

HFUS 3 BOU 182200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 018B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 18 JAN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 18/1200Z TO 18/2100Z: SOLAR ACTIVITY HAS BEEN LOW DURING THE PAST 9 HOURS. A TOTAL OF 8 C-CLASS SUBFLARES HAVE BEEN OBSERVED, SEVERAL EACH FROM REGIONS 3549 (S10W28), 3553 (S08W51) AND 3559 (S15W16). REGION 3559 PRODUCED THE STRONGEST FLARE, A C5/SF AT 18/1436Z. THIS REGION HAS HAD THE MOST IMPRESSIVE GROWTH OF ANY REGION ON THE DISK IN THE PAST 24 HOURS. REGION 3553 HAS ALSO GROWN SUBSTANTIALLY. REGION 3549 HAS RELAXED A BIT BUT IS NOW BEING RAPIDLY SURROUNDED BY OTHER GROWING REGIONS.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE LOW TO MODERATE. THERE IS A GRADUALLY INCREASING PROBABILITY OF M-CLASS ACTIVITY FROM THE REGIONS WHICH ARE SURROUNDING, AND PROBABLY INTERACTING WITH, REGION 3549.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN QUIET TO MILDLY UNSETTLED FOR THE PAST 9 HOURS. THE FIELD IS EXPECTED TO CONTINUE GENERALLY QUIET TO MILDLY UNSETTLED FOR THE NEXT 72 HOURS.

III. EVENT PROBABILITIES 19 JAN-21 JAN

CLASS M 40/50/60

CLASS X 01/05/05

PROTON 01/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 18 JAN 173

PREDICTED 19 JAN-21 JAN 182/187/190

90 DAY MEAN 18 JAN 198

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 17 JAN 013/010

ESTIMATED AFR/AP 18 JAN 009/013

PREDICTED AFR/AP 19 JAN-21 JAN 006/010-005/008-005/010

SOLTERWARN

BT

HXUS BOU 182200

PREDM 04019 05020 06021

PREDX 00119 00520 00521

PREDP 00119 00520 00521

PCAFT 00119

TENCM 18219 18720 19021

AFRED 00619 00520 00521

AFAPF 01019 00820 01021

BT

KKK 22222 21122 22211

BT

HFUS 1 BOU 181300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 018A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 18 JAN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 17/1200Z TO 18/1200Z: SOLAR ACTIVITY CONTINUES LOW. THE LARGEST EVENT OF THE PAST 24 HOURS WAS C4/1N FROM REGION 3549(S10W21).

THIS REGION CONTINUES A SLOW INCREASE IN MAGNETIC COMPLEXITY WITH TWO ISOLATED POLES NOW PRESENT NEAR THE CENTER OF THIS LARGE PLAGE. THE PRINCIPAL POLARITY-INVERSION LINE IS ORIENTED EAST-WEST, INDICATING A SHEARED TOPOLOGY WITH APPRECIABLE STORED ENERGY. THE REGION IS NOW SURROUNDED BY ELEVEN SMALLER BIPOLAR REGIONS, FIVE OF WHICH HAVE EMERGED IN THE PAST 24 HOURS. REGION 3553(S08W44) AND REGION 3559(S15W09) ARE THE STRONGEST OF THESE AND BOTH ARE NOW GROWING RAPIDLY.

ADDITIONAL AREAS OF EXTENSIVE PLAGE HAVE APPEARED ALONG EAST LIMB AND MINOR NEW FLUX REGIONS HAVE EMERGED NEAR THEM. A LARGE FILAMENT GRADUALLY ERUPTED NEAR S48W38 AT 2331-2346Z.

IB. SOLAR ACTIVITY FORECAST: A SLOW INCREASE IN ACTIVITY IS EXPECTED THROUGHOUT THIS PERIOD. FURTHER DEVELOPMENT OF THE ACTIVITY COMPLEX CENTERED AROUND REGION 3549 IS EXPECTED TO RESULT IN MODERATE FLARE ACTIVITY. REGIONS DEVELOPING OR ROTATING INTO VIEW NEAR EAST LIMB WILL CONTRIBUTE TO A RISE IN INTEGRATED SOLAR FLUX.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN QUIET THIS PERIOD. QUIET CONDITIONS ARE EXPECTED FOR THE NEXT THREE DAYS. THE MAGNETIC FIELD ASSOCIATED WITH THE ERUPTING FILAMENT ON 17 JANUARY WAS NOT ORIENTED IN THE ASPECT CONDUCTIVE TO PRODUCING A GEOMAGNETIC DISTURBANCE.

III. EVENT PROBABILITIES 19 JAN-21 JAN

CLASS M 40/50/60
CLASS X 01/05/05
PROTON 01/05/05
PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 17 JAN 158
ESTIMATED 18 JAN 174
PREDICTED 19 JAN-21 JAN 182/187/190
90 DAY MEAN 17 JAN 199

V. GEOMAGNETIC A INDICES

OBSERVED AFR 16 JAN 014 AP 17 JAN 010
ESTIMATED AFR 17 JAN 012 AFR/AP 18 JAN 005/010
PREDICTED AFR/AP 19 JAN-21 JAN 006/010-005/008-005/010

SOLTERWARN

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HXUS BOU 181300

PREDM 04019 05020 06021
PREDX 00119 00520 00521
PREDP 00119 00520 00521
PCAFT 00119
TENCM 18219 18720 19021
AFRED 00619 00520 00521
AFAPF 01019 00820 01021
KKK 22222 21122 22211

BT