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HF US 3 BOU 242200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 205

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 24 JUL 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 23/2100 TO 24/2100Z: SOLAR ACTIVITY HAS BEEN LOW DURING THE PAST 24 HOURS. WITH THE DEPARTURE OF REGIONS 4249/4260 (SW07), THE MOST SIGNIFICANT REGION ON THE SOLAR DISK IS 4256 (S05W44). THIS REGION HAS SHOWN DRAMATIC GROWTH AND HAS BEEN FLUCTUATING NEAR FLARE INTENSITY DURING RECENT HOURS. MAGNETICALLY, IT IS A SIMPLE BIPOLE. REGION 4252 (S08W33) HAS REGAINED SPOTS AND REGION 4253 (N10W29) SHOWED MINOR GROWTH. OTHER REGIONS REMAINED MOSTLY STABLE OR DECAYED. ONE NEW REGION CROSSED THE EAST LIMB TODAY. IT IS 4262 (S22E73), AN H-TYPE SPOT WHICH IS THE RETURN OF OLD REGION 4230. A LARGE NORTH-SOUTH FILAMENT LOCATED NEAR W20 AND CROSSING THE SOLAR EQUATOR DISAPPEARED BEFORE 1500Z. THIS FILAMENT HAD DEFINED THE MAGNETIC INVERSION LINE BETWEEN REGIONS 4256 AND 4255 (N08W41). AN M1 X-RAY EVENT WHICH OCCURRED ON 23 JULY 0945Z HAS NOW BEEN ASSOCIATED WITH A B FLARE FROM S08W75 (REGION 4249).

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE LOW. REGION 4256 OFFERS A SLIGHT POSSIBILITY FOR SIGNIFICANT, M-CLASS FLARES.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 23/2100Z TO 24/2100Z: THE GEOMAGNETIC FIELD HAS BEEN AT MINOR STORM LEVELS AT MIDLATITUDE LOCATIONS FOR THE PAST 24 HOURS. HIGH LATITUDES HAVE BEEN EXPERIENCING PERIODS AT MAJOR STORM LEVELS. THIS ACTIVITY IS ATTRIBUTED TO DISTURBED SOLAR WIND ASSOCIATED WITH A CORONAL HOLE AND AN OBVIOUS RESTRUCTURING OF THE LARGE-SCALE HELIOMAGNETIC FIELDS NEAR SOLAR CENTER.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO REMAIN ACTIVE TOMORROW, DECLINE TOWARD UNSETTLED CONDITIONS THE NEXT DAY, AND RESUME ACTIVE TO MINOR STORM CONDITIONS BY THE END OF THE FORECAST PERIOD IN RESPONSE TO THE FILAMENT DISAPPEARANCE DESCRIBED ABOVE.

III. EVENT PROBABILITIES 25 JUL-27 JUL

CLASS M 05/05/05

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 24 JUL 135

PREDICTED 25 JUL-27 JUL 125/125/115

90 DAY MEAN 24 JUL 135

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 23 JUL 023/024

ESTIMATED AFR/AP 24 JUL 040/055

PREDICTED AFR/AP 25 JUL-27 JUL 025/025-015/015-018/015

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