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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 161

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 10 JUN 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 09/2100 TO 10/2100Z: SOLAR ACTIVITY WAS AT MODERATE LEVELS DURING THE PAST 24 HOURS. REGION 4204 (S10E04) PRODUCED TWO "M" CLASS EVENTS THE LARGEST WAS A M1/SB AT 09/2154UT THE OTHER WAS A M1/1B 10/1746UT. BOTH EVENTS HAD MINOR RADIO. REGION 4204 ALSO PRODUCED A C9/SB AT 10/1329UT THIS EVENT HAD 130 FLUX UNITS AT 2695MHZ AND 420 FLUX UNITS AT 245 MHZ. NO TYPE III/IV SWEEPS HAVE BEEN OBSERVED THIS PERIOD. REGION 4204 HAS CHANGED LITTLE IN SIZE OR MAGNETIC CONFIGURATION DURING THIS PERIOD. REGION 4201 (S09W75) HAS BEEN SOME WHAT SUBDUEO THIS PERIOD WITH ONLY MINOR "C" CLASS EVENTS BEING OBSERVED. THE REST OF THE REGIONS HAVE BEEN GENERALLY UNCHANGED.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE AT GENERALLY MODERATE LEVELS DURING THIS FORECAST PERIOD. REGION 4204 IS EXPECTED TO BE THE PRIME PRODUCER OF ACTIVITY. REGION 4201 MAY CONTRIBUTE AN ISOLATED "M" EVENT.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 09/2100Z TO 10/2100Z: THE GEOMAGNETIC FIELD HAS BEEN AT ACTIVE TO MINOR STORM LEVELS AT THE MID LATITUDE SITES AND AT MINOR TO MAJOR STORM LEVELS AT THE HIGH LATITUDE SITES. THE DISTURBANCE APPEARS TO BE FROM THE LARGE NORTHERN CORONAL HOLE WHICH PASSED CENTERAL MERIDIAN ON 06 JUNE. A SMALL SUDDEN IMPULSE WAS OBSERVED AT BOULDER AT 10/0455UT.

A. A LARGE NW TO SE FILAMENT WHICH WAS LOCATED AT S21W16 AT 2200UT ON 09 JUNE DISAPPEARED BEFOR 10 JUNE. THIS FILAMENT WAS PART OF A LONG NETURAL LINE WHICH TRAVERSED THE EQUATOR NEAR N00W50, AT 2100UT 10 JUNE, THEN PASSED OVER THE EAST LIMB AT NE52. THE LENGTH OF THE FILAMENT ALONG WITH ITS FAVORABLE LOCATION MAKES THE POSSIBILITY OF A MINOR MAGNETIC DISTURBANCE ON 14 TO 15 JUNE LIKELY.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO BE AT ACTIVE TO MINOR STORM LEVELS FOR THE NEXT 30 HOURS AT THE MID LATITUDE SITES. THE HIGH LATITUDE SITES SHOULD BE AT MINOR STORM, WITH PERIODS AT MAJOR STORM LEVELS, FOR THE NEXT 40 HOURS. THE FIELD IS THEN EXPECTED TO BE AT ACTIVE TO UNSETLED LEVELS FOR THE REST OF THE FORECAST PERIOD.

III. EVENT PROBABILITIES 11 JUN-13 JUN

CLASS M 30/20/20

CLASS X 10/05/05

PROTON 05/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 10 JUN 154

PREDICTED 11 JUN-13 JUN 150/145/135

90 DAY MEAN 10 JUN 127

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 09 JUN 021/025

ESTIMATED AFR/AP 10 JUN 023/035

PREDICTED AFR/AP 11 JUN-13 JUN 017/020-012/020-012/015.

SOLTERWARN

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