

SESC Solar Summary and Forecast - For Joe Hirman

Begin: 08/20/86 00:00:00

End : 08/20/86 23:59:00

08/20 22:00

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1053 BOU 202200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 232

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 20 AUG 1986

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 19/2100 TO 20/2100Z: SOLAR ACTIVITY HAS BEEN VERY LOW. REGION 4743 (S11E28) WAS NUMBERED TODAY AS A SMALL BXO TYPE SPOT GROUP. THE REGION HAS A MAGNETIC CONFIGURATION THAT IS LEADER-POSITIVE AND TRAILER-NEGATIVE. THIS IS REVERSED FROM WHAT IS EXPECTED DURING THE CURRENT SUNSPOT CYCLE NUMBER 21. THE REGION PRODUCED ONLY MINOR FLARE ACTIVITY. A 10 DEGREE LONG FILAMENT DISAPPEARED FROM THE NORTHWEST QUADRANT EARLY IN THE DAY. THE REST OF THE DISK AND LIMBS WERE QUIET.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN VERY LOW FOR THE NEXT THREE DAYS. REGION 4741 (N08, L-235 CLASS/AREA DKI/200 ON 29 JULY) IS DUE TO RETURN LATE ON 22 AUGUST. REGION 4741 WAS A REVERSED POLARITY REGION WHICH PRODUCED TWENTY MINOR FLARES ON THE LAST SOLAR ROTATION. IT WAS RELATIVELY INACTIVE WHEN IT ROTATED OFF THE DISK ON 09 AUGUST.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 19/2100Z TO 20/2100Z: THE GEOMAGNETIC FIELD WAS GENERALLY QUIET TO UNSETTLED EARLY IN THE PERIOD AND AT MINOR STORM LATER IN THE PERIOD. A SUDDEN IMPULSE RECORDED AT SEVERAL MIDDLE LATITUDE STATIONS AT APPROXIMATELY 1350 UT 20 AUGUST MARKED THE CHANGE IN ACTIVITY. THE CHANGE MAY BE PART OF A RECURRENT PATTERN OF SEVERAL PAST SOLAR ROTATIONS OR THE EFFECTS OF A LARGE FILAMENT DISRUPTION ON 15 AUGUST OR A COMBINATION OF BOTH.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO BE ACTIVE AT MIDDLE LATITUDES (MINOR STORM AT HIGH LATITUDES) FOR THE NEXT 48 HOURS WITH GENERALLY ACTIVE CONDITIONS AT ALL LATITUDES FOR THE SUBSEQUENT 24 HOURS.

PERIODS OF MINOR STORM CONDITIONS AT MIDDLE LATITUDES (MAJOR STORM CONDITIONS AT HIGH LATITUDES) ARE POSSIBLE DURING THIS THREE DAY INTERVAL, ESPECIALLY IN THE LOCAL NIGHTTIME SECTORS.

III. EVENT PROBABILITIES 21 AUG-23 AUG

CLASS M 02/02/02

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 20 AUG 069

PREDICTED 21 AUG-23 AUG 070/070/071

90 DAY MEAN 20 AUG 069

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 19 AUG 006/011

ESTIMATED AFR/AP 20 AUG 020/025

PREDICTED AFR/AP 21 AUG-23 AUG 020/030-020/030-018/020

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