

SDF NUMBER 359A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 25 DEC 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 24/1200Z TO 25/1200Z: SOLAR ACTIVITY HAS BEEN HIGH. LACK OF DATA HAS AGAIN INHIBITED ANALYSIS AND PREDICTION. REGION 4333 (S15E33) PRODUCED AN X2/13 AT 25/0752Z. THIS FLARE ALSO PRODUCED AN 880 F.U. BURST AT 103M AND A STRONG LONG LIVED TYPE IV. SEVERAL NEW SMALL SPOTS HAVE EMERGED IN THIS REGION AND ACTIVE FILAMENT MATERIAL HAS BEEN OBSERVED. REGION 4336 (S18W38) IS GROWING SLOWLY AND REGION 4030 (S13E56) IS NOW VISIBLE AS A CLASS C GROUP. SLIGHT ACTIVE SURGING HAS BEEN OBSERVED AT SE13-22.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD BE GENERALLY MODERATE FOR THE FORECAST PERIOD. REGION 4333 DOES NOT (FROM LIMITED DATA) APPEAR TO BE A REGION WHICH WILL PRODUCE FREQUENT CLASS M AND X FLARES. ISOLATED CLASS M AND INFREQUENT CLASS X FLARES ARE EXPECTED FROM THIS REGION FOR THE NEXT THREE DAYS. PREVIOUSLY ACTIVE LONGITUDES ARE EXPECTED TO RETURN TO THE EAST LIMB ON 26-27 DEC.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN SLIGHTLY ACTIVE FOR THE PAST 24 HOURS. MINOR STORM CONDITIONS ARE EXPECTED TO BEGIN ON 26 DEC (IN RESPONSE TO A FILAMENT DISRUPTION ON 23 DEC) AND CONTINUE INTO 27 DEC (IN RESPONSE TO THE X2 FLARE TODAY). THE FIELD SHOULD RETURN TO ACTIVE LEVELS ON 28 DEC. IT IS POSSIBLE THAT THE FLARE SHOCK COULD CATCH UP WITH THE TAIL END OF THE FILAMENT DISTURBANCE RESULTING IN LARGE K VALUES AT THE EARTH AT THE ONSET OF THE FLARE RELATED DISTURBANCE. AT ISSUE TIME, NO SIGNIFICANT ENERGY PARTICLE FLUXES HAVE BEEN DETECTED, AND THEIR LIKELIHOOD OF DETECTION IS DECREASING RAPIDLY WITH TIME.

III. EVENT PROBABILITIES 26 DEC-28 DEC

CLASS M 30/80/80

CLASS X 20/20/20

PROTON 25/10/15

PCAF YELLOW

IV. OTTAWA 13.7 CM FLUX

OBSERVED 24 DEC 173

ESTIMATED 25 DEC 180

PREDICTED 26 DEC-28 DEC 186/193/200

90 DAY MEAN 24 DEC 179

V. GEOMAGNETIC A INDICES

OBSERVED AFR 23 DEC 022 AP 24 DEC 013

ESTIMATED AFR 24 DEC 017 AFR/AP 25 DEC 013/025

PREDICTED AFR/AP 26 DEC-28 DEC 030/030-030/025-020/020

SOLTERBARN

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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 359F

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 25 DEC 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
25/1200Z TO 25/2100Z: SOLAR ACTIVITY HAS BEEN LOW. ACTIVITY HAS
BEEN LIMITED TO AN OPTICALLY UNASSOCIATED C2 XRAY EVENT AT
25/1753Z WITH MODEST LOW FREQUENCY CENTIMETRIC BURSTS AT
SEVERAL FREQUENCIES. OPTICAL OBSERVATIONS WERE PREVENTED BY
WEATHER. THE CONDITION OF REGION 4033(S13E25) FOLLOWING THE
MAJOR FLARE OF EARLY 25 DEC WAITS TO BE DETERMINED.

IP. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
GENERALLY MODERATE. OCCASIONAL M LEVEL XRAY ACTIVITY IS
EXPECTED FROM REGION 4033.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD
CONTINUES ACTIVE. MINOR STORM CONDITIONS ARE EXPECTED ON 26
DEC CONTINUING TO 23 DEC.

III. EVENT PROBABILITIES 26 DEC-23 DEC

CLASS M 30/80/80

CLASS X 20/20/20

PROTON 45/10/15

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 25 DEC 176

PREDICTED 26 DEC-28 DEC 181/187/191

90 DAY MEAN 25 DEC 179

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 24 DEC 017/018

ESTIMATED AFR/AP 25 DEC 018/015

PREDICTED AFR/AP 26 DEC-28 DEC 030/030-230/025-020/020

SOLTFEARN

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