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HFUS BOU 180500

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 261A ISSUED 0500Z 18 SEPT 1971

A CLASS M FLARE IS LIKELY DURING THE NEXT 24 HOURS.

A. SOLAR ACTIVITY HAS REMAINED AT A LOW LEVEL DURING THE PAST SEVEN HOURS, AND NO ENERGETIC FLARES HAVE OCCURRED. LITTLE SIGNIFICANT CHANGE HAS OCCURRED IN ANY OF THE DISK REGIONS, BUT REGIONS 263 AND 266 RETAIN THEIR RELATIVELY DYNAMIC PLAGE CHARACTERISTICS. A MODERATE GEOMAGNETIC STORM BEGAN GRADUALLY AT ABOUT 17/2220Z. THE K-INDEX AT BOULDER DURING THE INTERVAL 18/0000-0300Z WAS SIX, AND DISTURBANCE IS STILL IN PROGRESS.

B. CLASS C FLARES AND SMALL CLASS M FLARES ARE EXPECTED DURING THE NEXT 72 HOURS. REGION 263 PROBABLY WILL PRODUCE A LARGE CLASS M OR SMALL CLASS X FLARE DURING THE NEXT FIVE DAYS. THE GEOMAGNETIC STORM PRESENTLY IN PROGRESS PROBABLY WILL CONTINUE FOR AT LEAST 12 HOURS.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 18 SEPT/0000Z ENDING 20 SEPT/2400Z.

CLASS M OR GREATER 75/75/75

CLASS X 10/10/10

PROTON EVENTS 10/10/10

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HFUS BOU 182200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 261B ISSUED 2200Z 18 SEPT 1971

FLARES TO NEAR-CLASS M ARE EXPECTED NEXT 24 HOURS.

A. FREQUENT MINOR FLARES HAVE BEEN OBSERVED FROM THE REGIONS 263 /S11E07/, 265 /N04E07/ AND 266 /S11E15/. THE MOST ENERGETIC OF THESE, A SUBBRIGHT AT 1330Z IN REGION 265, WAS TENTATIVELY CLASSED AS AN M1. IT HAS BEEN SUGGESTED IN THE SCIENTIFIC LITERATURE THAT SMALL REGIONS LOCATED NEAR LARGER COMPLEX REGIONS MAY TRIGGER MUTUAL ENERGY RELEASE IN BOTH. SUCH ACTIVITY SUPPOSEDLY PREVENTS THE MORE COMPLEX REGION FROM REACHING A POTENTIAL CONFIGURATION SUFFICIENT FOR MAJOR FLARE ACTIVITY. THE ACTIVE FILAMENTS, LARGE BRIGHT AND DARK DISK SURGES AND FLARE SIMULTANEITY REPORTED IN THESE THREE REGIONS INDICATE THIS MAY WELL BE HAPPENING HERE. EVEN SO, MOST REGIONS AS COMPLEX MAGNETICALLY AS REGION 263 PRODUCE A LARGE CLASS M OR CLASS X LATE IN THEIR DECAY PHASE WHEN THE SPOTS ARE NEARLY GONE. REGION 261 /S17W77/ HAS PRODUCED SEVERAL MINOR FLARES BUT NONE HAVE BEEN ENERGETIC. THE MAGNETIC STORM THAT BEGAN GRADUALLY ABOUT 18/1800Z IS OF INDEFINITE ORIGIN. NO ENERGETIC FLARES HAVE BEEN RECORDED THAT WOULD EVEN ROUGHLY CORRELATE WITH THE TIMING OF THE STORM AND NO SUDDEN COMMENCEMENT WAS EVIDENT. FOR SEVERAL ROTATIONS NO RECURRING DISTURBANCES HAVE BEEN SEEN AT THE SOLAR LONGITUDES CURRENTLY AFFECTING THE EARTH. A PROBABLE SOURCE WAS THE EVENT PRODUCED BY THE CURRENT REGION 263/266 WHEN IT WAS 2-3 DAYS BEYOND WEST LIMB. FOR SOME PAST REGIONS PRODUCING LARGE WEST LIMB EVENTS, ANOMALOUS MAGNETIC DISTURBANCES OCCURRED 18-21 DAYS LATER WHEN THE SOURCE REGION WAS STILL EAST OF C.M. ON ITS NEXT ROTATION, NO OTHER FLARES WERE REPORTED AND NO RECURRENT STORMS WERE DUE. THESE DISTURBANCES ARE USUALLY SHORT-LIVED WITH K NO GREATER THAN 3 OR 4 THE SECOND DAY AT MID-LATITUDES.

B. CONTINUED FLARES CLASS C TO SMALL CLASS M ARE EXPECTED. A LARGE CLASS M OR CLASS X IS EXPECTED IN THE NEXT 5 DAYS. THE LARGER FLARE WILL ALMOST CERTAINLY PRODUCE A PROTON EVENT. THE MAGNETIC STORM IN PROGRESS IS EXPECTED DECLINE RAPIDLY WITH ISOLATED SUBSTORMS PRODUCING MID-LATITUDE K VALUES OF 2 OR 3 AND OCCASIONALLY 4 FOR THE NEXT 24 HOURS.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 19/0000Z ENDING 21/2400Z.

CLASS M OR GREATER 75/75/75

CLASS X 10/10/10

PROTON EVENTS 10/15/20

D. OTTAWA 10.7 CM FLUXES FOR 18/1400Z, 18/1700Z AND 18/2000Z WERE 122, 116 AND 112 RESPECTIVELY. PREDICTED 10.7 CM FLUX FOR 19-21 SEPT IS 112/112/112.

E. MAGNETIC A-FREDERICKSBURG FOR 17 SEPT WAS 13. FOR 18 SEPT ABOUT 28 PREDICTED AP FOR 19-21 SEPT, 22/15/12.

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