

SDF NUMBER 365

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY. 45

ISSUED 2200Z 31 DEC 1983

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 30/2100Z TO 31/2100Z: THE SOLAR ACTIVITY HAS BEEN AT A VERY LOW LEVEL FOR THE PAST 24 HOUR PERIOD. REGION 4384 (N13E22) PRODUCED A SUB-FLARE WITH ASSOCIATED CLASS "B3" X-RAY EVENT AT 31/0633UT. IT WAS THE ONLY SPOTTED REGION AND HAD DWINDLED DOWN TO A SIMPLE "AXX". AN UNCORRELATED CLASS "B8" X-RAY EVENT AT 31/2045UT WAS THE GREATEST SINCE 26 DEC. NO NEW REGIONS WERE ASSIGNED.

IB. SOLAR ACTIVITY FORECAST: THE SOLAR ACTIVITY IS EXPECTED TO BE AT A VERY LOW LEVEL THROUGH-OUT THE FORECAST PERIOD. RETURNING REGIONS 4376/4372 "(S14 CAR14/S12 CAR14) STILL PROVIDE A VERY SLIGHT CHANCE OF MODERATE LEVEL ACTIVITY BUT HAVE PRODUCED NO EVIDENCE OF THEIR CONTINUED EXISTENCE YET. RETURNING REGION 4379 (S28 CAR 327) TRAVERSED THE WEST LIMB AS A GROWING "HSX" AND SHOULD REAPPEAR AT 1/0700UT. RETURNING REGION 4374 (N02 CAR336) PRODUCED 8 SUB-FLARES AND 1 CLASS "C" X-RAY EVENT DURING ITS LAST ORBITATION BUT CROSSED THE LIMB AS AN DYING "AXX". IT SHOULD RETURN AT 3/1600UT.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 30/2100Z TO 31/2100Z: THE GEOMAGNETIC ACTIVITY HAS BEEN AT MINOR STORM LEVELS FOR THE PAST 24 HOUR PERIOD. A MAJOR STORM LEVEL WAS REPORTED AT COLLEGE AFTER 31/1500UT. THIS DISTURBANCE WAS ATTRIBUTED TO DISAPPEARING FILUMENTS ON 26/27 DEC 1983 WITH AN ACCOMPANYING SUDDEN COMMENCEMENT AT 30/2348UT.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC ACTIVITY IS EXPECTED TO BE AT AN ACTIVE LEVEL WITH BRIEF MINOR STORM LEVELS AT HIGH LATITUDE SITES FOR THE FIRST DAY (1 JAN). THIS ACTIVITY IS THE FINAL STAGE OF THE DISAPPEARING FILUMENT OF THE 26/27TH DEC. THE GEOMAGNETIC ACTIVITY IS EXPECTED TO INCREASE SLIGHTLY TO ACTIVE/MINOR STORM LEVELS DURING THE SECOND AND THIRD DAYS (2/3 JAN) DUE TO RECURRENCE. MAJOR STORM LEVELS ARE EXPECTED AT HIGH LATITUDE SITES DURING NIGHT-TIME PERIODS.

III. EVENT PROBABILITIES 21 JAN-23 JAN

CLASS M 25/25/25

CLASS X 21/21/21

PROTON 21/21/21

PCAF GREEN

IV. OTTAWA 12.7 CM FLUX

OBSERVED 31 DEC 287

PREDICTED 21 JAN-23 JAN 289/291/292

90 DAY MEAN 31 DEC 299

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 30 DEC 231/234

ESTIMATED AFR/AP 31 DEC 218/225

PREDICTED AFR/AP 21 JAN-23 JAN 215/215-222/225-225/225

SOLTERWARN

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