

HFUSS BOU 172200  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 352

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 17 DEC 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 16/2100 TO 17/2100Z: SOLAR ACTIVITY WAS VERY LOW. REGION 4608 (N16W11) PRODUCED A B2 X-RAY EVENT IN CONJUNCTION WITH AN EIGHT DEGREE LONG DISAPPEARING FILAMENT (NE6E04) AT 17/0230Z. A 1415 MHZ RADIO NOISE STORM ACCOMPANIED THE EVENT. THE SOUTHERN PORTION OF THE FILAMENT REFORMED FAINTLY LATE IN THE PERIOD. THE REGION STOPPED ITS GROWTH AND STARTED TO SLOWLY DECAY IN MOST WHITE-LIGHT ASPECTS. REGION 4607 (S11W84) CONTINUED ITS DECAY WITHOUT ANY SIGNIFICANT ACTIVITY OTHER THAN SURGES. RETURNING REGION 4598 REAPPEARED AS A PLAGE AREA AT S08E80 WITHOUT OBSERVED SPOTS AND WAS NOT RENUMBERED DURING THE PERIOD. ITS ONLY SIGNIFICANT OPTICAL ACTIVITY WAS SURGING. NO NEW REGION WAS NUMBERED.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE VERY LOW. RETURNING REGION 4600 (S12, CAR-041) CROSSED THE WEST LIMB LAST ROTATION AS A FAINT, SPOTLESS PLAGE REGION WITHOUT SIGNIFICANT ACTIVITY. ITS LOCATION IS PREDICTED TO REAPPEAR AT 18/0600Z.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 16/2100Z TO 17/2100Z: GEOMAGNETIC ACTIVITY WAS AT MINOR STORM TO ACTIVE LEVELS. THE DELAYED CORONAL HOLE STREAM-INDUCED DISTURBANCE CONTINUED TO EFFECT MINOR STORM REPORTS AT MID-LATITUDES AT 16/2100-2400 AND 17/1500Z. ACTIVE TO UNSETTLED LEVELS PREVAILED AT OTHER TIMES. THE HIGH LATITUDES REPORTED MAJOR STORM LEVELS AT 16/2230-0300Z AND 17/1330-2100Z. ACTIVE LEVELS DOMINATED THE REMAINING PERIODS EXCEPT FOR ONE MINOR LEVEL AT 17/0900Z.

IIB. GEOPHYSICAL ACTIVITY FORECAST: GEOMAGNETIC ACTIVITY IS EXPECTED TO BE AT ACTIVE TO OCCASIONALLY MINOR STORM LEVELS. MINOR STORM LEVELS ARE EXPECTED AT HIGH LATITUDES DURING NIGHTTIME PERIODS, WITH THE POSSIBILITY OF MAJOR REPORTS AT LOCAL MID-NIGHT HOURS LATE ON THE SECOND THROUGH THE THIRD DAYS (19-20 DEC). THIS ENHANCED LEVEL OF ACTIVITY (OVER RECURRENT VALUES) IS EXPECTED IN RESPONSE TO THE SMALL DISAPPEARING FILAMENT AT 17/0230Z. THE FIRST DAY'S ACTIVITY (18 DEC) IS THE LAST DAY OF THE CORONAL HOLE HIGH-SPEED STREAM INDUCED DISTURBANCE.

III. EVENT PROBABILITIES 18 DEC-20 DEC

CLASS M 01/01/01

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 1.7 DEC 075

PREDICTED 18 DEC-20 DEC 074/073/073

90 DAY MEAN 17 DEC 075

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 16 DEC 025/032

ESTIMATED AFR/AP 17 DEC 019/030

PREDICTED AFR/AP 18 DEC-20 DEC 018/020-017/015-014/010

SOLTERWARN

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