

HFUS 1 BOU 181300  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 199A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 1300Z 18 JUL 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 17/1200Z TO 18/1200Z: SOLAR ACTIVITY HAS BEEN MODERATE. REGION 3804 (N14W46) PRODUCED AN M6/2B FLARE AT 17/2320Z MAXIMUM WITH MINOR DISCRETE FREQUENCY RADIO BURSTS THROUGH THE SPECTRUM. IT ALSO PRODUCED AN M2/1B AT 18/1146Z MAXIMUM. TWO OTHER SMALL M-CLASS FLARES WERE OBSERVED EARLY IN THE PERIOD, ONE FROM 3804 AND ONE FROM 3806 (S24W65). REGION 3804 CONTINUES TO DECAY SLOWLY IN THE CENTRAL PORTION OF ITS SPOT GROUP, BUT ARCH FILAMENTS INDICATE NEW GROWTH IN THE LEADER WHERE MOST OF THE FLARES HAVE BEEN OCCURRING. THE MAGNETIC GRADIENTS HAVE WEAKENED AS THE REGION CONTINUES TO ELONGATE. THE 3810/3812 COMPLEX CENTERED AT N17W04 IS BECOMING MORE AND MORE DIFFICULT TO SEPARATE AS THE REGIONS CONTINUE TO INTERACT ALONG A COMMON NEUTRAL LINE. BOTH THESE REGIONS HAVE PRODUCED NUMEROUS SUBFLARES DURING THE PAST 24 HOURS. THE REMAINING SEVEN SPOTTED REGIONS HAVE SHOWN LITTLE CHANGE.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH WITH ANOTHER X-CLASS EVENT FROM REGION 3804 LIKELY PRIOR TO ITS WEST LIMB ROTATION. ACTIVITY IS ALSO EXPECTED FROM THE 3810/3812 COMPLEX.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD VARIED BETWEEN MINOR STORM AND ACTIVE CONDITIONS DURING THE PAST 24 HOURS. RECENT TRENDS INDICATE A GRADUAL SETTLING OF THE FIELD DURING THE PAST 6 HOURS. ACTIVE CONDITIONS SHOULD BE THE NORM THROUGH THE NEXT 36 HOURS FOLLOWED BY MINOR STORM CONDITIONS BY MID-DAY ON THE 20TH AS A RESULT OF YESTERDAY'S X3/2B.

III. EVENT PROBABILITIES 19 JUL-21 JUL

CLASS M 99/99/99

CLASS X 40/30/30

PROTON 30/20/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 17 JUL 265

ESTIMATED 18 JUL 255

PREDICTED 19 JUL-21 JUL 250/245/235

90 DAY MEAN 17 JUL 164

V. GEOMAGNETIC A INDICES

OBSERVED AFR 16 JUL 050 AP 17 JUL 027

ESTIMATED AFR 17 JUL 024 AFR/AP 18 JUL 022/020

PREDICTED AFR/AP 19 JUL-21 JUL 025/027-035/035-020/025

SOLTERWARN

BT

HFXS 3 BOU 182200  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 199B  
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 2200Z 18 JUL 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 18/1200Z TO 18/2100Z: SOLAR ACTIVITY HAS BEEN LOW FOR THE PAST 9 HOURS. THE LARGEST EVENT WAS C7/SB AT 1520Z FROM REGION 3804(N14W54). THIS VERY LARGE REGION HAS CLEARLY DIMINISHED IN SIZE, INTENSITY AND MAGNETIC COMPLEXITY EXCEPT FOR LOCALIZED GROWTH IN ITS LEADER PORTION. SLOW SPOT GROWTH CONTINUES IN REGION 3810(N13W11) WHICH NOW IS BRIGHTER THAN REGION 3804. ITS SPOT GROUP HAS EXPANDED SO THAT THERE IS NO SEPARATION BETWEEN IT AND REGION 3812(N20W11). ONLY MINOR SUBFLARES HAVE OCCURRED TODAY IN THIS COMPLEX. THE REMAINING SIX SPOTTED REGIONS ARE SMALL AND DECLINING. MOST OF THE GREAT FILAMENT NE OF REGION 3804 SLOWLY DISAPPEARED BETWEEN 1400Z AND 1600Z.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO DECLINE DURING THIS PERIOD AS ALL ACTIVE REGIONS BEGIN TO DISSIPATE. POTENTIAL FOR CLASS X ACTIVITY CONTINUES IN REGIONS 3804 AND 3810 ONLY AS LONG AS NEW SPOTS APPEAR.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE. CONDITIONS ARE EXPECTED TO INCREASE TO MINOR STORM BY MIDDAY TOMORROW AND CONTINUE WITH STORM CONDITIONS THROUGH 20 JULY.

III. EVENT PROBABILITIES 19 JUL-21 JUL

CLASS M 90/90/90  
CLASS X 40/30/30  
PROTON 30/20/20  
PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 18 JUL 246  
PREDICTED 19 JUL-21 JUL 235/220/205  
90 DAY MEAN 18 JUL 165

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 17 JUL 020/027  
ESTIMATED AFR/AP 18 JUL 020/030  
PREDICTED AFR/AP 19 JUL-21 JUL 025/027-035/035-020/025  
SOLTERWARN  
BT

HXUS BOU 182200  
PREDM 09019 09020 09021  
PREDX 04019 03020 03021  
PREDP 03019 02020 02021  
PCAFT 00219  
TENCM 23519 22020 20521  
AFRED 02519 03520 02021  
AFAPF 02719 03520 02521  
RT