70 MEV NEAR 32 FLUX UNITS. THE DETECTOR AT MESSAGE TIME INDICATES A VERY GRADUAL DECLINE.

B. ENERGETIC FLARES OF THE M CLASS ARE ANTICIPATED THROUGHOUT WEST-LIMB PASSAGE OF THE N16W80 COMPLEX WITH NO CONTRIBUTION TO THE ENHANCED PROTON FLUXES NOW IN EARTH'S VICINITY. A CONTINUANCE OF THE PAST 3 DAYS' ACTIVITY LEVEL IS NOT EXPECTED FROM THE NE REGION. TWO MORE SHORT-LIVED RISES IN PROTON COUNTING RATES ARE FORESEEN AS A RESULT OF THE 12 AND 14 AUG X EVENTS; ONSET TIMES, AND THESE ARE VERY CRUDE INDEED, HAVE BEEN PLACED IN THE VICINITY OF 16/1600Z AND BETWEEN 18/0900 AND 1200Z. ASSOCIATED GROUND-BASED RIOMETER ABSORPTION SHOULD NOT EXCEED 2 DB. TWO DISTINCT MAGNETIC STORMS SUPERPOSED ON 6 OR 7 DISTURBED DAYS ARE FORESEEN DURING THE COMING WEEK AS A RESULT OF THE LARGE SECTOR OF INTERPLANETARY MEDIUM AFFECTION (APPROXIMATELY 180 DEGREES) BY THE NE CENTER. THE INITIAL DISTURBANCE, WITH HOPEFULLY AN ADEQUATE ALLOWANCE FOR CROSS-FIELD DIFFUSION, IS PROJECTED TO BEGIN ABOUT 2100Z AUG 17.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 15 AUG/0400Z ENDING 18 AUG/0400Z

CLASS M OR GREATER 100/100/80

CLASS X 35/35/20

PROTON EVENTS 20/20/10

D. THERE WILL BE NO 1700Z AND 2000Z FLUX DATA DUE TO FLARE ENHANCED SOLAR FLUX.

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CORRECTION

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDF NUMBER 719B ISSUED 1700Z 15 AUG 1970.

CLASS-M FLARES ARE EXPECTED AND CLASS-X FLARES ARE NOT UNLIKELY DURING THE NEXT 11 HOURS.

A. SOLAR ACTIVITY HAS REMAINED AT A RELATIVELY HIGH LEVEL DURING THE PAST 13 HOURS; MOST OF THE ACTIVITY HAS CONSISTED OF MODERATELY ENERGETIC SUBFLARES FROM THE REGION NOW CROSSING THE LIMB NEAR NW17. BACKGROUND 1-8 ANGSTROM X-RAY LEVELS ON THE SOLRAD-9 SATELLITE HAVE REMAINED ENHANCED AT OR NEAR THE CLASS-M THRESHOLD OF .01 ERGS/CM<sup>2</sup>/SEC, SO THAT NUMEROUS TECHNICAL CLASS-M EVENTS HAVE OCCURRED. THE EVENT OF 14/1600Z, REPORTED IN SDFC 718B WAS A MODERATELY LARGE CLASS-X EVENT; PEAK 1-8 ANGSTROM FLUX WAS .45 ERGS/CM<sup>2</sup>/SEC ON THE SOLRAD-9 SATELLITE. THE LONG-LIVED X-RAY BURST REMAINED ABOVE THE CLASS-X THRESHOLD FOR MORE THAN 40 MINUTES AND ABOVE THE CLASS-M THRESHOLD FOR MORE THAN SEVEN HOURS. THE REGION AT N08E63 PRESENTLY APPEARS TO BE RELATIVELY DORMANT, BUT A MAGNETIC DELTA COMPLEX PROBABLY EXISTS AT THIS SITE. THE NW17 REGION REMAINS ACTIVE AND ENHANCED AT OPTICAL AND RADIO WAVELENGTHS. OCCASIONAL ENERGETIC ACTIVITY OF RELATIVELY MINOR SIGNIFICANCE HAS BEEN PRODUCED BY THE N21W47 REGION. ATS-1 SATELLITE PROTON COUNTING RATES REACHED AN APPARENT MAXIMUM NEAR 15/1200Z; AT THAT TIME THE 5-21 MEV CHANNEL INDICATED A FLUX OF APPROXIMATELY 1700 PARTICLES/CM<sup>2</sup>/SEC, AND THE 21-70 MEV CHANNEL INDICATED ABOUT 85 PARTICLES/CM<sup>2</sup>/SEC. PRESENT COUNTING RATES ARE APPROXIMATELY 900 PARTICLES/CM<sup>2</sup>/SEC AND 45 PARTICLES/CM<sup>2</sup>/SEC ON THE TWO RESPECTIVE CHANNELS. THE THULE RIOMETER RECORDED AN APPROXIMATE ABSORPTION OF 1.6 DB AT 15/0800Z. DURING THE PAST 24 HOURS THE GEOMAGNETIC FIELD HAS REMAINED QUIET.

B. HIGH SOLAR ACTIVITY IS EXPECTED TO CONTINUE DURING THE FORECAST PERIOD; OCCASIONAL CLASS-M EVENTS ARE EXPECTED, AND STRONGER EVENTS OF CLASS-X INTENSITY ARE NOT UNLIKELY. THE GEOMAGNETIC FIELD IS EXPECTED TO BE ONLY SLIGHTLY DISTURBED DURING THE NEXT 24 HOURS.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOURS PERIODS BEGINNING 15 AUG/1700Z ENDING 18 AUG/1700Z.

CLASS M OR GREATER 99/99/95

CLASS X 35/30/20

PROTON EVENTS 20/20/10

D. OTTAWA 10.7 CM FLUX FOR 15/1400Z WAS 166.

PREDICTED 10.7 CM FLUX FOR 16-18 AUG IS 165/170/173.

E. MAGNETIC A-FREDERICKSBURG FOR 14 AUG WAS 03. FOR 15 AUG ABOUT 07. PREDICTED AP FOR 16-18 AUG, 10/13/25.

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