

HFUS 1 BOU 272200  
FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO  
SDF NUMBER 270  
JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200Z 27 SEPTEMBER 1978

IA. SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 24 HOURS.  
REGION 1304 (N30W23), WHILE SIMPLE IN APPEARANCE AND MAGNETIC  
STRUCTURE, HAS PRODUCED AN M3 AND TWO M1 X-RAY BURSTS. REGION  
1304 HAS A LARGE LEADER SPOT BUT ITS INTERIOR AND FOLLOWER SPOTS  
SHOW SIGNIFICANT DECAY. THE H-ALPHA PLAGE IS LARGER AND BETTER  
STRUCTURED THAN YESTERDAY WHILE THE FILAMENT PATTERN IS LESS  
PRONOUNCED. THE OTHER TWO REGIONS OF OPTICAL IMPORTANCE, 1307  
(S12E16) AND 1310 (N18E38), HAVE NOT CHANGED MUCH. REGION 1300  
(N14W79), CURRENTLY UNDERGOING WEST LIMB PASSAGE, PRODUCED A  
SUB-NORMAL FLARE AT 270743Z WHICH IS THE ONLY OTHER REGION THAT  
HAS SHOWN ANY DYNAMIC TENDENCIES.

IB. SOLAR ACTIVITY WILL BE LOW TO MODERATE FOR THE COMING 24 HOURS.

II. THE GEOMAGNETIC FIELD IS UNSETLED. MINOR STORM CONDITIONS  
WERE OBSERVED DURING NIGHTTIME HOURS AND ARE EXPECTED TO PREVAIL  
AGAIN TONIGHT. SOME DECLINE IN STORM INTENSITY IS EXPECTED BUT IN  
GENERAL, IT IS BELIEVED THAT THE FIELD IS UNDER THE INFLUENCE OF  
CORONAL HOLE ACTIVITY AND WILL REMAIN IN A DISTURBED STATE FOR  
ANOTHER 36-48 HOURS.

III. EVENT PROBABILITIES 28 SEPTEMBER - 30 SEPTEMBER

CLASS M	80/5.0/50
CLASS X	20/10/05
PROTON	10/05/05
PCAF	GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED	27 SEPTEMBER 152
PREDICTED	28-30 SEPTEMBER 152/152/150
90-DAY MEAN	27 SEPTEMBER 135

V. GEOMAGNETIC INDICES

OBSERVED FREDERICKSBURG	26 SEPTEMBER 30
ESTIMATED AFR/AP	27 SEPTEMBER 25/37
PREDICTED AFR/AP	28-30 SEPTEMBER 25/60 - 18/40 - 12/20
SOLTERWARN	
BT	

SDF NUMBER 270

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200Z 27 SEPTEMBER 1979

IA. SOLAR ACTIVITY HAS BEEN LOW DURING THE PAST 24 HOURS. THE LARGEST X-RAY EVENT WAS A C-4/SN FLARE FROM REGION 1994 (N07W71) AT 0221Z MAXIMUM. A SB FLARE FROM REGION 2021 (N22W04) REACHED MAXIMUM AT 1909Z, BUT ONLY REACHED C1.9 IN X-RAY EMISSION. THIS REGION WHICH IS COUPLED WITH REGION 2006 (N17W07) IN H-ALPHA PLAGE ALSO PRODUCED A SN FLARE AT 1718Z MAXIMUM WHICH WAS ACCCOMPANIED BY A 1400 FLUX UNIT BURST AT 245 MHZ. REGIONS 2021, 2006, AND 2015 (S26E08) ARE UNDERGOING SLOW GROWTH AND HAVE ARCH FILAMENTS VISIBLE. REGIONS 2017 (N16E22) AND 2016 (N21E20) APPEAR TO BE MERGING AND COULD BE CONSIDERED ONE REGION TRENDING TOWARD A BETA GAMMA COMPLEXITY. REGION 1994 RETAINS ITS ACTIVE DARK FILAMENT, BUT SEEMS TO BE DECREASING IN FLARE POTENTIAL AS IT NEARS THE WEST LIMB.

IB. SOLAR ACTIVITY IS EXPECTED TO BE LOW TO MODERATE DURING THE FORECAST PERIOD. AN ISOLATED M-CLASS FLARE IS POSSIBLE FROM REGION 1994 PRIOR TO ITS LIMB TRANSIT. THE 2006/2021 AND 2017/2016 COMPLEXES ARE SLOWLY SHOWING THE POTENTIAL FOR M-CLASS FLARES BUT HAVE NOT AS YET PRODUCING ANY SIGNIFICANT ACTIVITY.

II. THE GEOMAGNETIC FIELD WAS GENERALLY AT UNSETTLED LEVELS DURING THE PAST 24 HOURS WITH BRIEF ACTIVE PERIODS OBSERVED BETWEEN 03 TO 06Z AND AGAIN BETWEEN 15 TO 18Z. THE FIELD WILL REMAIN AT UNSETTLED LEVELS THROUGH THE FORECAST PERIOD.

III. EVENT PROBABILITIES 28 SEPTEMBER - 30 SEPTEMBER

CLASS M 40/30/40

CLASS X 10/05/05

PROTON 10/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 27 SEP 229

PREDICTED 28 - 30 SEP 225/220/216

90-DAY MEAN 27 SEP 180

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 26 SEP 13

ESTIMATED AFR/AP 27 SEP 15/18

PREDICTED AFR/AP 28 - 30 SEP 10/12 07/08 10/11

SOLTERWARN