

HFUS 1 BOU 060600

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 187A

JOINT AFGWC/SESC SECONDARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 0600Z 06 JULY 1974

IA. NO SIGNIFICANT EVENT HAS OCCURRED SINCE THE MAJOR FLARE IN  
REGION 433 (S14W33) AT 05/2118Z. HOWEVER, THE STRONG DELTA REMAINS  
WITH CONTINUED STRUCTURAL CHANGE. REGIONS 435 (S10W78), 431 (S12W48),  
AND 437 (S15W03) SHOW SLOW GROWTH.

IB. MAJOR FLARE ACTIVITY WILL CONTINUE IN REGION 433 WITH MINOR  
FLARES FROM THE OTHER REGIONS LISTED IN PART IA.

II. A SUDDEN COMMENCEMENT WAS RECORDED AT BOULDER AT 0322Z WITH A  
60 GAMMA DEFLECTION. AT 0330Z THE "D" TRACE BEGAN A RAPID DEFLECTION,  
APPARENTLY SATURATING THIS TRACE. BY EXTRAPOLATION, AN ESTIMATED  
DEFLECTION OF 548 GAMMAS (K EQUALS 9) WAS MADE ON THE "D" TRACE.  
THE POLAR CAP ABSORPTION CONTINUES AND IS EXPECTED TO INTENSIFY.

III. NO CHANGE.

IV. NO CHANGE.

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 04 JUL 24

ESTIMATED AFR/AP 05 JUL 48/75

PREDICTED AFR/AP 06-08 JUL 102/150-50/75-40/55

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HFUS 1 BOU 061400

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 187B

JOINT AFGWC/SESC SECONDARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 1500Z 06 JULY 1974

IA. SOLAR ACTIVITY HAS REMAINED HIGH DURING THE PAST EIGHT HOURS. REGION 433 (S14W37) HAS PRODUCED TWO SIGNIFICANT ENERGETIC FLARES, AS FOLLOWS; 06/1038Z, IMPORTANCE ZERO-BRILLIANT, CLASS M6 (GOES, BURST OF 240 FLUX UNITS ABOVE BACKGROUND AT 2695 MHZ; 06/1058Z, IMPORTANCE ONE-BRILLIANT, CLASS X2 (GOES), BURST OF 680 FLUX UNITS ABOVE BACKGROUND AT 2695

MHZ. STRONG IONOSPHERIC DISTURBANCES ACCOMPANIED THESE FLARES, AND DEKAMETRIC DATA HAVE NOT BEEN REPORTED. REGION 433 HAS SHOWN SOME DECAY AND A DECREASE OF MAGNETIC GRADIENTS, BUT THIS REGION RETAINS ITS DELTA CONFIGURATION AND ITS POTENTIAL FOR PRODUCING ENERGETIC FLARES. REGIONS 431 (S12W52) AND 437 (S15W07) HAVE DEVELOPED SOMEWHAT BUT REMAIN SIMPLE MAGNETICALLY.

IB. SOLAR ACTIVITY IS EXPECTED TO REMAIN HIGH. REGION 433 PROBABLY WILL CONTINUE TO PRODUCE MAJOR FLARES BUT AT A DECREASING RATE AS DECAY CONTINUES. OTHER REGIONS MAY PRODUCE MINOR ACTIVITY.

II. A MAJOR GEOMAGNETIC STORM HAS BEEN OBSERVED THE PAST 12 HOURS. AN ACCURATE K-INDEX AT BOULDER IS NOT AVAILABLE FOR THE INTERVAL 07/0300-0600Z BECAUSE THE REAL-TIME MAGNETOMETER WAS DRIVEN OFF-SCALE, THE FREDERICKSBURG GEOMAGNETIC CENTER OBSERVED AT DEFLECTION OF 610 GAMMAS DURING THE INTERVAL 07/0600-0900Z, FOR A K-INDEX OF 9. THE K-INDEX AT FREDRICKSBURG WAS 8<sup>03-06</sup> DURING THE INTERVAL 0600-0900Z. THE LEVEL OF DISTURBANCE DECREASED CONSIDERABLE AFTER ABOUT 0900Z. REPORTS OF MID-LATITUDE VISUAL AURORA HAVE BEEN RECEIVED.

THE PROTON EVENT REPORTED ON SDF 186 HAS DECREASED IN INTENSITY. THE THULE 30 MHZ RIOMETER HAS SHOWN RECENT POLAR CAP ABSORPTION VALUES OF ABOUT 2 DB.

