

SESC Solar Summary and Forecast - For Joe Hirman

Begin: 08/21/86 00:00:00

End : 08/21/86 23:59:00

08/21 22:00

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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 233

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 21 AUG 1986

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/2100 TO 21/2100Z: SOLAR ACTIVITY HAS BEEN VERY LOW. REGION 4743 (S10E14) HAS GROWN SLIGHTLY INTO A CRO TYPE SPOT GROUP. THIS REVERSED POLARITY REGION (LEADER-POSITIVE TRAILER-NEGATIVE) HAS PRODUCED A FEW MINOR FLARES. NO NEW REGIONS WERE NUMBERED TODAY AND THE REST OF THE DISK AND LIMBS WERE QUIET.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE VERY LOW FOR THE NEXT THREE DAYS. REGION 4743 IS CAPABLE OF CONTINUED MINOR FLARE ACTIVITY. REGION 4741 (NOB, L-235 CLASS/AREA DK1/200 ON 29 JULY) IS DUE TO RETURN LATE ON 22 AUGUST. THIS REGION WAS A REVERSED POLARITY REGION THAT PRODUCED TWENTY MINOR FLARES ON THE LAST SOLAR ROTATION. IT WAS DECLINING WHEN IT ROTATED OFF THE DISK ON 09 AUGUST.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 20/2100Z TO 21/2100Z: GEOMAGNETIC ACTIVITY HAS RANGED FROM UNSETTLED TO MINOR STORM AT MIDDLE LATITUDES AND MINOR TO SEVERE STORM AT HIGH LATITUDES. SOME PERIODS OF MAJOR STORM CONDITIONS WERE OBSERVED AT ONE MIDDLE LATITUDE STATION. THE GEOMAGNETIC STORM BEGAN AS A SUDDEN COMMENCEMENT AT 1350 UT 20 AUGUST AND IS STILL IN PROGRESS. THE SOURCE OF THE DISTURBANCE IS EITHER THE EFFECT OF A RECURRENT HIGH SPEED SOLAR WIND (CORONAL HOLE) OR THE EFFECT OF A LARGE FILAMENT DISRUPTION ON 15 AUGUST, OR BOTH.

IIB. GEOPHYSICAL ACTIVITY FORECAST: GEOMAGNETIC FIELD CONDITIONS ARE EXPECTED TO BE ACTIVE AT MIDDLE LATITUDES AND MINOR STORM AT HIGH LATITUDES FOR THE NEXT 24 HOURS. GENERALLY ACTIVE CONDITIONS AT ALL LATITUDES ARE EXPECTED FOR THE SUBSEQUENT 48 HOURS. PERIODS OF MINOR TO MAJOR STORM CONDITIONS ARE POSSIBLE DURING THE NEXT THREE DAYS. THE EXPECTED END TIME OF THE STORM IS UNCLEAR SINCE THE SOURCE IS NOT POSITIVELY KNOWN.

III. EVENT PROBABILITIES 22 AUG-24 AUG

CLASS M 02/02/02

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 AUG 069

PREDICTED 22 AUG-24 AUG 069/069/069

90 DAY MEAN 21 AUG 069

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 20 AUG 016/025

ESTIMATED AFR/AP 21 AUG 025/043

PREDICTED AFR/AP 22 AUG-24 AUG 020/030-018/020-018/020

SOLTERWARN

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