

HFUS 1 BOU 041230

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 216A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 1300Z 04 AUG 1981

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
03/1200Z TO 04/1200Z:

SOLAR ACTIVITY HAS BEEN MODERATE FOR THE PAST 24 HOURS DUE
TO FOUR M-CLASS FLARES OCCURRING IN REGIONS 3234 (S12W93)
AND 3257 (S09E69). THE LARGEST WAS AN M7/IN AT 03/2028 UT
FROM REGION 3257. THIS REGION HAS ROTATED OVER THE EAST
LIMB ACTIVE AND HAS PRODUCED MOST OF THE M-CLASS FLARES AND
SEVERAL LARGE C-CLASS FLARES. THE DELTA WHICH DEVELOPED
IN REGION 3247 (N16W29) YESTERDAY FORMED A STRONG MAGNETIC
GRADIENT IN THAT REGION. SIGNIFICANT PENUMBRAL GROWTH HAS
CONTINUED IN REGION 3248 (N23W58).

I B. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE THROUGH THE
FORECAST PERIOD PRIMARILY DUE TO THE ACTIVE NATURE OF REGION
3257. ONCE THIS REGION HAS SHOWN ITS FULL EXTENT, IT MAY
REVEAL A POTENTIAL FOR X-CLASS ACTIVITY. REGION 3247 IS
EXPECTED TO SOON BEGIN CONTRIBUTING TO THE M-CLASS FLARE
ACTIVITY.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED FOR THE PAST 24
HOURS EXCEPT FOR ONE BOULDER K-INDEX OF FOUR FOR THE 0600-
0900 UT PERIOD. THE FIELD IS EXPECTED TO REMAIN MOSTLY
UNSETTLED WITH ACTIVE PERIODS PROBABLE ON 7 AUG, AS SUGGESTED
BY RECURRENCE.

III. EVENT PROBABILITIES: 05 - 07 AUG

CLASS M 70/75/80

CLASS X 15/20/20

PROTON 05/05/10

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 03 AUG 183

ESTIMATED 04 AUG 185

PREDICTED 05-07 AUG 188/190/195

90 DAY MEAN 03 AUG 180

V. GEOMAGNETIC INDICES

OBSERVED AFR 02 AUG 13 AP 03 AUG 25

ESTIMATED AFR 03 AUG 17 AFR/AP 04 AUG 15/17

PREDICTED AFR/AP 05-07 AUG 12/14 09/10 14/15

SOLTERWARN

BT

HFUS 3 BOU 042200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO
SDF NUMBER 216B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 04 AUGUST 1981

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 04/1200Z TO 04/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE. AN M1 OCCURRED AT 1801Z MAXIMUM, BUT COULD NOT BE CORRELATED OPTICALLY EVEN THOUGH THERE WERE SEVERAL SITES VIEWING THE SUN. A SOLAR RADIO BURST AT 1530Z MAXIMUM WHICH PRODUCED 269 FLUX UNITS AT 2800 MHZ AND 11,000 FLUX UNITS AT 245 MHZ WAS ALSO NOT CORRELATED. BOTH THESE EVENTS COULD HAVE BEEN PRODUCED FROM REGIONS BEHIND THE LIMBS. REGION 3257 (S09E67) IS NOW THE MOST IMPRESSIVE ON THE DISK, WITH STRONG MAGNETIC GRADIENTS AND A BETA-GAMMA CONFIGURATION.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE MODERATE. M-CLASS FLARES CAN BE EXPECTED FROM REGION 3257 AND TO A LESSER EXTENT REGION 3247 (N16W35), WHICH IS STILL GROWING SLOWLY AND CONTAINS A MAGNETIC DELTA CONFIGURATION.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED DURING THE PAST NINE HOURS. A GENERALLY UNSETTLED LEVEL IS EXPECTED DURING THE FORECAST PERIOD WITH BRIEF ACTIVE CONDITIONS POSSIBLE DURING NIGHT-TIME HOURS.

III. EVENT PROBABILITIES 05 AUGUST - 07 AUGUST

CLASS M 70/75/80

CLASS X 10/10/10

PROTON 05/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 04 AUGUST 181

PREDICTED 05-07 AUGUST 185/188/190

90-DAY MEAN 04 AUGUST 179

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 03 AUGUST 19/25

ESTIMATED AFR/AP 04 AUGUST 14/17

PREDICTED AFR/AP 05-07 AUGUST 12/14 - 09/10 - 14/15

SOLTERWARN

BT