

HFUSS BOU 132200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 348

JOINT USAF/NASA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 13 DEC 1984

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 12/2100Z TO 13/2100Z: SOLAR ACTIVITY WAS VERY LOW. REGION 4607 (S11W32) DECAYED IN WHITE-LIGHT SPOT NUMBER AND AREA. IT MAINTAINED AT LEAST ONE ARCHED FILAMENT SYSTEM THROUGHOUT THE PERIOD AND REMAINED A BETA-TYPE MAGNETICALLY. REGION 4608 (N18E40) DECAYED IN WHITE-LIGHT AREA BUT INCREASED ONE SPOT. IT WAS ALSO A MAGNETIC BETA-TYPE BUT PRODUCED ONLY AN ACTIVE DARK FILAMENT. NO NEW REGION WAS ASSIGNED.

I B. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE VERY LOW. NO RETURNING REGION IS EXPECTED.

II A. GEOPHYSICAL ACTIVITY SUMMARY FROM 12/2100Z TO 13/2100Z: GEOMAGNETIC ACTIVITY WAS AT MINOR TO MAJOR STORM LEVELS. MID LATITUDES EXPERIENCED A MINOR STORM PULSE FOLLOWED BY A MAJOR STORM PULSE FOR 13/0300 AND 0430-0600Z RESPECTIVELY. ANOTHER MINOR STORM PULSE FOLLOWED THESE AT MID-LATITUDES AT 13/1200Z. HIGH LATITUDES EXPERIENCED MANY MINOR STORM PULSES BETWEEN 13/0300 AND 1930Z. THIS DISTURBANCE WAS ATTRIBUTED TO A HIGH-SPEED EMISSION STREAM FROM A POSITIVE CORONAL HOLE WHOSE LEADING EDGE ROTATED PAST CENTRAL MERIDIAN ON 10/1400Z.

II B. GEOPHYSICAL ACTIVITY FORECAST: GEOMAGNETIC ACTIVITY IS EXPECTED TO BE AT MINOR TO MAJOR STORM LEVELS. THE CORONAL HOLE STREAM DISTURBANCE IS EXPECTED TO CONTINUE AT THE SAME OR HIGHER LEVEL THROUGH THE FIRST DAY (14 DEC) WITH A GRADUAL DECREASE TO ACTIVE LEVELS BY THE THIRD DAY (16 DEC). THE OUTLOOK PERIOD WILL CONTINUE THE GRADUAL DECREASE TO AN UNSETTLED TO ACTIVE LEVEL BY THE SEVENTH DAY (20 DEC). HIGH LATITUDES WILL CONTINUE TO EXPERIENCE BRIEF MAJOR LEVELS THROUGH BOTH THE FIRST AND SECOND DAYS (14-15 DEC), WITH MINOR STORM LEVELS POSSIBLE THROUGH THE THIRD DAY (16 DEC).

III. EVENT PROBABILITIES 14 DEC-16 DEC

CLASS M 01/01/01

CLASS X 01/01/01

PROTON 01/01/01

RCAF-----GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 13 DEC 079

PREDICTED 14 DEC-16 DEC 078/077/076

90 DAY MEAN 13 DEC 075

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 12 DEC 017/020

ESTIMATED AFR/AP 13 DEC 030/025

PREDICTED AFR/AP 14 DEC-16 DEC 038/040-025/030-021/020

SOLTERWARN

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