

SESC Solar Summary and Forecast - For Joe Hirman

Begin: 02/04/86 00:00:00

End : 02/04/86 23:59:00

02/04 22:00

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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 035

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 04 FEB 1986

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 03/2100 TO 04/2100Z: SOLAR ACTIVITY HAS BEEN VERY HIGH FOR THE PAST 24 HOURS. REGION 4711 (S07E10) APPEARS TO HAVE REACHED ITS PEAK IN SIZE AND COMPLEXITY. IT IS A MAGNETICALLY COMPLEX DKC/BETA-DELTA TYPE SPOT GROUP (WHITE LIGHT AREA 720 MILLIONTHS OF THE SOLAR HEMISPHERE). A MAJOR FLARE OCCURRED IN THIS REGION AT 0732 UT AND REACHED AN X-RAY MAXIMUM AT 0741 UT ON 04 FEB 86. THIS X-RAY/OPTICAL CLASS X3/3B EVENT WAS ACCCOMPANIED BY VERY ENERGETIC RADIO EMISSIONS AND A SUDDEN IONOSPHERIC DISTURBANCE. THE RADIO EVENTS INCLUDED A TYPE II SWEEP (IMPORTANCE 2) AND AN 820 FLUX UNIT BURST AT 2695 MHZ (TENFLARE). REGION 4713 (S02E54) IS A CAD TYPE SPOT GROUP. THIS STILL GROWING REGION (WHITE LIGHT AREA 140 MILLIONTHS OF THE SOLAR HEMISPHERE) PRODUCED A MAJOR FLARE OF X-RAY/OPTICAL CLASS M6/1B. THE FLARE BEGAN AT 1018 UT AND REACHED AN X-RAY MAXIMUM AT 1029 UT 04 FEB 86. THIS EVENT ALSO WAS ASSOCIATED WITH A SUDDEN IONOSPHERIC DISTURBANCE. REGION 4612 (S04W73), A DSO TYPE SPOT GROUP, HAS GROWN SINCE YESTERDAY. NO NEW REGIONS WERE NUMBERED TODAY.

SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE HIGH TO HIGH FOR THE NEXT THREE DAYS. REGION 4711 IS EXPECTED TO PRODUCE MAJOR FLARE ACTIVITY AND ASSOCIATED DISTURBANCES. REGION 4713 MAY PRODUCE MINOR TO MAJOR FLARE ACTIVITY. THE PROBABILITY OF A PROTON EVENT IS SIGNIFICANTLY ENHANCED. NO REGIONS ARE DUE TO RETURN.

II A. GEOPHYSICAL ACTIVITY SUMMARY FROM 03/2100Z TO 04/2100Z: GEOMAGNETIC ACTIVITY HAS BEEN GENERALLY QUIET FOR THE PAST 24 HOURS. OCCASIONAL PERIODS OF UNSETTLED CONDITIONS, ESPECIALLY AT HIGH LATITUDES, WERE OBSERVED.

II B. GEOPHYSICAL ACTIVITY FORECAST: GEOMAGNETIC ACTIVITY IS EXPECTED TO BE QUIET TO UNSETTLED FOR THE NEXT DAY AND ACTIVE WITH PERIODS OF MINOR STORM CONDITIONS FOR THE SUBSEQUENT TWO DAYS. ACTIVITY LEVELS ARE LIKELY TO INCREASE BY EARLY ON 06 FEB 86 IN RESPONSE TO THE EFFECTS OF SOLAR FLARES OF 03-04 FEB 86.

III. EVENT PROBABILITIES 05 FEB-07 FEB

CLASS M 90/90/90

CLASS X 50/50/40

PROTON 30/30/30

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 04 FEB 101

PREDICTED 05 FEB-07 FEB 103/101/099

90 DAY MEAN 04 FEB 075

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 03 FEB 006/007

ESTIMATED AFR/AP 04 FEB 005/006

PREDICTED AFR/AF U3 FEB-07 FEB 0127/0207-0307/0407-0107/0207

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