

HFUS 1 BOU 171300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 198A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 17 JUL 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

16/1200Z TO 17/1200Z: SOLAR ACTIVITY RETURNED TO THE HIGH LEVEL

AFTER SEVERAL DAYS WITHOUT AN X-CLASS FLARE. REGION 3804

(N14W32) PRODUCED AN X3/2B AT 17/1035Z MAXIMUM. THIS FLARE

PRODUCED STRONG RADIO EMISSION THROUGH THE CENTIMETRIC SPECTRUM

(1200 FU AT 2695MHZ) AND STRONG SHORT WAVE FADES TO 15MHZ, BUT

NO TYPE II OR IV RADIO SWEEP WAS RECORDED. THIS REGION ALSO

PRODUCED AN M8/1B FLARE AT 17/0207Z MAXIMUM WITH STRONG RADIO

EMISSION IN A CASTELLI U SHAPED SIGNATURE. 740 FU AT 2695MHZ

WAS OBSERVED FROM THIS FLARE. REGION 3804 HAS EVIDENTLY ENTERED

ITS DECAY PHASE SHOWING A TENDENCY TO SPREAD LONGITUDINALLY AND

A DECLINE IN ITS SPOT AREA. ITS MAGNETIC STRUCTURE NEAR THE

CENTER OF THE REGION STILL DISPLAYS STRONG GRADIENTS HOWEVER.

REGION 3812 (N20E10) AND REGION 3810 (N12E07) LOCATED JUST TO

THE SOUTH OF 3812, CONTINUE TO BE THE NEXT MOST DOMINATE

COMPLEX, BUT HAVE MANAGED ONLY SUBFLARES IN THE PAST 12 HOURS.

OF THE REMAINING 10 SPOTTED REGIONS ON THE DISK, 7 HAVE

PRODUCED MINOR SUBFLARE ACTIVITY, SHOWING THAT THE ACTION HAS

NOT BEEN LIMITED TO THE LARGE REGIONS.

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

MODERATE TO HIGH. REGION 3804 SHOULD PRODUCE AT LEAST ONE MORE

X-CLASS EVENT PRIOR TO WEST LIMB ROTATION. THE 3810/3812

COMPLEX NOW APPEARS CAPABLE OF A SMALL X-CLASS EVENT.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS

BEEN AT MINOR STORM LEVELS. CURRENT INDICATIONS FROM THE ISEE

SPACECRAFT AND GROUND BASED MAGNETOMETERS ARE THAT THE FIELD

MIght BE GRADUALLY SETTLING BACK TO ACTIVE CONDITIONS. ACTIVE

CONDITIONS ARE FORECAST THROUGH MID-DAY ON THE 19TH, WHEN MINOR

STORM LEVELS ARE EXPECTED AS A RESULT OF TODAYS X3/2B. A MINOR

PARTICLE ENHANCEMENT IS EXPECTED BY LATE TODAY (2000Z) FROM THE

X3 FLARE, BUT IT IS NOT FELT THAT IT WILL REACH EVENT CRITERIA.

III. EVENT PROBABILITIES 18 JUL-20 JUL

CLASS M 99/99/99

CLASS X 60/50/40

PROTON 50/40/30

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 16 JUL 271

ESTIMATED 17 JUL 270

PREDICTED 18 JUL-20 JUL 265/260/255

90 DAY MEAN 16 JUL 162

V. GEOMAGNETIC A INDICES

OBSERVED AFR 15 JUL 040 AP 16 JUL 040

ESTIMATED AFR 16 JUL 035 AFR/AP 17 JUL 028/035

PREDICTED AFR/AP 18 JUL-20 JUL 020/025-020/027-030/035

SOLTERWARN

BT

HFUS 3 BOU 172200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 198B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 17 JUL 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 17/1200Z TO 17/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE TO LOW THIS PAST 9 HOURS. CLASS M EVENTS OCCURRED ONLY NEAR THE BEGINNING OF THE PERIOD: M2/SB AT 1307Z FROM REGION 3804(N14W39) AND M1/SB AT 1350Z FROM REGION 3806 (S24W58). SUNSPOT GROWTH IN THE CENTRAL PORTION OF GIANT REGION 3804 MAINTAINS ITS HIGH MAGNETIC GRADIENT AND COMPLEX DELTA CONFIGURATION. GROWTH OF SPOTS IN REGION 3810(N13E03) HAS INCREASED ITS COMPLEXITY. MINOR GROWTH IN REGION 3806 AND REGION 3817(N18E42) HAS BEEN ACCCOMPANIED BY SMALL FLARES. SLOW DECAY IS OCCURRING IN OTHER REGIONS.

IB. SOLAR ACTIVITY FORECAST: A SINGLE CLASS X FLARE WITH PROTON EMISSION MAY OCCUR BEFORE WEST LIMB PASSAGE OF REGION 3804. RADIO AND SUNSPOT INDICES ARE EXPECTED TO DECLINE DURING THIS FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BECOME MUCH LESS ACTIVE DURING THE PAST NINE HOURS. THE QUIET-LOOKING TRACES ON THE RECORDERS ARE DECEPTIVE IN THAT THE FIELD IS STILL DISPLACED FROM NORMAL. ACTIVE CONDITIONS ARE EXPECTED DURING THE NEXT 24 HOURS, WITH A MINOR STORM EXPECTED ON 19 JULY AS A RESULT OF THE X3 EVENT EARLIER TODAY.

III. EVENT PROBABILITIES: 18 JUL-20 JUL

CLASS M 90/90/90

CLASS X 50/40/30

PROTON 40/30/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 17 JUL 265

PREDICTED 18 JUL-20 JUL 255/245/235

90 DAY MEAN 17 JUL 164

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 16 JUL 050/040

ESTIMATED AFR/AP 17 JUL 019/026

PREDICTED AFR/AP 18 JUL-20 JUL 015/020-025/027-035/035

SOLTERWARN

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