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HFUS 1 BOU 171300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 229A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 17 AUG 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 16/1200Z TO 17/1200Z: SOLAR ACTIVITY CONTINUES LOW WITH ONLY INFREQUENT LOW-LEVEL C-CLASS SUBFLARES OBSERVED. THE LARGEST X-RAY EVENT DURING THE PAST 24 HOURS WAS AN UNCORRELATED C3 FLARE AT 17/0649Z MAXIMUM. REGIONS 3856 (S12W27) AND 3861 (N08W39) HAVE BEEN THE PRIME PRODUCERS OF THE OBSERVED FLARES. REGION 3856 HAS NOW APPARENTLY STABILIZED AS A MODERATE SIZED E-TYPE SPOT GROUP WITH ONLY MINOR MAGNETIC COMPLEXITY (BETA-GAMMA), BUT WITH FAIRLY STRONG GRADIENTS IN ITS CENTRAL PORTION. REGION 3861 CONTINUES IN ITS GROWTH PHASE WITH A STRONG ARCH FILAMENT SYSTEM VISIBLE IN ITS INTERIOR. FOUR NEW REGIONS WERE NUMBERED SINCE THE 2200Z FORECAST, BUT REGION 3866 (N22E36) IS THE ONLY ONE OF THESE WHICH IS SHOWING ANY PROMISE, WITH SLOW GROWTH REPORTED. A SMALL SURGE AT SE12 AND AN UNIMPRESSIVE PLAGE INDICATE A NEW REGION IS NOW ROTATING INTO VIEW.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY WILL REMAIN LOW. REGION 3856 IS THE ONLY DISK REGION WITH ENOUGH COMPLEXITY TO PRODUCE A SIGNIFICANT EVENT. BUT EVEN THIS IS EXPECTED TO BE ISOLATED.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS GENERALLY UNSETTLED THROUGH THE PAST 24 HOURS, EXCEPT DURING THE 03-06Z PERIOD WHEN A K-INDEX OF FOUR WAS OBSERVED AT BOULDER. THIS ACTIVITY WAS ACCOMPANIED BY AN INCREASE IN THE DENSITY OF THE SOLAR WIND MEASURED AT THE ISEE-3 SPACECRAFT. THE SOURCE OF THIS MINOR ACTIVITY IS UNKNOWN, BUT COULD BE A SMALL DISAPPEARING FILAMENT. UNSETTLED CONDITIONS WITH BRIEF ACTIVE PERIODS ARE EXPECTED THROUGH THE NEXT 24 HOURS FOLLOWED BY CONTINUOUS ACTIVE LEVELS FOR THE REMAINDER OF THE PERIOD WHEN THE EARTH'S MAGNETIC FIELD BECOMES UNDER THE INFLUENCE OF A FAVORABLY LOCATED CORONAL HOLE.

III. EVENT PROBABILITIES 18 AUG-20 AUG

CLASS M 25/25/25

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 16 AUG 158

ESTIMATED 17 AUG 150

PREDICTED 18 AUG-20 AUG 140/135/130

90 DAY MEAN 16 AUG 168

V. GEOMAGNETIC A INDICES

OBSERVED AFR 15 AUG 002 AP 16 AUG 010

ESTIMATED AFR 16 AUG 007 AFR/AP 17 AUG 013/013

PREDICTED AFR/AP 18 AUG-20 AUG 010/013-015/015-020/020

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HFUS 3 BOU 172200  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 229B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 2200Z 17 AUG 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
17/1200Z TO 17/2100Z: SOLAR ACTIVITY WAS MODERATE THIS PERIOD.  
AN M1/1B FLARE OCCURRED IN REGION 3867 (S13E75) WHICH WAS NEWLY  
NUMBERED TODAY. SEVERAL CLASS C XRAY EVENTS ALSO OCCURRED.  
RADIO ACTIVITY ACCOMPANIED THESE EVENTS INCLUDING A 245 MEGA  
HERTZ, 210 FLUX UNIT BURST AT 1743Z. REGION 3864 (N14W46)  
WHICH HAD TWO OF THE CLASS C XRAY EVENTS ALSO HAS GROWN RAPIDLY  
IN WHITE LIGHT AREA, AND HAS AN ARCH FILAMENT SYSTEM. REGION  
3862 (N26E40) ALSO HAS AN ARCH FILAMENT SYSTEM BUT HAS NOT  
SHOWN ANY GROWTH IN WHITE LIGHT.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE  
LOW THROUGHOUT THE PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: GEOMAGNETIC ACTIVITY HAS  
BEEN ACTIVE DURING THIS PERIOD. UNSETTLED CONDITIONS ARE  
EXPECTED UNTIL THE END OF THE FORECAST PERIOD WHEN THE  
INFLUENCE OF A FAVORABLY LOCATED CORONAL HOLE WILL RESULT IN  
THE RETURN OF ACTIVE CONDITIONS.

III. EVENT PROBABILITIES 18 AUG-20 AUG

CLASS M 25/25/25

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 17 AUG 161

PREDICTED 18 AUG-20 AUG 153/150/145

90 DAY MEAN 17 AUG 168

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 16 AUG 006/010

ESTIMATED AFR/AP 17 AUG 013/013

PREDICTED AFR/AP 18 AUG-20 AUG 010/013-015/015-020/020

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