

HFUS 1-B OU 062200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, COLO

SDF NUMBER 097

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 06 APRIL 1980

IA. SOLAR ACTIVITY WAS HIGH DURING THE PAST 24 HOURS. DURING THAT TIME VERY RAPID GROWTH HAS OCCURRED IN REGION 2372 (N12E04). THIS GROWTH RESULTED IN AN X2/1B FLARE WITH A MAXIMUM AT 06/142TZ. THE PARALLEL RIBBON FLARE WAS ACCCOMPANIED BY A DARK SURGE FROM THE TRAILER SPOTS. NEAR MAXIMUM AND POST FLARE LOOPS WERE SEEN ON THE DISK. DURING THE FLARE, STRONG SHORT-WAVE FADES WERE NOTED IN DAYLIGHT SECTORS. 10.7 CENTIMETER RADIO FLUXES REACHED 680 FLUX UNITS BUT SWEEP FREQUENCY EVENTS WERE NOT REPORTED. SOME TEN HOURS EARLIER AN M5/1B (WITH MAXIMUM AT 0418Z) OCCURRED IN THE SAME REGION. THIS FLARE WAS ACCCOMPANIED BY TYPE II AND TYPE IV BURSTS AND A WHITE LIGHT RESPONSE WAS ALSO REPORTED WITH THIS FLARE. SINCE THE X2 EVENT, AN M2 (MAXIMUM AT 1548Z) AN M4 (1628Z) AND AN M1 (2102Z) HAVE ALL OCCURRED IN REGION 2372. REGION 2370 (N22E20) IS A LARGE COMPLEX REGION NEAR REGION 2372. REGION 2370 HAS NOT BEEN FLARING BUT IT APPARENTLY CONTAINS A MAGNETIC DELTA CONFIGURATION AND STRONG GRADIENTS. OTHER REGIONS ON THE DISK ARE NOW QUIET ALTHOUGH NEW REGION 2375 (S29E81) HAS SURGING ASSOCIATED WITH IT INDICATING MORE SPOTS TO FOLLOW IT ONTO THE DISK.

IB. REGION 2372 IS LIKELY TO CONTINUE PRODUCING M-CLASS FLARES AS IT HAS BEEN, WITH THE POSSIBILITY OF ANOTHER X-CLASS FLARE GROWING STEADILY. REGION 2370 SHOULD NOT BE COUNTED OUT. IT HAS INCREASING POTENTIAL FOR PRODUCING A MAJOR FLARE EITHER BY ITSELF OR IN CONCERT WITH REGION 2372.

II. A SUDDEN COMMENCEMENT WAS OBSERVED AT 06/1058Z PROBABLY INDUCED BY THE M5 FLARE PRODUCED BY REGION 2363 (N26W67) ON 04 APRIL. FOLLOWING THE SC, MAGNETIC CONDITIONS WERE ACTIVE FOR THE REST OF THE UT DAY. THE X2 FLARE TODAY IS EXPECTED TO PRODUCE MINOR GEOMAGNETIC STORM CONDITIONS BEGINNING LATE IN THE UT DAY ON 07 APRIL. MAGNETIC ACTIVITY SHOULD DECLINE ON 09 APRIL IF NO FURTHER MAJOR FLARES OCCUR.

III. EVENT PROBABILITIES 07 APRIL - 09 APRIL 1980

CLASS M 9 0/9 0/9 0

CLASS X 4 0/4 0/4 0

PROMPT 3 0/35 4 0/

PCAF RED

IV. OTTAWA 10.7 CM FLUX

OBSERVED 06 APRIL 238 (FLARE ENHANCED)

PREDICTED 07 - 09 APRIL 229/231/232

90-DAY MEAN 06 APRIL 191

V. GEOMAGNETIC AL INDICES

OBSERVED FREDERICKSBURG 05 APRIL 09

ESTIMATED AFR/APR 06 APRIL 24/22

PREDICTED AFR/APR 07 - 09 APRIL 24/25 40/40 23/25

SOLTERWARN

BT