

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 UNSETTLED 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 UNSETTLED WITH OCCASIONAL ACTIVE PERIODS FOR 16-17 OCTOBER BECOMING GENERALLY UNSETTLED ON 18 OCTOBER. THE 16 OCTOBER ACTIVE PERIODS ARE EXPECTED FROM REMAINING ENERGY OF THE CURRENT DISTURBANCE BEING RELEASED IN THE FORM OF SUBSTORMS. 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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