

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 1932

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.

II. 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

OPSERVED	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

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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 OCCURED  
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/CM2/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 030/080

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

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