

SESC Solar Summary and Forecast - For Joe Hirman

Begin: 10/17/87 00:00:00

End : 10/17/87 23:59:00

10/17 22:00

2200

HFUS3 BOU 172200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 290

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 17 OCT 1987

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 16/2100Z TO 17/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE. REGION 4870 (S24W43) PRODUCED A M1.4/1B FLARE AT 1225UT ACCOMPANIED BY A 245 MHZ RADIO BURST. INTERESTINGLY, REGION 4866 PRODUCED A SUBFLARE AT THE SAME TIME SUGGESTING SYMPATHETIC FLARING. REGION 4870 SHOWED SOME GROWTH DURING THE PERIOD AND APPEARED TO BE ELONGATING AT FORECAST ISSUE TIME. REGION 4866 (N23W27) CONTINUED TO SHOW A GRADUAL DECLINE AND PRODUCED ONLY SMALL FLARES, THE LARGEST BEING A C1.6/1N AT 1353Z. THE REGION HAS SIMPLIFIED MAGNETICALLY AND HAS A NORTH-SOUTH INVERSION LINE CLEARLY SEPARATING THE NEGATIVE LEADER AND POSITIVE TRAILER SUNSPOTS. THE NEW PLAGE AREA ROTATING ONTO THE SOUTHEAST PART OF THE DISK DISPLAYED SOME SURGE ACTIVITY BUT AS YET HAS NOT BEEN OBSERVED TO HAVE SUNSPOTS. THE REMAINING ACTIVE REGIONS WERE QUIET AND STABLE.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE VERY LOW TO MODERATE. REGIONS 4870 AND 4866 ARE CONSIDERED TO BE THE MOST LIKELY SOURCES FOR M-FLARE ACTIVITY.

II. GEOPHYSICAL ACTIVITY SUMMARY FROM 16/2100Z TO 17/2100Z: THE GEOMAGNETIC FIELD WAS QUIET TO UNSETTLED UNTIL ABOUT 1200Z WHEN A BRIEF PERIOD OF ACTIVE TO MINOR STORM LEVELS OCCURRED WITH SOME MAJOR STORMING AT HIGH LATITUDES. THE DISTURBANCE ENDED AT ABOUT 1800Z AND CONDITIONS HAVE BEEN GENERALLY UNSETTLED SINCE THEN. A LIKELY SOURCE FOR THIS ACTIVITY IS AN ISOLATED CORONAL HOLE LOCATED AT ABOUT N25W55 AS OF 1500Z ON 17 OCTOBER.

III. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO BE GENERALLY UNSETTLED WITH OCCASIONAL BRIEF ACTIVE PERIODS FOR THE NEXT THREE DAYS.

IV. EVENT PROBABILITIES 18 OCT-20 OCT

CLASS M 25/25/25

CLASS X 05/05/05

PROTON 05/05/05

PCAF GREEN

V. OTTAWA 10.7 CM FLUX

OBSERVED 17 OCT 107

PREDICTED 18 OCT-20 OCT 104/100/097

20 DAY MEAN 17 OCT 092

VI. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 16 OCT 012/017

ESTIMATED AFR/AP 17 OCT 016/018

PREDICTED AFR/AP 18 OCT-20 OCT 015/018-012/015-010/015