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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 219A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 07 AUG 1982

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 06/1200Z TO 07/1200Z: SOLAR ACTIVITY HAS BEEN MODERATE DUE TO AN M2/1B FROM REGION 3829 (S 2W51) AT 06/2330Z. THIS FLARE PRODUCED MINOR CM BURSTS AND A MODERATE INTENSITY TYPE II. REGION 3829 IS DECAYING RAPIDLY. REGIONS 3837 (N10E34) AND 3839 (N 12E48) HAVE PRODUCED FREQUENT SUBFLARES AND SHOWN SLIGHT GROWTH AS HAVE REGIONS 3838 (N 10W06) AND 3840 (S14W05). A MODERATE SIZE D GROUP HAS ROTATED ONTO THE DISK AT S08E82 AND HAS BEEN NUMBERED 3843. SURGING ON THE NORTHEAST LIMB FOR THE PAST TWO DAYS HAS RESULTED IN ONLY A SMALL ACTIVE REGION ROTATING INTO VIEW BUT THE LIMB ACTIVITY CONTINUES NEAR WHERE TWO ACTIVE REGIONS ARE EXPECTED TO RETURN.

B. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE MODERATE. SEVERAL REGIONS CURRENTLY ON, AND EXPECTED TO ROTATE ONTO, THE DISK ARE CAPABLE OF PRODUCING M CLASS FLARES. ANOTHER M CLASS FLARE FROM DECLINING REGION 3829 IS NOT EXPECTED TO OCCUR. THE POSSIBILITY OF A MAJOR FLARE FROM THE 3837/3839 COMPLEX CONTINUES TO EXIST.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN THE PRINCIPAL STORY FOR THE PAST 24 HOURS BEGINNING WITH A SMALL SUDDEN COMMENCEMENT OF 16 GAMMA AT 06/1842Z. THIS WAS FOLLOWED BY MINOR STORM LEVELS UNTIL 07/0545Z WHEN MAJOR STORM CONDITIONS BEGAN. LOCAL K INDICES OF 7,6 HAVE BEEN OBSERVED SINCE THAT TIME. SOLAR WIND DATA IMPLY THIS DISTURBANCE IS RELATED TO THE FILAMENT ERUPTION MIDDAY ON 04 AUG. THIS TYPE OF DISTURBANCE CHARACTERISTICALLY LASTS FOR TWO DAYS. THEREFORE, MAJOR STORM LEVELS SHOULD CONTINUE THROUGH 07 AUG, QUIETING TO MINOR STORM LEVELS ON 08 AUG. ACTIVE GEOMAGNETIC CONDITIONS SHOULD PREVAIL FOR 09-10 AUG WITH STRONG SUBSTORMS PROBABLE NEAR LOCAL MIDNIGHT.

III. EVENT PROBABILITIES 08 AUG-10 AUG

CLASS M 80/80/80

CLASS X 10/10/10

PROTON 05/05/10

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 06 AUG 196

ESTIMATED 07 AUG 210

PREDICTED 08 AUG-10 AUG 220/230/240

90 DAY MEAN 06 AUG 161

V. GEOMAGNETIC A INDICES

OBSERVED AFR 05 AUG 019 AP 06 AUG 026

ESTIMATED AFR 06 AUG 026 AFR/AP 07 AUG 070/120

PREDICTED AFR/AP 08 AUG-10 AUG 040/075-020/020-015/020

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HFUS 3 BOU 072200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 219B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 07 AUG 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 07/1200Z TO 07/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE. REGION 3839 (N12E42) PRODUCED AN M1 X-RAY EVENT AT 1207Z MAXIMUM WHICH WAS ASSOCIATED OPTICALLY TO AN IMPRESSIVE 2B FLARE. MINOR DISCRETE FREQUENCY BURSTS AND SHORT WAVE FADES TO 10MHZ ACCOMPANIED THIS EVENT. THIS REGION HAS GROWN AND MERGED WITH REGION 3837 (N10E27), AND NOW BOTH HAVE BECOME ALMOST UNDISTINQUISHABLE AS SEPARATE ENTITIES. BOTH NOW HAVE DEFINITE DELTA MAGNETIC CONFIGURATIONS, 3837'S IS LOCATED IN THE CENTRAL PORTION OF THE REGION AND 3839'S IN THE NORTHEAST TRAILER SECTION. OTHER REGIONS PRODUCING SUBFLARES WERE 3829 (S12W57), 3838 (N10W12) AND 3842 (N21E53). THESE REGIONS HAVE BEEN EITHER STABLE OR DECLINING. REGIONS 3840 (S15W10), 3841 (S11E09) AND NEW EMERGING FLUX REGION 3844 (S08E50) ARE GROWING. NEW REGIONS 3843 (S07E74) AND 3845 (N17E79) HAVE COME ACROSS EAST LIMB AS D-TYPE GROUPS.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO CONTINUE MODERATE. THE RECENT DEVELOPMENT AND INTERACTION IN THE 3837/3839 COMPLEX INDICATE AN INCREASING POTENTIAL FOR M-CLASS OR LARGER EVENTS.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS AT MAJOR STORM LEVELS EARLY IN THE PERIOD, BUT AFTER 1800Z A SIGNIFICANT SETTLING OF THE FIELD WAS OBSERVED. THE ISEE-3 SPACECRAFT MEASUREMENTS ALSO DISPLAYS EVIDENCE OF THIS QUIETING. THE FIELD IS HOWEVER, EXPECTED TO RETURN TO MINOR STORM CONDITIONS DURING THE NIGHT TIME SECTORS FOLLOWED BY ACTIVE LEVELS FOR THE REMAINDER OF THE FORECAST PERIOD. III. EVENT PROBABILITIES 08 AUG-10 AUG

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CLASS M 80/80/80

CLASS X 10/10/10

PROTON 05/05/10

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 07 AUG 214

PREDICTED 08 AUG-10 AUG 225/235/240

90 DAY MEAN 07 AUG 162

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 06 AUG 027/026

ESTIMATED AFR/AP 07 AUG 070/070

PREDICTED AFR/AP 08 AUG-10 AUG 040/075-020/020-015/020

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