

HVUS 1 BOU 281300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 362A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 28 DEC 1981

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 27/1200Z TO 28/1200Z: SOLAR ACTIVITY CONTINUES LOW. THE MOST SIGNIFICANT EVENT IN THE REPORT PERIOD HAS BEEN AN UNASSOCIATED XRAY EVENT OF C8 MAXIMUM AT 28/1033Z. TRACES OF DISCRETE FREQUENCY RADIO EMISSION WERE OBSERVED AT THE HIGHER FREQUENCIES. REGION 3521(S23W36) HAS CEASED TO DEVELOP AND REGION 3525(S20E20) HAS GROWN ONLY SLIGHTLY IN THE TRAILER AREA IN RECENT HOURS. BOTH REMAIN SIMPLE AND UNIMPRESSIVE. TWO NEW REGIONS 3530(N18F27), AND 3531(N22E70) HAVE BEEN NUMBERED. REGION 3530 HAS DEVELOPED VERY RAPIDLY, SHOWING PENUMBRA ON BOTH FACES AND STRONG AFS. REGION 3531 APPEARED OVER THE EAST LIMB AND IS NOW REPORTED AS A D GROUP. NONE OF THE REGIONS PRESENTLY VISIBLE APPEARS CAPABLE OF MAJOR ACTIVITY.

I B. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD REMAIN AT LOW LEVELS PENDING FURTHER REGION DEVELOPMENT OR THE RETURN OF OLD REGIONS IN AN ACTIVE STATE. OLD REGION 3492 WHICH LEFT THE DISK ACTIVE AND PRODUCED EVENTS FROM BEHIND THE LIMB IS DUE TO RETURN EARLY ON 30 DECEMBER.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN SLIGHTLY UNSETLED. THE EXPECTED INCREASE IN ACTIVITY DUE TO CORONAL HOLE EFFECTS HAS YET TO OCCUR. AN INCREASE TOWARD ACTIVE LEVELS IS STILL POSSIBLE LATER ON 28 DECEMBER WHICH COULD CONTINUE THROUGH MUCH OF THE U.T. DAY ON 29 DECEMBER.

III. EVENT PROBABILITIES 29 DEC-31 DEC

CLASS M 20/20/20

CLASS X 01/01/01

PROTON 01/01/71

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSEVED 27 DEC 183

ESTIMATED 28 DEC 192

PREDICTED 29 DEC-31 DEC 200/208/216

90 DAY MEAN 27 DEC 215

V. GEOMAGNETIC A INDICES

OBSEVED AFR 26 DEC 008 AP 27 DEC 005

ESTIMATED AFR 27 DEC 006 AFR/AP 28 DEC 012/013

PREDICTED AFR/AP 29 DEC-31 DEC 010/014-010/010-008/008

SOLTERWARN

BT

HVUS BOU 281300

PREDM 02029 02030 02031

PREDX 00129 00130 00131

PREDP 00129 00130 00131

PCAF 00129

TENCM 20020 20830 21631

AFRED 01029 01030 00831

AFAPF 01429 01030 00931

KKK 34433 22222 33322

BT

HFUS 3 BOU 282200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 362B

JOINT "SAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 28 DEC 1981

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 28/1200Z TO 28/2100Z: SOLAR ACTIVITY REACHED A MODERATE LEVEL WITH AN M1/1N FLARE AT 23/2119Z FROM NEW REGION 3533 (N07E57). THIS REGION CONTAINS A SMALL SPOT GROUP THAT HAS DEVELOPED IN THE PAST 24 HOURS. THE FLARE HAD A DURATION OF OVER 120 MINUTES. AN ERUPTIVE PROMINENCE WAS OBSERVED AT N16 EAST LIME FROM 1745Z TO 2057Z., THIS MAY BE ASSOCIATED WITH THE FLARE IN REGION 3533 . NEW REGION 3531 (N24E69) CONTAINS A LARGE SPOT GROUP BUT IT HAS NOT BEEN ACTIVE. SMALL REGION 3530 (N18E24), WHICH DEVELOPED RAPIDLY ON THE DISK , HAS PRODUCED SEVERAL SMALL SUBFLARES.

II. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY MAY INCREASE DURING THE NEXT THREE DAYS WITH M CLASS FLARES POSSIBLE FROM NEW REGIONS 3530 , 3531 AND 3533, AND THE RETURN OF PREVIOUSLY ACTIVE LONGITUDES.

III. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETLED. ACTIVE TO MINOR STORM LEVEL CONDITIONS ARE POSSIBLE 29-31 DEC AS THE RESULT OF A FILAMENT DISAPPEARANCE ON 27 DEC. A SLIGHT INCREASE IN PARTICLES AT SATELLITE ALTITUDES IS REPORTED BUT IT HAS NOT REACHED EVENT TRESHOLDS. THIS ENHANCEMENT MAY ALSO BE THE RESULT OF THE 27 DEC EVENTS.

IV. EVFNT PROBABILITIES 29 DEC-31 DEC

CLASS M 40/50/60

CLASS X 01/01/01

PROTON 01/01/31

PCAF GREEN

V. OTTAWA 10.7 CM FLUX

OBSERVED 28 DEC 189

PREDICTED 29 DEC-31 DEC 200/208/216

90 DAY MEAN 28 DEC 214

VI. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 27 DEC 006/005

ESTIMATED AFR/AP 28 DEC 014/014

PREDICTED AFR/AP 29 DEC-31 DEC 020/014-035/018-025/012

SOLTERWARN

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