

SESC Solar Summary and Forecast - For Joe Hirman

Begin: 10/15/87 00:00:00

End : 10/15/87 23:59:00

10/15 22:00

2200

HFUS3 BOU 152200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 288

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 15 OCT 1987

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 14/2100Z TO 15/2100Z: SOLAR ACTIVITY HAS BEEN VERY LOW. REGION 4866 (N22E00) CONTINUED TO GROW AND PRODUCED THREE C-CLASS X-RAY FLARES, THE LARGEST BEING A C4.5 AT 1112Z. THE PLAGE COVERAGE IN H-ALPHA SHOWS THE SUBSTANTIAL GROWTH AND CROWDING OF THE SUNSPOTS. THE REGION'S MAGNETIC FIELDS CONTINUE TO BE STRONG AND COMPLEX. REGION 4870 (S23W16) ALSO CONTINUED GROWING AND PRODUCED A SUBFLARE. REGION 4869 (S25W47) PRODUCED A FEW BRIGHTENINGS AND SUBFLARES DURING THE PERIOD. THE OTHER NUMBERED REGIONS WERE QUIET AND STABLE.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE VERY LOW TO MODERATE. REGION 4866 HAS STORED SUBSTANTIAL ENERGY IN A COMPLEX STRUCTURE WHICH IS EXPECTED TO DESTABILIZE AND PRODUCE AN M-CLASS FLARE SOMETIME IN THE NEXT FEW DAYS. REGIONS 4869 AND 4870 ARE POSSIBLE SOURCES FOR SMALL C-CLASS FLARES.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 14/2100Z TO 15/2100Z: THE GEOMAGNETIC FIELD WAS UNSETLED TO ACTIVE AT MID-LATITUDES AND WAS AT GENERALLY ACTIVE TO MINOR STORM LEVELS AT HIGH LATITUDES. THE DISTURBANCE APPEARED TO BE TAPERING OFF AT FORECAST ISSUE TIME.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO BE UNSETLED WITH OCCASIONAL ACTIVE PERIODS FOR 16-17 OCTOBER BECOMING GENERALLY UNSETLED ON 18 OCTOBER. THE 16 OCTOBER ACTIVE PERIODS ARE EXPECTED FROM REMAINING ENERGY OF THE CURRENT DISTURBANCE BEING RELEASED IN THE FORM OF SUB-STORMS. THE 17 OCTOBER CONDITIONS ARE EXPECTED FROM FAVORABLE POSITIONING OF A SMALL CORONAL HOLE.

III. EVENT PROBABILITIES 16 OCT-18 OCT

CLASS M 25/25/25

CLASS X 05/05/05

PROTON 05/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 15 OCT 119

PREDICTED 16 OCT-18 OCT 120/120/115

90 DAY MEAN 15 OCT 091

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 14 OCT 021/038

ESTIMATED AFR/AP 15 OCT 020/032

PREDICTED AFR/AP 16 OCT-18 OCT 010/020-014/015-010/015

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