

HFUS 1 BOU 191300
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 200A
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 1300Z 19 JUL 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
18/1200Z TO 19/1200Z: SOLAR ACTIVITY HAS BEEN HIGH. REGION 3804
(N14W61) RETURNED TO LIFE PRODUCING AN X1/2B AT 19/0104Z
MAXIMUM, AN M7/1B AT 19/0429Z MAXIMUM, AND AN M2/1B AT 19/0903Z
MAXIMUM. THE X1 WAS ACCOMPANIED BY STRONG TYPE II AND TYPE IV
INTERFEROMETRIC RADIOMETER BURSTS ALONG WITH 720 FU AT 2800MHZ.
THE TWO M-CLASS EVENTS HAD LITTLE ELSE ASSOCIATED WITH THEM.
REGION 3804 HAS DECAYED SIGNIFICANTLY DURING THE PAST 24 HOURS,
BUT STILL DISPLAYS STRONG MAGNETIC GRADIENTS IN THE CENTRAL
PORTION OF THE REGION. PENUMBRA AREA, SPOT COUNT, AND EXTENT
HAVE DIMINISHED, BUT PLAGE BRIGHTNESS AND FLUCTUATIONS
CONTINUE. REGIONS 3810/3812 (CENTERED AT N16W18), WHEN
COMBINED, HAVE TAKEN OVER AS THE MOST DOMINATE DISK FEATURE IN
H-ALPHA. REGION 3812 (N20W18) PRODUCED AN M1/1B AT 19/0841Z
MAXIMUM. REGION 3810 (N11W18) IS THE LARGER AND MORE
MAGNETICALLY COMPLEX OF THE TWO REGIONS, BUT HAS ONLY MANAGED
TO PRODUCE SEVERAL SUBFLARES DURING THE PERIOD. THE REMAINING
DISK REGIONS HAVE CHANGED LITTLE.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
MODERATE TO HIGH. ALTHOUGH A GENERAL DECREASE IS FORECAST IN
THE 10.7CM RADIO FLUX AND SPOT NUMBER, X-CLASS ACTIVITY IS
STILL POSSIBLE FROM REGION 3804 AND THE 3810/3812 COMPLEX. THE
CURRENT X-RAY BACKGROUND HAS BEEN STEADY AT M1 FOR
APPROXIMATELY 4 HOURS, INDICATING SOME DEVELOPMENT IN ONE OF
THESE TWO COMPLEXES.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS
ACTIVE DURING THE PAST 24 HOURS. A SUDDEN COMMENCEMENT IS
EXPECTED LATER TODAY (APPROX 18-22Z) IN RESPONSE TO THE X3/2B
FLARE FROM REGION 3804 ON 17 JULY AT 1028Z. THE STRONGEST
RESPONSE TO THIS FLARE IS FORECAST TO COME ON THE 20TH, WITH
MINOR STORM LEVELS EXPECTED. THE REMAINDER OF THE PERIOD SHOULD
EXPERIENCE ACTIVE CONDITIONS.

III. EVENT PROBABILITIES 20 JUL-22 JUL

| | |
|---------|----------|
| CLASS M | 95/95/80 |
| CLASS X | 40/30/10 |
| PROTON | 30/20/05 |
| PCAF | YELLOW |

IV. OTTAWA 10.7 CM FLUX

| | | |
|-------------|---------------|-------------|
| OBSERVED | 18 JUL | 246 |
| ESTIMATED | 19 JUL | 235 |
| PREDICTED | 20 JUL-22 JUL | 220/200/190 |
| 90 DAY MEAN | 18 JUL | 165 |

V. GEOMAGNETIC A INDICES

| | | | | |
|------------------|---------------|-------------------------|---------------|---------|
| OBSERVED AFR | 17 JUL | 020 | AP 18 JUL | 026 |
| ESTIMATED AFR | 18 JUL | 022 | AFR/AP 19 JUL | 025/020 |
| PREDICTED AFR/AP | 20 JUL-22 JUL | 035/035-020/025-025/020 | | |

SOLTERWARN

BT

HXUS BOU 192200

PREDM 09520 09521 08022

PREDX 04020 03021 01022

PREDP 03020 02021 00522

PCAFT 00220

TENCM 20520 19021 18022

AFRED 03520 02021 02522

AFAPF 03520 02521 02022

BT

HFUS 3 BOU 192200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 200B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 19 JUL 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 19/1200Z TO 19/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE FOR THE PAST 9 HOURS. SMALL CLASS M EVENTS HAVE OCCURRED IN REGION 3804(N15W66) AT 1815Z AND 2020Z, IN REGION 3810(N14W22) AT 1253Z AND IN REGION 3812(N20W23) AT 1850Z. LOCALIZED GROWTH OF SUNSPOTS IN REGIONS 3804 AND 3810 APPEARS TO ACCOUNT FOR THE RESURGENCE OF ACTIVITY IN THESE REGIONS. OTHERWISE, THESE AND ALL OTHER ACTIVE REGION NOW VISIBLE ARE DECLINING. THIS DECLINE IS REFLECTED IN THE SHARP DROP IN THE 10 CM RADIO FLUX.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE FOR THE NEXT TWO OR THREE DAYS AS REGION 3804 TRANSITS WEST LIMB. AN ISOLATED CLASS X EVENT IS STILL POSSIBLE. PROTON EMISSION IS BECOMING LESS LIKELY AS THE MAGNETIC STRUCTURE IN REGION 3804 SIMPLIFIES.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN IN MINOR STORM CONDITION THROUGHOUT THIS PERIOD. THIS STORM IS EXPECTED TO INTENSIFY DURING THE NEXT 36 HOURS. ANOTHER INCREASE IN ACTIVITY IS EXPECTED ON 22 JULY AS A RESULT OF THE FILAMENT DISAPPEARANCE AND X1 FLARE OF THE PAST DAY.

III. EVENT PROBABILITIES 20 JUL-22 JUL

CLASS M 95/95/80

CLASS X 40/30/10

PROTON 30/20/05

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 19 JUL 227

PREDICTED 20 JUL-22 JUL 205/190/180

90 DAY MEAN 19 JUL 166

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 18 JUL 022/026

ESTIMATED AFR/AP 19 JUL 025/020

PREDICTED AFR/AP 20 JUL-22 JUL 035/035-020/025-025/020

SOLTERWARN

BT

HXUS BOU 192200

PREDM 09520 09521 08022

PREDX 04020 03021 01022

PREDP 03020 02021 00522

PCAFT 00220

TENCM 20520 19021 18022

AFRED 03520 02021 02522

AFAPF 03520 02521 02022

BT