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HFUS 1 BOU 131300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 164A

JO INT USAF/NO AA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 13 JUN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 12/1200Z TO 13/1200Z: SOLAR ACTIVITY HAS BEEN HIGH. REGION 3776 (N12E68) PRODUCED AN X3/2B FLARE AT 0949Z ACCOMPANIED BY A TENFLARE OF 750 FLUX UNITS AND MAJOR IONOSPHERIC DISTURBANCES. THE RADIO SPECTRUM WEAKLY SUGGESTS THIS WAS A PROTON FLARE. THE ASSOCIATED SUNSPOT GROUP IS THE LARGEST IN THE PAST 12 YEARS, AN FKX GROUP WITH PENUMBRA UNINTERRUPTED OVER ITS 16 DEGREE LENGTH. THERE ARE AT LEAST TWO MAJOR DELTA CONFIGURATIONS. THIS WAS THE SOURCE OF SMALL CLASS M EVENTS AT 1627Z, 1742Z, 1832Z, 1859Z AND 0510Z. AN MW/SW FLARE AT 1135Z ORIGINATED IN REGION 3763 (S09W69). THIS REGION HAS DIMINISHED IN AREA AND SPOT COUNT AND ITS DELTA CONFIGURATION HAS WEAKENED. REGION 3779 (S23E39) FORMED ON THE DISK AND IS GROWING RAPIDLY. THE FOUR OTHER SIMPLE BUT SIGNIFICANT REGIONS ARE LITTLE CHANGED. ACTIVITY AT THE LIMB SUGGESTS YET ANOTHER REGION MAY APPEAR TODAY.

IB. SOLAR ACTIVITY FORECAST: CLASS X PROTON FLARES ARE EXPECTED FROM REGION 3776.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN IN A MINOR STORM CONDITION SINCE THE SUDDEN COMMENCEMENT AT 12/1442Z. THIS STORM MAY ORIGINATE FROM THE OCCURRENCE OF NUMEROUS FLARES IN REGION 3763 ON THE BOUNDARY OF A GROWING TRANSEQUATORIAL CORONAL HOLE. MINOR STORM CONDITIONS ARE EXPECTED TO CONTINUE THROUGH THIS FORECAST PERIOD. AS THE LARGE CORONAL HOLE ROTATES THROUGH THE SUN-EARTH CONNECTION LONGITUDES. A MINOR PROTON EVENT IS EXPECTED 13-14 JUNE. LARGER PROTON EVENTS MAY OCCUR FOLLOWING ADDITIONAL FLARES IN REGION 3776.

III. EVENT PROBABILITIES 14 JUN - 16 JUN

CLASS M 99/99/99

CLASS X 60/60/60

PROTON 40/45/50

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 12 JUN 256

ESTIMATED 13 JUN 260

PREDICTED 14-16 JUN 260/250/230

90 DAY MEAN 12 JUN 166

V. GEOMAGNETIC A INDICES

OBSERVED AFR 1 JUN 025 AP 12 JUN 040

ESTIMATED AFR 12 JUN 029 AFR/AP 13 JUN 035/047

PREDICTED AFR/AP 14-16 JUN 025/030 - 025/025 - 025/025

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HFUS 3 BOU 132200  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 164B  
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 2200Z 13 JUN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
13/1200Z TO 13/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE FOR THE  
PAST 9 HOURS. REGION 3776 (N13E63) PRODUCED AN M2/SB FLARE  
MAXING AT 1823Z WHICH WAS ACCOMPANIED BY MAJOR SHORT WAVE FADES  
TO 15 MHZ AND A WEAK CASTELLI U-SHAPED RADIO BURST SPECTRUM.  
DURING THIS PERIOD SUBFLARES WERE OBSERVED IN 6 OF THE 10  
SPOTTED REGIONS ON THE VISIBLE DISK. THREE OF THESE GROUPS,  
3776, 3770 (S18W20), AND 3763 (S10W74) CONTAIN DELTA MAGNETIC  
CONFIGURATIONS.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE  
HIGH. X-CLASS FLARES ARE LIKELY FROM REGION 3776 AND  
SIGNIFICANT FLARES ARE POSSIBLE FROM 3763, 3770, AND 3774  
(N08E34).

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS  
CONTINUED AT MINOR STORM LEVELS FOR THE PAST 9 HOURS. ACTIVE TO  
STORM LEVEL CONDITIONS ARE EXPECTED TO PERSIST THROUGHOUT THE  
FORECAST PERIOD IN RESPONSE TO THE COMBINED EFFECTS OF NUMEROUS  
SIGNIFICANT FLARES AND A TRANSEQUATORIAL POSITIVE-POLARITY  
CORONAL HOLE. PROTON FLUXES AT SATELLITE ALTITUDES ARE WELL  
BELOW EVENT THRESHOLD VALUES AT THIS TIME.

III. EVENT PROBABILITIES 14 JUN-16 JUN

CLASS M	99/99/99
CLASS X	60/60/60
PROTON	40/45/50
PCAF	YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED	13 JUN	233
PREDICTED	14 JUN-16 JUN	230/230/225
90 DAY MEAN	13 JUN	166

V. GEOMAGNETIC A INDICES

OBSERVED	AFR/AP 12 JUN	036/040
ESTIMATED	AFR/AP 13 JUN	030/047
PREDICTED	AFR/AP 14 JUN-16 JUN	025/030-025/025-025/025

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