

HFUS 1 BOU 131300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 194A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 13 JUL 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
12/1200Z TO 13/1200Z: SOLAR ACTIVITY IS HIGH. CLASS M FLARE  
ACTIVITY REMAINS FREQUENT AND REGION 3804 (N14E21) WILL  
APPARENTLY KEEP IT THAT WAY. THE VERY LARGE COMPLEX SPOT GROUP  
SHOWS NO INDICATION OF DECAY AND THE BRIGHT H-ALPHA PLAGE IS  
INCREASING IN AREA. MEANWHILE, REGION 3806 (S24E06) PRODUCED AN  
M1 FLARE AT 130728Z (MAX) AND A LARGE CLASS C FLARE AT 130728Z  
(MAX). THIS REGION IS ALSO GROWING AND WHILE NOT NEARLY AS  
IMPRESSIVE AS 3804, ITS STRONG GRADIENTS SUGGEST CONTINUED  
ENERGETIC ACTIVITY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO  
REMAIN HIGH AS REGIONS 3804 AND 3806 HAVE DEMONSTRATED A  
POTENTIAL FOR SUSTAINED ACTIVITY.

III. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS  
BEEN AT ACTIVE TO MINOR STORM LEVELS WITH BRIEF PERIODS OF  
MAJOR STORM CONDITIONS. THE FIELD SHOULD CONTINUE DISTURBED AS  
IT RESPONDS TO THE FLURRY OF FLARE ACTIVITY. THE 10 MEV  
PARTICLE FLUX HAS GRADUALLY INCREASED SINCE 1800Z ON 12 JULY  
AND IS NOW AT 410 PARTICLES PER CM<sup>2</sup>/SEC/STER.

III. EVENT PROBABILITIES 14 JUL-16 JUL

CLASS M 99/99/99

CLASS X 70/70/70

PROTON 25/30/30

PCAF IN PROGRES

IV. OTTAWA 10.7 CM FLUX

OBSERVED 12 JUL 245

ESTIMATED 13 JUL 255

PREDICTED 14 JUL-16 JUL 260/265/265

90 DAY MEAN 12 JUL 157

V. GEOMAGNETIC A INDICES

OBSERVED AFR 11 JUL 032 AP 12 JUL 034

ESTIMATED AFR 12 JUL 025 AFR/AP 13 JUL 035/040

PREDICTED AFR/AP 14 JUL-16 JUL 030/035-025/040-020/040

SOLTERWARN

BT

HFUS 3 BOU 132200  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 194B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 13 JUL 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 WITH AN M3 X-RAY EVENT MAXING AT 1413Z. THIS EVENT CORRELATES WITH SIMULTANEOUS FLARES OCCURRING IN REGION 3804 (N13E15), 3806 (S24W02), AND 3812 (N22E57). REGION 3804 HAS SHOWN SPOT DECAY BUT RETAINS AMPLE POTENTIAL FOR MAJOR ACTIVITY. REGION 3806 CONTINUES TO GROW AND MAGNETIC GRADIENTS ARE INCREASING. REGION 3812 IS SHOWING RAPID GROWTH IN BOTH WHITE LIGHT AND MAGNETIC COMPLEXITY. NO NEW REGIONS WERE REPORTED TODAY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE HIGH.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD REACHED MAJOR STORM LEVELS DURING THE PAST 9 HOURS WITH K-INDEXES OF 8 AND 9 BEING OBSERVED AT LOW AND HIGH LATITUDE STATIONS. A SUDDEN COMMENCEMENT OF 90 GAMMAS AT BOULDER OCCURRED AT 1618Z WHICH WAS COUPLED WITH A SIGNIFICANT INCREASE IN THE PROTON FLUX AT SATELLITE LEVELS AT GREATER THAN 10 MEV ENERGIES. THE MAXIMUM FLUX OBSERVED SO FAR WAS 2900 PROTONS/CM<sup>2</sup>/SEC/STER AT 1615Z. A POLAR CAP ABSORPTION EVENT (PCA) IN EXCESS OF 20 DB IS OCCURRING. PROTON FLUXES ARE EXPECTED TO REMAIN WELL ABOVE THRESHOLD FOR THE NEXT THREE DAYS. THE GEOMAGNETIC STORM IS EXPECTED TO MAXIMIZE TOMORROW AND DECLINE OVER THE FOLLOWING TWO DAYS. IF ADDITIONAL MAJOR FLARES OCCUR, FORECASTS WILL BE REVISED.

III. EVENT PROBABILITIES 14 JUL-16 JUL

CLASS M 99/99/99

CLASS X 70/70/70

PROTON 25/30/30

PCAF IN PROGRESS

IV. OTTAWA 10.7 CM FLUX

OBSERVED 13 JUL 250

PREDICTED 14 JUL-16 JUL 250/250/250

90 DAY MEAN 13 JUL 158

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 12 JUL 039/034

ESTIMATED AFR/AP 13 JUL 080/080

PREDICTED AFR/AP 14 JUL-16 JUL 080/050-040/040-020/040

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