JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
SDF NUMBER 074 ISSUED AT 2200Z ON 15 MAR 1993
IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 14/2100Z TO 15/2100Z: SOLAR ACTIVITY WAS MODERATE. REGION 7440 (S06W93) PRODUCED TODAY'S ONLY M-CLASS EVENT, AN M1/2F IN PROGRESS AT 14/2100Z. THE X-RAY SIGNATURE SUGGESTS A GOOD POSSIBILITY FOR PROTONS. A STRONG CALCIUM EMISSION WAS NOTED ON THE SOUTHEAST LIMB TODAY.
IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE LOW TO MODERATE. REGION 7448 MAY PRODUCE AN ISOLATED M-CLASS FLARE OVER THE NEXT THREE DAYS. A GENERAL UPWARD TREND IN BACK-GROUND LEVELS IS EXPECTED AS AN INFERRED NEW REGION ROTATES AROUND FROM EAST LIMB.
IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 14/2100Z TO 15/2100Z: THE GEOMAGNETIC FIELD RANGED FROM UNSETTLED TO SEVERE STORM LEVELS. AN INITIALLY UNSETTLED TO ACTIVE FIELD CHANGED TO STORM LEVELS FOLLOWING A SUDDEN STORM COMMENCEMENT (SSC) AT 0526UT. MID-LATITUDES EXPERIENCED MINOR TO MAJOR STORM LEVELS AND HIGH LATITUDES REPORTETD MAJOR TO SEVERE STORM LEVELS. THE DISTURBANCE WAS BEGINNING TO SUBSIDE NEAR DAY'S END. THIS STORM WAS PROBABLY CAUSED BY THE LONG DURATION M7 FLARE OF 12 MARCH.
IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO BE UNSETTLED TO SLIGHTLY ACTIVE OVER THE NEXT 12 HOURS, AFTER WHICH ACTIVITY SHOULD DECLINE UNTIL DAY THREE IN RESPONSE TO THE M-FLARE IN PROGRESS. ACTIVE TO MINOR STORM LEVELS MAY BE ATTAINED ON DAY THREE.
III. EVENT PROBABILITIES 16 MAR-18 MAR
CLASS M 45/25/25
CLASS X 10/05/05
PROTON 25/05/05
PCAF YELLOW
IV. PENTICTON 10.7 CM FLUX
OBSERVED 15 MAR 131
PREDICTED 16 MAR-18 MAR 130/125/130
90 DAY MEAN 15 MAR 135
V. GEOMAGNETIC A INDICES
OBSERVED AFR/AP 14 MAR 017/016
ESTIMATED AFR/AP 15 MAR 030/050
PREDICTED AFR/AP 16 MAR-18 MAR 015/015-010/010-025/025
VI. GEOMAGNETIC ACTIVITY PROBABILITIES 16 MAR-18 MAR
A. MIDDLE LATITUDES
ACTIVE 25/25/45
MINOR STORM 10/10/25
MAJOR-SEVERE STORM 05/05/15
B. HIGH LATITUDES
ACTIVE 30/30/45
MINOR STORM 10/10/25
MAJOR-SEVERE STORM 05/05/15