

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 342

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY. H5

ISSUED 2222Z 26 DEC 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 25/2100 TO 26/2100Z: THE SOLAR ACTIVITY HAS BEEN AT A MODERATE LEVEL FOR THE PAST 24 HOUR PERIOD. REGION 4372 (S13E55) PRODUCED A M1/1B EVENT WITH 120 SOLAR FLUX UNIT 245MHZ BURST AT 26/2735UT. THIS REGION GREW TO 120 MILLIONTHS IN AREA WITH 11 SUNSPOTS DURING THIS PERIOD. IT PRODUCED ANOTHER M1/1B EVENT AT 26/1544UT. A SUB-FLARE ATTRIBUTED TO THIS REGION AT 26/2314UT INCREASED THE EXTENT FARTHER TO THE ESE LIMB AND IMPLIED A BETA-GAMMA MAGNETIC CONFIGURATION, BUT NO OBSERVATIONS CONFIRMED THIS ASSUMPTION. NO NEW REGIONS WERE ASSIGNED DURING THIS PERIOD.

IB. SOLAR ACTIVITY FORECAST: THE SOLAR ACTIVITY IS EXPECTED TO BE AT MODERATE TO LOW LEVELS THROUGH-OUT THE FORECAST PERIOD AS REGION 4372 SLOWS IT GROWTH BUT CONTINUES TO THREATEN TO PRODUCE A CLASS "M1" X-RAY EVENT.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 25/2100Z TO 26/2100Z: THE GEOMAGNETIC ACTIVITY HAS BEEN AT ACTIVE TO MINOR STORM LEVELS FOR THE PAST 24 HOUR PERIOD. MAJOR STORM LEVELS HAVE BEEN REPORTED AT HIGH LATITUDE STATIONS. THIS DISTURBANCE IS ATTRIBUTED TO RECURRENCE.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC ACTIVITY IS EXPECTED TO BE AT ACTIVE TO MINOR STORM LEVELS THROUGH-OUT THE FORECAST PERIOD. MAJOR STORM LEVELS ARE EXPECTED AT HIGH LATITUDES. THIS DISTURBANCE IS ATTRIBUTED TO RECURRENCE FOR THE FIRST/SECOND DAY (7/8 DEC), AND A COMBINATION OF CORONAL HOLE DISTURBANCE/RECURRENCE THE THIRD DAY (9 DEC). OUTLOOK: CONTINUED STORM LEVEL ACTIVITY THROUGH-OUT THE FOURTH DDAY (10 DEC) WITH A DECREASE TO MAINLY ACTIVE LEVELS ON THE FIFTH DAY (11 DEC).

III. EVENT PROBABILITIES 27 DEC-29 DEC

CLASS M 20/15/10

CLASS X 21/21/21

PROTON 21/21/21

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 26 DEC 101

PREDICTED 27 DEC-29 DEC 121/299/298

90 DAY MEAN 26 DEC 124

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 25 DEC 014/019

ESTIMATED AFR/AP 26 DEC 027/035

PREDICTED AFR/AP 27 DEC-29 DEC 024/032-026/032-032/035

SOLTERWARN