

HFUS 1 BOU 101300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 161A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 10 JUN 1982

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 09/1200Z TO 10/1200Z: SOLAR ACTIVITY CONTINUES MODERATE WITH REGION 3763(S09W26) PRODUCING FOUR CLASS M XRAY EVENTS: M2/1B AT 2252Z, M5/2B AT 0102Z, M2/1B AT 0614Z AND M2/1B AT 1145Z. THE SPOT GROUP IN THIS REGION RETAINS ITS LARGE DELTA CONFIGURATION BUT WITH WEAKER MAGNETIC GRADIENTS AND LESS RELATIVE MOTIONS AMONG ITS SPOTS. SPOT DECAY IN THE LEADER PORTION IS OFFSET BY SPOT GROWTH IN THE NORTHERN AND EASTERN PORTIONS OF THE REGION. SIGNIFICANT GROWTH HAS OCCURRED IN REGION 3770(S18E27), MAKING IT A LARGE CLASS D SPOT GROUP WITH SIMPLE MAGNETIC STRUCTURE. NO SIGNIFICANT FLARES HAVE OCCURRED IN THIS REGION. REGION 3774(N08E80) HAS ROTATED INTO VIEW AS A SMALL BRIGHT REGION. REGION 3775(S11E08) FORMED ON THE DISK BUT HAS NOT DEVELOPED PAST CLASS E SPOTS. AN INCREASE IN RADIO EMISSION AT EAST LIMB MAY BE DUE IN PART TO THE IMMINENT RETURN OF REGION 3739/3740 WHICH PRODUCED MAJOR EVENTS TWO WEEKS AGO.

I B. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE SO LONG AS REGION 3763 RETAINS ITS COMPLEX MAGNETIC FORM. GRADUAL DECAY OF THIS REGION IS EXPECTED DURING THIS FORECAST PERIOD. RETURNING REGIONS MAY COMPENSATE FOR THIS DECAY.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD DEVELOPED ONLY UNSETTLED CONDITIONS FOLLOWING YESTERDAY'S SUDDEN COMMENCEMENT, UNTIL A FULL 24 HOURS HAD ELAPSED. MAJOR STORM CONDITIONS OCCURRED IN THE PERIOD 03-09Z AND AGAIN JUST MINUTES BEFORE THE TIME OF ISSUE OF THIS REPORT. MINOR STORM CONDITIONS ARE EXPECTED THROUGHOUT THE NEXT 36 HOURS, AND UNSETTLED CONDITIONS FOR THE BALANCE OF THE FORECAST PERIOD.

III. EVENT PROBABILITIES 11 JUN-13 JUN

CLASS M 80/80/70

CLASS X 20/15/10

PROTON 10/10/10

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 09 JUN 172

ESTIMATED 10 JUN 179

PREDICTED 11 JUN-13 JUN 185/190/190

90 DAY MEAN 09 JUN 165

V. GEOMAGNETIC A INDICES

OBSERVED AFR 08 JUN 012 AP 09 JUN 013

ESTIMATED AFR 09 JUN 016 AFR/AP 10 JUN 030/045

PREDICTED AFR/AP 11 JUN-13 JUN 020/030-014/020-012/020

SOLTERWARN

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HFUS 3 BOU 102200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 161B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 10 JUN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 10/1200Z TO 10/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE DUE TO A VERY LONG LIVED M1/SB FROM REGION 3763 (S03W33) BEGINNING AT 10/1830UT AND STILL IN PROGRESS. THIS FLARE PRODUCED A GRADUAL RISE AND FALL 10CM BURST OF 310 F.U. AT 10/1942UT. CLARK LAKE RADIO MAPS VERIFY 3763 AS THE SOURCE REGION. REGION 3763 CONTINUES TO DECLINE. HOWEVER, THE NEUTRAL LINE REMAINS COMPLEX AND THE REGION HAS INCREASED IN BACKGROUND RADIO EMISSION.

REGION 3770 (S18E21) HAS SLOWED ITS GROWTH TREND AND A WEAK DELTA CONFIGURATION MAY HAVE FORMED. REGION 3774 (N07E72) IS A MODERATE SIZE CLASS E GROUP WITH MODERATE INTENSITY PLAGUE. VERY ACTIVE SURGING HAS BEEN REPORTED AT NE16 BEGINNING NEAR 10/1835UT.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE AT MODERATE LEVELS. M FLARE PRODUCTION FROM REGION 3763 IS EXPECTED TO CONTINUE BUT AT A REDUCED FREQUENCY. AN ISOLATED CLASS X FLARE FROM THIS REGION REMAINS A POSSIBILITY. REGIONS 3770 AND 3774 DO NOT APPEAR CAPABLE OF MAJOR ACTIVITY AT THIS TIME. ACTIVE LONGITUDES ARE DUE TO RETURN TO THE EAST LIMB DURING THE NEXT THREE DAYS.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN AT MINOR STORM LEVELS SINCE THE DISTURBANCE BEGAN NEAR 10/0200UT. CURRENTLY THE FIELD IS BECOMING ACTIVE. THE GEOMAGNETIC FIELD IS EXPECTED TO CONTINUE ACTIVE TOMORROW, BECOMING UNSETTLED ON 12 AND 13 MAY.

III. EVENT PROBABILITIES 11 JUN-13 JUN

CLASS M 80/80/70

CLASS X 25/15/10

PROTON 10/10/10

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 10 JUN 188

PREDICTED 11 JUN-13 JUN 195/200/200

90 DAY MEAN 10 JUN 165

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 09 JUN 015/013

ESTIMATED AFR/AP 10 JUN 035/045

PREDICTED AFR/AP 11 JUN-13 JUN 020/030-014/020-012/020

SOLTERWARN

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