

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 363

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 2200Z 29 DEC 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 28/2100Z TO 29/2100Z: THE SOLAR ACTIVITY HAS BEEN AT A VERY LOW LEVEL FOR THE PAST 24 HOUR PERIOD. REGION 4384 (N13E13) HAD AN EAST-WEST INVERSION LINE WITH ARCHED FILIMENTS IN THE TRAILERS AREA. IT WAS THE ONLY SIGNIFICANT REGION BUT PRODUCED NO EVENTS. NO NEW REGIONS WERE ASSIGNED.

IB. SOLAR ACTIVITY FORECAST: THE SOLAR ACTIVITY IS EXPECTED TO BE AT A VERY LOW LEVEL FOR THE FIRST DAY (30 DEC). RETURNING REGIONS 4376/72 (S14 CAR14/S12 CAR14) ARE EXPECTED TO INCREASE THE ACTIVITY TO A LOW LEVEL FOR BOTH THE SECOND AND THIRD DAYS (31DEC/1 JAN) AS THEY PRODUCED A TOTAL OF 4 OPTICAL FLARES AND 3 CLASS "M" X-RAY EVENTS ON THEIR LAST ROTATION. A VERY SLIGHT CHANCE OF MODERATE LEVEL ACTIVITY IS POSSIBLE AFTER 30 DEC, 1983.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 28/2100Z TO 29/2100Z: THE GEOMAGNETIC ACTIVITY HAS BEEN AT UNSETLED TO ACTIVE LEVELS FOR THE PAST 24 HOUR PERIOD. THIS SLIGHT INCREASE IN ACTIVITY, COMPARED TO RECURRENCE, WAS ATTRIBUTED TO A SMALL DISAPPEARING FILIMENT ON 25 DEC.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC ACTIVITY IS EXPECTED TO BE AT ACTIVE TO MINOR STORM LEVELS FOR THE FIRST DAY (30 DEC), AND DECREASE TO ACTIVE TO UNSETLED LEVELS FOR THE LAST TWO DAYS (31DEC/1 JAN). THIS INCREASE IN ACTIVITY, AS COMPARED TO RECURRENCE, IS EXPECTED IN RESPONSE TO DISAPPEARING FILIMENTS ON 26-27 DEC 1983.

III. EVENT PROBABILITIES 30 DEC-31 JAN

CLASS M 21/35/85

CLASS X 21/21/81

PROTON 21/21/81

PCAF GREEN

IV. OTTAWA 13.7 CM FLUX

OBSERVED 29 DEC 284

PREDICTED 30 DEC-31 JAN 285/289/293

90 DAY MEAN 29 DEC 182

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 28 DEC 311/313

ESTIMATED AFR/AP 29 DEC 316/315

PREDICTED AFR/AP 30 DEC-31 JAN 228/225-315/315-315/315

SOLTERWARN

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