

HFXS 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

*remove,
but how? >*

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

HFXS 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

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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