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FROM SPACE ENVIRONMENT SERVICES CENTER⁷ BOULDER⁷ COLORADO

SDF NUMBER 172A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 1300Z 21 JUN 1982

IA ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/1200Z TO 21/1200Z¹ SOLAR ACTIVITY HAS BEEN MODERATE THIS PERIOD AS REGION 3781¹N16W04³ PRODUCED ALL OF THE M-CLASS EVENTS OBSERVED DURING THE PAST 24 HOURS. THE LARGEST EVENT WAS A M3/2B AT 21/0107UT. MINOR MICROWAVE RADIO BURSTS WERE ALSO OBSERVED. REGION 3781 HAS CONTINUED ITS RAPID GROWTH AND STILL CONTAINS STRONG MAGNETIC GRADIENTS AND IS A BETA-GAMMA/DELTA REGION 3785¹N22W02³ WHICH IS GROWING JUST NORTH OF REGION 3781² MAY ALSO CONTRIBUTE TO THE CONTINUED INSTABILITY OF REGION 3781. REGION 3776¹N15W37³ HAS BEEN QUIET THIS PERIOD. HOWEVER IT CONTINUES TO CONTAIN A DELTA MAGNETIC CONFIGURATION AND A COMPLEX N/LINE. THE LARGE FILAMENT 1N44W25 TO N26W27³ DISAPPEARED BETWEEN 21/0638 TO 21/0725UT. SOME PLAGE ENHANCEMENT WAS OBSERVED AS THE FILAMENT BEGAN TO FADE². THE FILAMENT HAD NOT REFORMED AS OF 1100UT. REGION 3782¹N15E32³ CONTAINS AN ARCH FILAMENT SYSTEM AND HAS EXHIBITED SOME MINOR GROWTH.

IB SOLAR ACTIVITY FORECAST¹. SOLAR ACTIVITY IS EXPECTED TO CONTINUE AT MODERATE LEVELS DURING THE FORECAST PERIOD. WITH THE GROWTH OBSERVED IN REGION 3781 AND ITS RECENT HISTORY², CONTINUED M-CLASS EVENTS ARE TO BE EXPECTED FROM THIS REGION. AND IF GROWTH CONTINUES AN ISOLATED X-CLASS EVENT IS POSSIBLE. REGION 3776 ALTHOUGH UNDER GOING DECAY IT SHOULD NOT YET BE SLIGHTED AS TO ITS FLARE POTENTIAL AND IF RAPID DECAY OCCURS THEN AN X-CLASS EVENT IS LIKELY.

II GEOPHYSICAL SUMMARY AND FORECAST¹. THE GEOMAGNETIC FIELD HAS BEEN ACTIVE DURING THIS PERIOD. THE EFFECTS OF A LARGE CORONAL HOLE ARE EXPECTED TO BEGIN TO INFLUENCE THE GEOMAGNETIC FIELD EARLY ON 22 JUNE WITH ACTIVE CONDITIONS AND SOME PERIODS AT MINOR STORM LEVELS DURING THE FORECAST PERIOD.

III EVENT PROBABILITIES 22 JUN-24 JUN

CLASS M 85/85/85

CLASS X 10/10/10

PROTON 05/05/05

PCAF YELLOW

IV OTTAWA 10⁷ CM FLUX

OBSERVED 20 JUN 201

ESTIMATED 21 JUN 215

PREDICTED 22 JUN-24 JUN 215/205/195

90 DAY MEAN 20 JUN 165

V GEOMAGNETIC A INDICES

OBSERVED AFR 19 JUN 022 AP 20 JUN 022

ESTIMATED AFR 20 JUN 021 AFR/AP 21 JUN 014/015

PREDICTED AFR/AP 22 JUN-24 JUN 025/030-033/030-040/030

SOLTERWARN

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HFUS 3 BOU 212200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 172B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 21 JUN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 21/1200Z TO 21/2100Z: SOLAR ACTIVITY HAS REMAINED MODERATE DURING THE PAST NINE HOURS. REGION 3781 (N16W10) PRODUCED A M1 AT 1113Z AND A M3/1B AT 1606Z. THE SUNSPOT GROUP SIZE IS STABILIZING; HOWEVER, THE REGION REMAINS MAGNETICALLY COMPLEX. REGION 3782 (N16E27) HAS SHOWN AN ACCELERATED GROWTH THROUGH THE PAST 24 HOURS AND HAS PRODUCED MID-LEVEL CLASS C/ SUBFLARE ACTIVITY. CONTINUED GROWTH AT THE CURRENT RATE COULD MAKE THIS THE NEXT REGION PRODUCING CLASS M FLARES. REGION 3776 (N13W46) HAS CHANGED LITTLE DURING THE PAST 24 HOURS. THOUGH RELATIVELY INACTIVE, THE REGION REMAINS CAPABLE OF PRODUCING SPORADIC ENERGETIC FLARES. REGION 3786 (S05W74) EMERGED TODAY. ADDITIONALLY, DURING THE PAST THREE HOURS, NEW FLUX IS EMERGING ON THE NORTH SIDE OF THE PENUMBRA OF REGION 3780 (S19W15) AND NEAR S03E03.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETLED TO SLIGHTLY ACTIVE. THE GEOMAGNETIC FIELD IS EXPECTED TO INCREASE TO STORM LEVEL WITHIN THE NEXT 24 HOURS IN RESPONSE TO A LARGE CORONAL HOLE.

III. EVENT PROBABILITIES 22 JUN-24 JUN

CLASS M 85/85/85

CLASS X 10/10/10

PROTON 05/05/05

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 JUN 204

PREDICTED 22 JUN-24 JUN 205/205/200

90 DAY MEAN 21 JUN 165

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 20 JUN 021/022

ESTIMATED AFR/AP 21 JUN 009/015

PREDICTED AFR/AP 22 JUN-24 JUN 025/030-033/030-040/030

SOLTERWARN

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