

HFUS 1 BOU 111300
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 192A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 11 JUL 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 10/1200Z TO 11/1200Z: SOLAR ACTIVITY APPROACHED THE HIGH LEVEL DURING THE PAST 24 HOURS WITH FREQUENT M-CLASS FLARE PRODUCTION FROM REGION 3804 (N13E47). THIS DYNAMIC ACTIVITY CENTER HAS PRODUCED 15 M-CLASS XRAY EVENTS SINCE THIS TIME YESTERDAY. THE LARGEST WAS AN M5/1B AT 10/2017Z MAXIMUM. ALMOST EVERY FLARE WAS ACCCOMPANIED BY SMALL TO MEDIUM SIZED CENTIMETRIC RADIO BURSTS AND TYPE III SWEEP FREQUENCY BURSTS. NO TYPE II/IV SWEEP FREQUENCY EMISSION WAS OBSERVED WITH THESE EVENTS. THE REGION IS A LARGE (2500 MILLIONTHS), MAGNETICALLY COMPLEX (GAMMA-DELTA) GROUP COMPOSED ALMOST ENTIRELY OF PENUMBRA WITH VERY STRONG GRADIENTS AND SLOW GROWTH. GROWTH AND SOME COMPLEXITY HAS ALSO BEEN REPORTED IN REGIONS 3806 (S23E30) AND 3809 (S12E67), BUT THEIR ACTIVITY HAS BEEN OVER-SHADOWED BY 3804. VERY ACTIVE SURGING AT NF20 INDICATES THE RETURN OF YET ANOTHER VERY PRODUCTIVE REGION, OLD 3781, N15, CAR 280.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE HIGH. REGION 3804 CONTAINS A VERY HIGH POTENTIAL FOR A LARGE X-CLASS EVENT PRODUCING PARTICLES AT SATELLITE ALTITUDES. THE POTENTIAL FOR THE RETURN OF OLD REGION 3781 NOW APPEARS HIGH.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS ACTIVE UNTIL 11/0953Z WHEN A SUDDEN COMMENCEMENT WAS OBSERVED AT BOULDER FOLLOWED BY A K INDEX OF FIVE. ACTIVE TO MINOR STORM CONDITIONS ARE EXPECTED DURING THE NEXT 48 HOURS IN RESPONSE TO RECENT FLARE ACTIVITY. A SLOW RISING PROTON EVENT WAS DETECTED AT SATELLITE ALTITUDES BEGINNING APPROXIMATELY 10/2320Z. EVENT THRESHOLDS WERE CROSSED (10P/CM2/SEC/STER AT 10MEV) AT 11/0700Z WITH A MAXIMUM OF 20 PARTICLES REACHED AT 0935Z. THE EVENT IS NOW SLOWLY DECLINING.

III. EVENT PROBABILITIES 12 JUL-14 JUL

CLASS M 99/99/99

CLASS X 70/70/70

PROTON 20/20/25

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 10 JUL 203

ESTIMATED 11 JUL 230

PREDICTED 12 JUL-14 JUL 245/260/265

90 DAY MEAN 10 JUL 156

V. GEOMAGNETIC A INDICES

OBSERVED AFR 09 JUL 012 AP 10 JUL 014

ESTIMATED AFR 10 JUL 014 AFR/AP 11 JUL 022/020

PREDICTED AFR/AP 12 JUL-14 JUL 025/025-020/020-015/015

SOLTERWARN

BT

TIME
CALLED INITIALS

HFXUS 3 BOU 112200
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 192B
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 11 JUL 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
11/1200Z TO 11/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE WITH
REGION 3804 (N13E45) CONTINUING TO DOMINATE THE DISK PRODUCING
FOUR M-CLASS EVENTS SINCE 1200Z. THE FLARES WERE AN M4/1B AT
1403Z, AN M1/1B AT 1709Z, AN M1/SB AT 1856Z AND AN M2/SB AT
1936Z. ALL OF THESE FLARES AND NUMEROUS SMALLER C-CLASS FLARES
WERE ACCCOMPANIED BY MINOR RADIO BURSTS AT ALL FREQUENCIES. THE
SPOT GROUP IN 3804 REMAINS VERY COMPLEX WITH STRONG MAGNETIC
GRADIENTS. AN ACTIVE SURGE REGION HAS BEEN REPORTED AT N24E90
INTERMITTENTLY SINCE 11/0330Z BUT NO PLAGE AREA HAS ROTATED
ONTO THE DISK. A VERY SMALL NEW REGION 3310 (N12E77) WAS
NUMBERED TODAY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
HIGH WITH CONTINUED M-CLASS FLARES AND POSSIBLY AN X-CLASS
FLARE FROM REGION 3804 IN THE NEXT THREE DAYS.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS
BEEN AT MINOR STORM LEVELS SINCE THE SUDDEN COMMENCEMENT AT
11/0953Z. ACTIVE TO MINOR STORM CONDITIONS ARE EXPECTED DURING
THE FORECAST PERIOD FROM RECENT FLARE ACTIVITY IN REGION 3804.
A SLOW RISE PROTON EVENT BEGAN AT SATELLITE ALTITUDES AT
10/2320Z AND REACHED A MAXIMUM AT 11/1645Z OF 30
P/CM²/SEC/STER AT 10 MEV. IT IS DECLINING SLOWLY AT THIS TIME.

III. EVENT PROBABILITIES 12 JUL-14 JUL

CLASS M 99/99/99

CLASS X 70/70/70

PROTON 20/20/25

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 11 JUL 223

PREDICTED 12 JUL-14 JUL 240/255/260

90 DAY MEAN 11 JUL 156

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 10 JUL 011/014

ESTIMATED AFR/AP 11 JUL 024/022

PREDICTED AFR/AP 12 JUL-14 JUL 025/025-020/020-015/015

SOLTERWARN

BT

HFXUS BOU 112200

PREDM 09912 09913 09914

PREDX 07012 07013 07014

PREDP 02012 02013 02514

PCAF 00212

TENCM 24012 25513 26014

AFRED 02512 02013 01514

AFAPP 02512 02013 01514

BT