

HFUS 1 BOU 152200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER CO

SDF NUMBER 349

JOINT USAF/NAO PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200Z 15 DECEMBER 1978

IA. WITH THE PASSAGE OF REGION 1447 BEYOND WEST LIMB, SOLAR ACTIVITY HAS DROPPED TO A MODERATE LEVEL. THE LARGEST EVENT TODAY WAS A M1 AT 0747Z (NO OPTICAL COUNTERPART YET RECEIVED). MANY CLASS C X-RAY BURST HAVE OCCURRED WITH SUBFLARE ACTIVITY IN REGIONS 1446 (N21W45), 1444 (S16W37), AND 1448 (S12W37). THE PENUMBRA OF REGION 1444 HAS SEPARATED AND THE REGION NO LONGER HAS A DELTA CONFIGURATION. HOWEVER, POLARITY INTRUSIONS INTO 1444 FROM REGIONS 1448 AND REGION 1453 (S18W27) ARE OCCURRING. NEW REGIONS 1458 (N12W15) AND 1459 (S22E39) HAVE EMERGED WITH REGION 1460 (N10E77) ROTATING AROUND EAST LIMB. IB. SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE WITH A FAIR CHANCE OF ISOLATED LARGE EVENTS FROM THE 1444/1448/1453 COMPLEX. II. THE GEOMAGNETIC FIELD HAS BEEN ACTIVE WITH A LARGE SUB-STORM PRODUCING A K OF 6 AT BOULDER FROM 04-05Z. THE FIELD IS EXPECTED TO BE UNSETTLED (DAYLIGHT) TO ACTIVE (NIGHTTIME) DURING THE NEXT THREE DAYS.

III. EVENT PROBABILITIES 16-18 DECEMBER

CLASS M 85/85/85

CLASS X 30/30/30

PROTON 30/30/30

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 15 DECEMBER 199

PREDICTED 16-18 DECEMBER 194/191/187

90-DAY MEAN 15 DECEMBER 163

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 14 DECEMBER 19

ESTIMATED 15 DECEMBER 23/28

PREDICTED AFR/AP 16-18 DECEMBER 15/20 - 15/15 - 15/15

SOLTERWARN

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HFUS 1 BOU 152200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, COLO

SDF NUMBER 349

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200Z 15 DECEMBER 1979

IA. SOLAR ACTIVITY HAS DIMINISHED DURING THE PAST 24 HOURS. X-RAY  
BACKGROUND LEVELS CONTINUE FAIRLY HIGH BUT NO M-CLASS FLARES AND  
VERY FEW C-CLASS SUBFLARES HAVE BEEN OBSERVED DURING THE PAST 24  
HOURS. REGION 2183 (S15W52) WHICH GREW RAPIDLY YESTERDAY HAS NOW  
APPARENTLY STABILIZED. OTHER DISK REGIONS ARE DULL IN H-ALPHA AND  
WEAKENING IN WHITE LIGHT. THERE ARE NO SIGNS OF ACTIVITY APPROACHING  
THE EAST LIMB SO THE TREND OF SOLAR ACTIVITY SHOULD BE DOWNWARD  
FOR THE NEXT FEW DAYS.

IB. SOLAR ACTIVITY IS EXPECTED TO DECLINE DURING THE NEXT FEW DAYS.  
SMALL M-CLASS FLARES ARE STILL A POSSIBILITY. MAJOR SOLAR FLARES  
ARE VERY UNLIKELY, GIVEN THE CURRENT SITUATION ON THE VISIBLE DISK.

II. THE GEOMAGNETIC FIELD BECAME BRIEFLY ACTIVE ABOUT 15/0900Z AND  
HAS BEEN MILDLY UNSETTLED SINCE THEN. THE FIELD IS EXPECTED TO BE  
UNSETTLED TO MILDLY ACTIVE DURING THE NEXT 72 HOURS.

III. EVENT PROBABILITIES 16 DECEMBER - 18 DECEMBER 1979

CLASS M 40/30/20

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 15 DECEMBER 238

PREDICTED 15 - 18 DECEMBER 233/227/220

90-DAY MEAN 15 DECEMBER 225

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 14 DECEMBER 05

ESTIMATED AFR/AP 15 DECEMBER 09/10

PREDICTED AFR/AP 16 - 18 DECEMBER 12/12 09/10 08/10

SOLTERWARN

BT