

SDF issued at 2059UT 09 DEC 86

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 343

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 09 DEC 1986

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 08/2100Z TO 09/2100Z: SOLAR ACTIVITY WAS VERY LOW. ACTIVE SURGING NEAR S30, EAST LIMB WAS PROBABLY WITH A C1 X-RAY EVENT AT 09/0910Z. THIS WAS VERY NEAR THE PROJECTED LOCATION OF RETURNING REGION 4759 (S28, L-248). NEWLY NUMBERED REGION 4760 (N26E39) WAS AN EMERGING REVERSED-POLARITY BETA-TYPE.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE VERY LOW.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 08/2100Z TO 09/2100Z: THE GEOMAGNETIC FIELD WAS QUIET TO UNSETTLED.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO BE UNSETTLED TO ACTIVE THE FIRST ONE-HALF OF THE PERIOD. MINOR STORM CONDITIONS ARE POSSIBLE AT HIGH LATITUDES. THE LAST ONE-HALF OF THE PERIOD IS EXPECTED TO BE UNSETTLED TO QUIET. THIS RECURRENT DISTURBANCE IS SLOWLY WEAKENING.

III. EVENT PROBABILITIES 10 DEC-12 DEC

CLASS M 01/01/01

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 09 DEC 073

PREDICTED 10 DEC-12 DEC 074/076/078

90 DAY MEAN 09 DEC 077

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 08 DEC 002/006

ESTIMATED AFR/AP 09 DEC 005/008

PREDICTED AFR/AP 10 DEC-12 DEC 011/015-008/015-006/010

**Highlights of Solar and Geomagnetic Activity**  
**01 - 07 December 1986**

Solar activity was very low. There were no sunspot regions on the disk during the period.

There were no significant proton enhancements observed at satellite altitudes.

Active to minor storm conditions from an undetermined source were observed at high latitudes on 01 - 02 December. Otherwise, the geomagnetic field was generally quiet to unsettled with only brief periods of active conditions.

**Forecast of Solar and Geomagnetic Activity**  
**10 December 1986 - 08 January 1987**

Solar activity is expected to remain very low. Region 4759 (S28, L=248) is due to return on 09 December.

The geomagnetic field is expected to be generally unsettled to active through the forecast period. Peak active conditions are expected on 21 - 23 December around the time of a possible Solar Sector Boundary (SSB) passage. The remainder of the forecast is based on a weakening recurrent pattern.