

HFUS 1 BOU 121300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 316A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 12 NOV 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 11/1200Z TO 12/1200Z: SOLAR ACTIVITY HAS BEEN MODERATE. THE STRENGTH AND FREQUENCY OF EVENTS IN REGION 3987(S12E37) INCREASED MARKEDLY IN THE PAST 12 HOURS WITH THE OCCURRENCE OF A PROLONGED EVENT WITH THREE MAXIMA ABOVE CLASS M INTENSITY: M2/1B AT 0351Z, M1/1B AT 0536Z AND M2/1B AT 0856Z. THE LAST TWO MAXIMA WERE ACCOMPANIED BY TYPE II AND TYPE IV RADIO BURSTS OF INTENSITY 2. A FILAMENT ERUPTION FROM WITHIN THIS REGION PRECEDED THESE FLARES. RADIO BURST INTENSITY AT CM WAVELENGTHS WAS NOT STRONG. THE OPTICAL FLARES PARTIALLY INVOLVED ADJACENT REGIONS 3984(S15E20) AND 3990(S07E33). THE SUNSPOTS IN REGION 3987 CONTINUE TO GROW IN SIZE AND COMPLEXITY. THERE IS EVIDENCE OF SIGNIFICANT DISTORTION IN THE MAGNETIC FIELDS OF THIS ACTIVITY COMPLEX. ALL OTHER REGIONS ON THE VISIBLE DISK ARE SMALL AND DECLINING. REGION 3978(N26W20) IS OF REVERSED POLARITY ARRANGEMENT, BUT IS PRESENTLY SPOTLESS. AN ACTIVE PROMINENCE NEAR SE25 HAS AN ASSOCIATED RADIO NOISE STORM THAT IS INCREASING IN INTENSITY, AS IF SIGNALLING THE ARRIVAL AT EAST LIMB OF AN IMPORTANT ACTIVITY CENTER. REGION 3955 IS NOT DUE TO RETURN UNTIL LATE ON 14 NOVEMBER.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE MODERATE FOR THE NEXT 24 HOURS. ACTIVITY MAY INCREASE TO HIGH WITH THE RETURN OF AN ADDITIONAL STRONG ACTIVE REGION AT SE LIMB ON 14 NOVEMBER. CONTINUED GROWTH OF REGION 3987 AND ITS APPROACH TO CENTRAL MERIDIAN BRING A DISTINCT INCREASE IN CHANCE FOR PROTON EMISSION.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE. ACTIVE CONDITIONS ARE EXPECTED AGAIN TOMORROW. MINOR STORM CONDITIONS ARE EXPECTED 14-15 NOVEMBER AS THE COMBINED EFFECTS OF CORONAL HOLE AND MULTIPLE CORONAL TRANSIENTS ARRIVE AT EARTH.

III. EVENT PROBABILITIES 13 NOV-15 NOV

CLASS M 80/90/90

CLASS X 15/30/30

PROTON 20/30/30

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 11 NOV 157

ESTIMATED 12 NOV 171

PREDICTED 13 NOV-15 NOV 176/186/198

90 DAY MEAN 11 NOV 162

V. GEOMAGNETIC A INDICES

OBSERVED AFR 10 NOV 010 AP 11 NOV 018

ESTIMATED AFR 11 NOV 015 AFR/AP 12 NOV 010/015

PREDICTED AFR/AP 13 NOV-15 NOV 018/025-025/025-025/020

SOLTERWARN

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HFUS 3 BOU 122200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 316B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 12 NOV 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 12/1200Z TO 12/2100Z: SOLAR ACTIVITY HAS BEEN HIGH THIS PERIOD.

THE SERIES OF CLASS M FLARES FROM REGION 3987 (S12E31) EARLIER

TODAY WAS CULMINATED BY AN X1/2B FLARE WITH MAXIMUM AT 1437Z.

THE EVENT HAD A MULTIPLE RISE PHASE BEGINNING AT 1323Z. A

MODERATE SHORT WAVE FADE THROUGH 22 MHZ WAS REACHED. RADIO

BURSTS WERE MODERATE BUT WITH A FLAT SPECTRUM. THE BURST AT

2695 MHZ WAS 100 FU. SIGNIFICANT SUNSPOT AND MAGNETIC

COMPLEXITY CHANGES HAVE OCCURRED IN THE LEAD AND CENTRAL

PORTION OF REGION 3987 - WITH SOME DECAY HAVING OCCURRED IN ITS

TRAILER SUNSPOT STRUCTURE. SUNSPOTS CONTINUE TO EMERGE

SOUTHWEST, WEST, AND NORTH OF THE MAIN SUNSPOT STRUCTURE OF

REGION 3987. GROWTH ON THE NORTH SIDE IS BECOMING INVOLVED WITH

REGION 3990 (S07E26). SUBFLARES HAVE ALSO OCCURRED IN REGIONS

3990, 3991 (N08E24), 3981 (N23W65), AND 3976 (N12W32). THE TYPE

I NOISE STORM WHICH BEGAN YESTERDAY OVER THE SE LIMB HAS

INTENSIFIED. THIS MAY BE A PRECURSOR TO ACTIVE OLD REGION 3955

OR TO NEW STRUCTURE WHICH MAY HAVE ARISEN AHEAD OF 3955.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO

REMAIN MODERATE TO HIGH WITH REGION 3987 POSING AN INCREASING

THREAT OF PRODUCING A PROTON FLARE.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS

BEEN ACTIVE. GENERALLY ACTIVE FIELD CONDITIONS ARE EXPECTED TO

CONTINUE THROUGH THE FORECAST PERIOD. HOWEVER, THERE MAY BE

SHORT PERIODS OF MINOR STORM LEVEL EMBEDDED WITHIN THE ACTIVE

CONDITIONS ON 14-15 NOVEMBER.

III. EVENT PROBABILITIES 13 NOV-15 NOV

CLASS M 80/90/90

CLASS X 30/30/30

PROTON 20/30/30

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 12 NOV 168

PREDICTED 13 NOV-15 NOV 176/186/198

90 DAY MEAN 12 NOV 162

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 11 NOV 016/018

ESTIMATED AFR/AP 12 NOV 015/015

PREDICTED AFR/AP 13 NOV-15 NOV 018/025-025/025-025/020

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