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HFUS BOU 300500

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDF NUMBER 181A ISSUED 0500Z 30 JUNE 1971

CLASS M FLARES ARE LIKELY DURING THE NEXT 24 HOURS.

A. A RELATIVELY LOW LEVEL OF SOLAR ACTIVITY HAS BEEN OBSERVED DURING THE PAST SEVEN HOURS. AT 29/2237Z A SUBNORMAL FLARE OCCURRED AT N19W24, AND NEARLY SIMULTANEOUSLY AN IMPORTANCE-TWO ERUPTIVE PROMINENCE WAS OBSERVED AT SW10. THESE EVENTS WERE ACCOMPANIED BY A MINOR SPA (1-8 ANGSTROM X-RAY DATA NOT AVAILABLE) AND A COMPLEX RADIO BURST (TYPE V DEKAMETRIC EMISSIONS AND AN ENHANCEMENT AT 2800MHZ ON THE ORDER OF 150 FLUX UNITS ABOVE THE BACKGROUND LEVEL). THE ACTIVE CENTER AT N16W21 PRESENTLY CONSISTS OF AN OLDER BIPOLAR SPOT GROUP IN CLOSE PROXIMITY TO A NEWER EMERGING STRUCTURE SLIGHTLY TO THE NORTHWEST. ACCORDING TO THE MOUNT WILSON OBSERVATORY, A DELTA CONFIGURATION MAY EXIST IN THE MAIN LEADER OF THIS DEVELOPING N16W21 REGION. THE COMPLEX OF AT LEAST THREE BIPOLAR FEATURES IN THE SOUTHEASTERN QUADRANT IS PRESENTLY THE MOST DYNAMIC AND IMPRESSIVE DISK FEATURE. CONTINUED DEVELOPMENT HAVE BEEN OBSERVED IN THE PLAGE AND PENUMBRA OF THE RELATIVELY NEW S10E48 BIPOLE, WHICH IS LOCATED CLOSE TO THE WELL-DEVELOPED BIPOLAR STRUCTURE CENTERED AT S13E45. PRESENTLY-AVAILABLE DATA SUGGEST THAT THE SPOT GROUP AT S06E33 IS INTERACTING MAGNETICALLY WITH THE S10E48 AND S13E45 STRUCTURES, PRODUCING A VERY COMPLEX CHROMOSPHERIC MAGNETIC CONFIGURATION. THE PLAGE OF THIS SE COMPLEX IS BRIGHT, FLUCTUATING, AND STILL GROWING. THE DEVELOPING NEW BIPOLAR REGION AT N08E24 NOW CONTAINS A C-TYPE SPOT GROUP. OTHER REGIONS ARE RELATIVELY UNIMPRESSIVE. A GEOMAGNETIC SUBSTORM HAS BEEN IN PROGRESS SINCE ABOUT 29/0500Z, BUT K-INDICES AT MOST MIDDLE-LATITUDE OBSERVATORIES HAVE NOT EXCEEDED FOUR.

B. SOLAR ACTIVITY PROBABLY WILL INCREASE SIGNIFICANTLY DURING THE NEXT 72 HOURS AS DEVELOPMENT CONTINUES AT N16W21 AND IN THE SE COMPLEX. LARGE, ENERGETIC FLARES MAY BE PRODUCED NEAR S10E48 IF INTERACTION BETWEEN THE BIPOLAR GROUPS BECOMES SUFFICIENTLY INTENSE. THE GEOMAGNETIC FIELD PROBABLY WILL REMAIN ACTIVE DURING THE NEXT 24-48 HOURS, WITH K-INDICES OF THREE AND FOUR AT MIDDLE-LATITUDE STATIONS.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 30 JUNE/0000Z ENDING 02 JULY/2400Z

CLASS M OR GREATER 80/85/90

CLASS X 10/15/15

PROTON EVENTS 05/10/10

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FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 181B ISSUED 2200Z 30 JUNE 1971

CLASS M FLARES ARE EXPECTED DURING THE NEXT 24 HOURS.

A. APPROXIMATELY TWO DOZEN CLASS C SUBFLARES HAVE OCCURRED TODAY FROM THE VARIOUS DISK REGIONS. THE N16W32 REGION HAS GROWN SLIGHTLY AND HAS DEVELOPED A DELTA CONFIGURATION IN THE TRAILER OF A SMALL BIPOLAR EMERGING DIRECTLY NORTH OF THE MAIN LEADER SPOT. THE S10E37 REGION CONTAINS A WEAK DELTA CONFIGURATION IN THE LEADER. MIXED SPOT POLARITIES ARE ALSO APPARENT IN THE S14E36 REGION. ALL OF THESE AREAS OF MAGNETIC COMPLEXITY ARE SOURCES OF MANY SMALL FLARES TODAY. THE NEW REGION AT N07E12 OF CLASS/AREA - D/70 CONTINUES TO GROW AND BE ACTIVE. INTENSE DECA-METRIC TYPE III EMISSION HAS OCCURRED FREQUENTLY THE PAST 8 HOURS.

B. MAJOR FLARES ARE CERTAINLY A DISTINCT POSSIBILITY FROM THE S14E36 AND S10E37 REGIONS. THE MAGNETIC ANOMALIES AND THE INTERACTION BETWEEN THE SIDE BY SIDE REGIONS ENHANCES OUR PROBABILITIES. BUT SOME NEGATIVE FACTORS EXIST, NAMELY, THE REGIONS LIE ON INACTIVE LONGITUDES IN THE INACTIVE SOUTHERN HEMISPHERE AND THEY ARE FORMING DOMINANT SYMMETRIC LEADERS OF THE TYPE THAT FORM STABLE REGIONS. THE N16W32 REGION IS EXPECTED TO PRODUCE AN OCCASIONAL CLASS M FLARE. A INTERPLANETARY SECTOR BOUNDARY IS EXPECTED TO UNSETTLE THE GEOMAGNETIC FIELD LATE ON JULY 2.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 1 JULY/0000Z ENDING 3 JULY/2400Z.

CLASS M OR GREATER 85/90/90

CLASS X 15/20/20

PROTON EVENTS 10/15/20

D. OTTAWA 10.7 CM FLUXES FOR 30/1400Z, 30/1700Z AND 30/2000Z WERE 144, 144 AND 140 RESPECTIVELY. PREDICTED 10.7 CM FLUX FOR 1-3 JULY IS 146/148/150.

E. MAGNETIC A-FREDERICKSBURG FOR 29 JUNE WAS 20. FOR 30 JUNE ABOUT 10 PREDICTED AP FOR 1-3 JULY, 12/12/12.

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