

HFUS 1 BOU 122200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 346

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200Z 12 DECEMBER 1978

IA. SOLAR ACTIVITY HAS BEEN HIGH. A SERIES OF CLASS M X-RAY BURSTS HAVE OCCURRED, MOST OF WHICH HAD NO OPTICAL CORRELATIONS. AN M 1/SF WAS OBSERVED IN REGION 1447 (S18W64) AT 120646 U.T. AND THEN AT 121503 U.T., 1447 PRODUCED AN X2/2B FLARE. ALTHOUGH LARGE IN OPTICAL AND X-RAY CHARACTERISTICS, THIS FLARE WAS NOT IMPRESSIVE IN RADIO NOISE WITH ONLY 277 FLUX UNITS AT 2695 MHZ AND ONLY LIMITED SHORT WAVE FADES WERE REPORTED. SINCE THE 1503 U.T. EVENT, REGION 1447 HAS PRODUCED THREE ADDITIONAL CLASS M X-RAY BURSTS. THIS REGION IS A D-TYPE GROUP OF 1100 MILLIONTHS IN AREA AND A BETA DELTA MAGNETIC CONFIGURATION. REGION 1444 (S15W01) IS PART OF A LARGE COMPLEX COMPOSED OF 1452 (S20W15), 1448 (S12E03) AND 1453 (S17E09). REGION 1444 IS THE DOMINANT GROUP AND IS CLASSED AN F-TYPE WITH BETA-GAMMA-DELTA MAGNETIC CONFIGURATION. REGION 1446 (N22W06) IS THE SECOND LARGEST GROUP ON THE DISK (F-TYPE OF 1060 MILLIONTHS IN AREA) BUT IS STABLE.

IB. SOLAR ACTIVITY WILL REMAIN HIGH. THE COMPLEX COMPOSED OF 1444, 1448, 1452 AND 1453 IS DYNAMIC IN APPEARANCE AND 1447, ALTHOUGH CLOSE TO THE LIMB, IS STILL A THREAT AS THE NEUTRAL LINE REMAINS VERY COMPLEX.

II. THE GEOMAGNETIC FIELD HAS BEEN QUIET TO UNSETLED. THE FLARE ON 11 DECEMBER IS EXPECTED TO IMPACT THE GEOMAGNETIC FIELD EARLY ON 13 DECEMBER RESULTING IN MINOR STORM CONDITIONS. THE FLARE TODAY (12 DECEMBER) IS NOT EXPECTED TO HAVE AS LARGE AN IMPACT AS YESTERDAY'S FLARE, BUT SHOULD AID IN EXTENDING THE LIFE OF THE DISTURBANCE. A SMALL PROTON EVENT IS LIKELY DURING THE NEXT 12 HOURS WITH A MAXIMUM OF 1 DB ABSORPTION.

III. EVENT PROBABILITIES 13 DECEMBER - 15 DECEMBER

CLASS M 95/95/95

CLASS X 50/50/50

PROTON 30/40/50

PCAF RED

IV. OTTAWA 10.7 CM FLUX

OBSERVED 12 DECEMBER 237

PREDICTED 13-15 DECEMBER 233/228/225

90-DAY MEAN 12 DECEMBER 162

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 11 DECEMBER 01

ESTIMATED AFR/AP 12 DECEMBER 05/06

PREDICTED AFR/AP 13-15 DECEMBER 30/30 - 40/60 - 30/50

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FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, CO  
SDF NUMBER 346  
JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200Z 12 DECEMBER 1979  
IA. SOLAR ACTIVITY HAS BEEN LOW TO MODERATE. REGION 2174 (N 13W 76) PRODUCED A M3/1B AT 1713Z AND A C4/1F AT 0526Z. MODERATE SHORT WAVE FADES THROUGH 18 MHZ AND CENTIMETRIC BURSTS ACCCOMPANIED THE M CLASS FLARE. REGION 2174 IS TOO CLOSE TO THE LIMB TO DETERMINE WHAT TRIGGERED TODAY'S ACTIVITY. REGION 2186 (N24E17) PRODUCED A C8/1N AT 0551Z AND REGION 2188 (N12W28) PRODUCED A C4/SB AT 1704Z. NUMEROUS SUBFLARES HAVE BEEN REPORTED FROM SEVEN DIFFERENT REGIONS, INCLUDING NEW REGIONS 2194 (N18E20) AND 2196 (S13W67). REGION 2195 (N04E24) HAS A WEAK H-ALPHA STRUCTURE.

IB. SOLAR ACTIVITY IS EXPECTED TO BE LOW TO MODERATE, WITH ONLY ISOLATED CLASS M EVENTS PROBABLE.

II. THE GEOMAGNETIC FIELD HAS BEEN QUIET. QUIET TO SLIGHTLY UNSETLED FIELD CONDITIONS ARE EXPECTED THROUGH THE NEXT THREE DAYS.

III. EVENT PROBABILITIES 13 - 15 DEC 79

CLASS M 40/40/40

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 12 DEC 240

PREDICTED 13-15 DEC 236/231/224

90-DAY MEAN 12 DEC 224

V. GEOMAGNETIC INDICES

OBSERVED FREDERICKSBURG 11 DEC 04

ESTIMATED AFR/AP 12 DEC 05/06

PREDICTED AFR/AP 13-15 DEC 07/10 05/08 05/08

SOLTERWARN

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