

HFUS 1
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 116A
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 1320Z 26 APR 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
25/1200Z TO 26/1200Z: SOLAR ACTIVITY HAS CONTINUED LOW EVEN WITH
CONTINUED MINOR GROWTH IN AT LEAST THREE ACTIVE REGIONS. X-RAY
ACTIVITY HAS NOT EXCEEDED C2 FOR 24 HOURS. THE MOST COMPLEX
REGIONS ARE 3703(N18W22) AND 3707(N10W20). BOTH ARE CLASS E
SPOT GROUPS WITH NUMEROUS SPOTS AND COMPLEX PENUMBRAE. THEIR
CHROMOSPHERIC PLAGES HAVE EXPANDED TO THE POINT OF JOINING TO
FORM A SINGLE COMPLEX AREA. REGION 3707 OCCASIONALLY MERGES
ITS SPOTS WITH THE LARGE LEADER SPOT OF REGION 3702(N13W15).
REGION 3701(N05W19) SHARES A COMMON NEUTRAL LINE WITH REGIONS
3707,, 3702, 3706(N22E01) AND 3703. A SMALL FILAMENT
DISAPPEARED AT ABOUT 25/1200Z FROM N12W35 ON THE WESTERN BORDER
OF THE LARGE-SCALE MAGNETIC STRUCTURE WHICH CONTAINS THE MAJOR
ACTIVITY CENTERS AND THE SITE OF THE ERUPTIVE EVENT RESPONSIBLE
FOR YESTERDAY'S GEOMAGNETIC STORM. A SMALL SPOT AND BRIGHT
PLAGE AT N16E72 HAVE BEEN NUMBERED REGION 3711. REGION
3709(S03W72) IS ONE OF THE BRIGHTEST AREAS ON THE SUN BUT
REMAINS SMALL. MINOR GROWTH IS REPORTED IN SMALL REGION
3708(N02W61).

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY WILL BE LOW TO
MODERATE WITH A DECREASING CHANCE FOR CLASS M EVENTS AS GROWTH
SLOWS IN THE NORTH-CENTRAL ACTIVITY COMPLEX.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE MAJOR GEOMAGNETIC
STORM ENDED AT APPROXIMATELY 25/1800Z. CONDITIONS HAVE BEEN
QUIET TO UNSETTLED SINCE THEN. UNSETTLED CONDITIONS ARE
EXPECTED TO CONTINUE FOR ANOTHER 36 HOURS BEFORE THE ARRIVAL OF
A MINOR MAGNETIC STORM. STORM CONDITIONS WILL OCCUR
INTERMITTENTLY FOR THE LATTER HALF OF THE THIS FORECAST PERIOD.
THE MAJOR GEOMAGNETIC STORM ENDED AT APPROXIMATELY 25/1800Z.
CONDITIONS HAVE BEEN QUIET TO UNSETTLED SINCE THEN. UNSETTLED
CONDITIONS ARE EXPECTED TO CONTINUE FOR ANOTHER 36 HOURS. A
MINOR STORM IS EXPECTED LATE ON 28 APRIL WITH INTERMITTENT
STORM CONDITIONS FOR THE REMAINDER OF THE FORECAST PERIOD. III.
EVENT PROBABILITIES 27 APR-29 APR

CLASS M 50/40/40
CLASS X 01/01/01
PROTON 01/01/01
PCAF GREEN

IV. OTTAWA 10.7 CM FLUX
OBSERVED 25 APR 183
ESTIMATED 26 APR 185
PREDICTED 27 APR-29 APR 186/185/184
90 DAY MEAN 25 APR 202

V. GEOMAGNETIC A INDICES
OBSERVED AFR 24 APR 019 AP 25 APR 043
ESTIMATED AFR 25 APR 041 AFR/AP 26 APR 006/010
PREDICTED AFR/AP 27 APR-29 APR 010/010-020/022-020/015
SOLTERWARN
BT

*removal,
but how?*

HXUS BOU 261300
PREDM 05027 04028 04029
PREDX 00127 00128 00129
PREDP 00127 00128 00129
PCAFT 00127
TENCN 18627 18528 18429
AFRED 01027 02028 02029
AFAPF 01027 02228 01529
KKK 22233 22222 35433
BT

HFUS 3 BOU 262200
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 116B
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 26 APR 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
26/1200Z TO 26/2100Z: SOLAR ACTIVITY HAS BEEN VERY LOW DURING
THE PAST 9 HOURS. ONLY ONE SMALL C-CLASS SUBFLARE WAS OBSERVED
FROM THE 12 REGIONS CURRENTLY VISIBLE ON THE SOLAR DISK.
REGIONS 3703 (N18W27) AND 3706 (N22W05), WHICH SHOWED SOME
PROMISE TWO DAYS AGO, ARE NOW CLEARLY DECAYING. A PRESENTLY
QUIET, BUT THREATENING, SITUATION EXISTS BETWEEN REGIONS 3702
(N13W20) AND 3707 (N10W25). THE LARGE LEADER POLARITY SPOT
(2500 GAUSS IN STRENGTH) IN REGION 3702 AND THE LARGE TRAILER
POLARITY SPOT IN REGION 3707 (1700 GAUSS) HAVE MOVED TOGETHER
DURING THE PAST 24 HOURS. THESE TWO SPOTS NOW SHARE COMMON
PENUMBRA IN A DUMBBELL-SHAPED SPOT CONCENTRATION. THIS MERGING
HAS CREATED A FAIRLY STEEP GRADIENT IN A GENUINE INTER-REGION
DELTA CONFIGURATION. THIS IS A RARE DEVELOPMENT. NEW REGIONS
3712 (N16E35) AND 3713 (N09W39) HAVE BEEN NUMBERED TODAY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
LOW TO MODERATE WITH A DECREASING CHANCE OF M-CLASS EVENTS AS
GROWTH SLOWS IN THE NORTH-CENTRAL COMPLEX. HOWEVER, THE
NORTH-SOUTH ALIGNMENT OF THE DELTA BETWEEN REGIONS 3707 AND
3702 WOULD SUGGEST THERE IS A TENDENCY FOR THE SPOTS TO ROTATE
COUNTERCLOCKWISE ABOUT EACH OTHER. THIS MOTION WOULD PRODUCE
VERY SUBSTANTIAL SHEAR BETWEEN THE REGIONS AND ALMOST CERTAINLY
PRODUCE A MAJOR ENERGETIC FLARE. WHETHER THIS WILL INDEED
HAPPEN IS UNCERTAIN, BUT IF IT DOES HAPPEN A VERY LARGE FLARE
COULD RESULT.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS
BEEN GENERALLY QUIET DURING THE LAST 9 HOURS. THE FIELD IS
EXPECTED TO BE MILDLY UNSETTLED FOR THE NEXT 24 HOURS.

III. EVENT PROBABILITIES 27 APR-29 APR

CLASS M 50/40/40

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 26 APR 176

PREDICTED 27 APR-29 APR 176/176/174

90 DAY MEAN 26 APR 202

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 25 APR 037/043

ESTIMATED AFR/AP 26 APR 005/010

PREDICTED AFR/AP 27 APR-29 APR 010/016-020/022-020/015

SOLTERWARN

BT

HXUS BOU 262200

PREDM 05027 04028 04029

PREDX 00127 00128 00129

PREDP 00127 00128 00129

PCAFT 00127

TENCM 17627 17628 17429

AFRED 01027 02028 02029

AFAPF 01627 02228 01529

BT