

HFUS 1 BOU 121300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 346A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 12 DEC 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 11/1200Z TO 12/1200Z: SOLAR ACTIVITY, DESPITE THE MANY LARGE COMPLEX REGIONS, HAS BEEN LOW DURING THIS PERIOD. THE LARGEST EVENT RECORDED WAS A C7/SN FROM REGION 4021 (S16E06) AT 11/2057UT. REGIONS 4014 (N07W71), 4022 (N12E18), 4025 (S07E47) AND 4026 (S11E58) ARE COMPLEX MAGNETICALLY WITH 4022, 4025 AND 4026 CONTAINING DELTAS. EXPECT FOR REGION 4026, WHICH HAS APPARENTLY DOUBLED IN SIZE, ALL REGIONS HAVE BEEN LITTLE CHANGED THIS PERIOD. **EXCEPT**

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE MODERATE DURING THIS FORECAST PERIOD. LARGE EVENTS ARE PROBABLE FROM REGION 4014, 4022 AND 4026. RAPID CHANGE IN ANY OF THE REGIONS COULD PRODUCE AN X CLASS EVENT AT ANY TIME DURING THE NEXT THREE DAYS.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN GENERALLY UNSETLED, EXCEPT FOR A SHORT PERIOD 11/1930UT TO 12/0000UT WHEN CONDITIONS AT THE HIGH LATITUDE SITES WERE AT MINOR STORM LEVELS. ALTHOUGH LARGE M CLASS EVENTS HAVE BEEN OBSERVED DUE TO THEIR LOCATION AND SMALL INTEGRATED FLUX ONLY LIMITED EFFECTS ON THE GEOMAGNETIC FIELD IS EXPECTED DURING THE NEXT THREE DAYS. **ARE**

III. EVENT PROBABILITIES 13 DEC-15 DEC

CLASS M 95/95/95

CLASS X 35/35/30

PROTON 20/20/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 11 DEC 272

ESTIMATED 12 DEC 270

PREDICTED 13 DEC-15 DEC 260/250/240

90 DAY MEAN 11 DEC 171

V. GEOMAGNETIC A INDICES

OBSERVED AFR 10 DEC 039 AP 11 DEC 218

ESTIMATED AFR 11 DEC 017 AFR/AP 12 DEC 010/020

PREDICTED AFR/AP 13 DEC-15 DEC 008/015-010/015-010/015

SOLTERWARN

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HFUS 3 BOU 122200  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 346B  
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 2200Z 12 DEC 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 12/1200Z TO 12/2100Z: SOLAR ACTIVITY RETURNED TO MODERATE LEVELS WHEN REGION 4014 (N08W76) PRODUCED AN M1/SB AT 12/1323Z WITH MINOR RADIO BURSTS. REGION 4022 (N11E13) HAS AN EXTENSIVE ACTIVE NEUTRAL LINE FILAMENT, SOME PLAGE GROWTH, AND RISING MAGNETIC GRADIENTS. REGIONS 4025 (S07E42) AND 4026 (S11E53) HAVE BEEN QUIET BUT THEY SHARE A COMMON NEUTRAL LINE AND ARE IN CLOSE PROXIMITY. REGION 4026 IS NOW DISPLAYING TWO DELTAS AND MAY BE GROWING (PART OF THE AREAL INCREASE REPORTED TODAY MAY BE A RESULT OF DECREASED FORESHORTENING).

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE AT MODERATE LEVELS. DUE TO THE SIZE AND MAGNETIC COMPLEXITIES OF CURRENT REGIONS, ONLY SMALL INSTABILITIES ARE REQUIRED TO RESULT IN AN INCREASE IN THE FREQUENCY OF CLASS M FLARES. MAJOR FLARES REMAIN POSSIBLE, PRIMARILY FROM REGIONS 4022 AND 4026. NO SIGNIFICANT ACTIVE REGIONS ARE EXPFCTED TO RETURN DURING THE FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS ACTIVE EARLY IN THE PERIOD BUT HAS SINCE QUIETED TO UNSETLED LEVELS. ISEE DATA SHOW A QUIET SOLAR WIND IN THE EARTH'S NEIGHBORHOOD. GENERALLY UNSETLED CONDITIONS WITH ISOLATED SUBSTORMS ARE EXPECTED TO OCCUR DURING THE FORECAST PERIOD. AURORAL LATITUDES SHOULD EXPERIENCE A SLIGHTLY HIGHER LEVEL OF DISTURBANCE.

III. EVENT PROBABILITIES 13 DEC-15 DEC

CLASS M 95/95/95  
CLASS X 35/35/30  
PROTON 20/20/20  
PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED	12 DEC	259
PREDICTED	13 DEC-15 DEC	250/240/235
90 DAY MEAN	12 DEC	173

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP	11 DEC	016/018
ESTIMATED AFR/AP	12 DEC	014/020
PREDICTED AFR/AP	13 DEC-15 DEC	008/015-010/015-010/015

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