

SESC Solar Summary and Forecast - For Joe Hirman

Begin: 12/25/87 00:00:00

End : 12/25/87 23:59:00

12/25 22:00

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HFUS3 BOU 252200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 359

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 25 DEC 1987

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 24/2100Z TO 25/2100Z: SOLAR ACTIVITY HAS BEEN VERY LOW. TWO NEW REGIONS WERE NUMBERED TODAY: 4912 (S33E71) AND 4913 (S21W12). REGION 4912, THE RETURN OF OLD REGION 4903 WHICH WAS QUIET AND IMMATURE LAST ROTATION, IS MOST LIKELY RESPONSIBLE FOR THE SIGNIFICANT INCREASE IN BOTH THE 10 CM. AND X-RAY BACKGROUND LEVELS NOW BEING OBSERVED. CALCIUM XV (YELLOW LINE) EMISSION WAS OBSERVED NEAR THE SITE OF THIS REGION YESTERDAY. ANALYSIS OF THE SPOT GROUP IS DIFFICULT DUE TO ITS LIMB PROXIMITY, BUT IT SEEMS TO CONSIST OF 10-15 SPOTS WITH PENUMBRA. A FEW SUBFLARES HAVE BEEN PRODUCED BY THE REGION IN THE PAST 12 HOURS. THE OTHER NEW SPOT GROUP, REGION 4913, EMERGED ON THE DISK AS A SIMPLE BIPOLE WITH AN ARCH-FILAMENT SYSTEM. REGION 4906 (S33W85) IS THE ONLY OTHER SPOTTED REGION. IT IS MAKING A QUIET WEST LIMB TRANSIT.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO INCREASE TO LOW TO MODERATE LEVELS. REGION 4912 IS LIKELY TO PRODUCE M-CLASS ACTIVITY DURING THE FORECAST PERIOD.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 24/2100Z TO 25/2100Z: THE GEOMAGNETIC FIELD HAS BEEN AT MOSTLY QUIET LEVELS AT MID-LATITUDES WHILE HIGH LATITUDE SITES HAVE OBSERVED QUIET TO UNSETTLED CONDITIONS.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD SHOULD PERSIST AT QUIET TO UNSETTLED LEVELS THROUGHOUT THE INTERVAL.

III. EVENT PROBABILITIES 26 DEC-28 DEC

CLASS M 60/60/60

CLASS X 10/10/10

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 25 DEC 102

PREDICTED 26 DEC-28 DEC 106/111/117

90 DAY MEAN 25 DEC 097

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 24 DEC 005/010

ESTIMATED AFR/AP 25 DEC 007/012

PREDICTED AFR/AP 26 DEC-28 DEC 005/012-005/010-005/010

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