III. EVENT PROBABILITIES 06-08 JULYJULY

CLASS M 95/90/90

CLASS X 70/70/60

PROTON 70/60/60

PCAF RED

IV. OTTAWA 10.7 CM FLUX

OBSERVED 05 JULY 131

PREDICTED 06-08 JULY 128/125/122

90 DAY MEAN 05 JULY 91

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 04 JULY 24

ESTIMATED AFR/AP 05 JULY 48/75

PREDICTED AFR/AP 06 - 08 JULY 110/130 - 80/100 - 50/70

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HFUS BOU 062300

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, CO

SDF NUMBER 187

JOINT AFGWC/SESC PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2300Z 06 JULY 1974

IA. SOLAR ACTIVITY HAS REMAINED VERY HIGH. REGION 433 (S15W43) HAS PRODUCED THREE SIGNIFICANT ENERGETIC FLARES DURING THE PAST 24 HOURS AS FOLLOWS- 06/1038Z, ZERO-BRILLIANT, CLASS M6 (GOES), 240 FLUX UNITS ABOVE BACKGROUND AT 2695 MHZ; 06/1112Z, ONE-BRILLIANT, CLASS X2 (GOES), 680 FLUX UNITS ABOVE BACKGROUND AT 2695 MHZ; 06/1915Z, ONE-BRILLIANT, CLASS X2 (GOES), 314 FLUX UNITS ABOVE BACKGROUND AT 2695 MHZ. STRONG IONOSPHERIC EFFECTS WERE OBSERVED WITH THESE FLARES. DEKAMETRIC DATA HAVE NOT BEEN REPORTED FOR THE 1038Z AND 1112Z EVENTS, BUT TYPE III AND IV BURSTS ACCOMPANIED THE 1915Z EVENT. THIS EVENT HAD THREE DISTINCT OPTICAL AND X-RAY MAXIMA AT ABOUT 1848, 1904, AND 1915Z. REGION 433 HAS DECAYED SOMEWHAT, BUT A MAGNETIC DELTA CONFIGURATION STILL EXISTS IN THE MAIN TRAILING SPOT. THIS PART OF THE REGION CONTAINS STRONG MAGNETIC FIELD GRADIENTS AND ENHANCED PLAGE. OTHER REGIONS HAVE REMAINED RELATIVELY SIMPLE AND UNIMPRESSIVE.

IB. SOLAR ACTIVITY IS EXPECTED TO REMAIN VERY HIGH. REGION 433 PROBABLY WILL CONTINUE TO PRODUCE MAJOR FLARES UNTIL THE DELTA FIGURATION THERE IS GONE. THESE FLARES MAY CONTINUE THROUGH THE FORECAST PERIOD. ONLY MINOR ACTIVITY IS LIKELY IN OTHER REGIONS.

II. A MAJOR GEOMAGNETIC STORM HAS DEVELOPED DURING THE PAST 24 HOURS. AN APPARENT SUDDEN COMMENCEMENT FEATURE OCCURRED AT 06/0322Z, FOLLOWED BY LARGE, RAPID FLUCTUATIONS OF ALL COMPONENTS. THE FREDERICKSBURG GEOMAGNETIC CENTER RECORDED A MAXIMUM EXCURSION OF 610 GAMMAS DURING THE INTERVAL 06/0300 - 0600Z FOR A K-INDEX OF 9. SIMILARLY LARGE DISTURBANCES WERE REPORTED BY OTHER OBSERVATORIES. VISUAL AURORA WAS REPORTED AT VARIOUS PLACES ACROSS THE NORTHERN USA, DESPITE A NEARLY FULL MOON.

THE PROTON EVENT REPORTED IN SDF 184, 185, AND 186 HAS DECLINED IN INTENSITY. SATELLITE COUNTERS HAVE SHOWN A CONSIDERABLE DECREASE, AND THE THULE 30 MHZ RIOMETER HAS SHOWN RECENT POLAR CAP ABSORPTION VALUES OF LESS THAN 2 DB.

III. EVENT PROBABILITIES 07 - 09 JULY

CLASS M 95/90/90

CLASS X 80/70/60

PROTON 60/50/50

PCA IN PROGRESS- SEE PART II ABOVE

IV. OTTAWA 10.7 CM FLUX

OBSERVED 06 JULY 118

PREDICTED 07-09 JULY 120/118/115

90-DAY MEAN 06 JULY 92

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 05 JULY 52

ESTIMATED AFR/AP 06 JULY 112/130

PREDICTED AFR/AP 07-09 JULY 90/145 - 80/130 - 60/95

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