

UNIT 1 R0U 271244

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 239A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 1300Z 27 AUGUST 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

26/1200Z TO 27/1200Z:

MAJOR SOLAR FLARES OCCURRED AT 0427Z (M9/2P) AND 0556Z (M7/2B) FROM REGIONS 3284 (S10W55) AND 3300 (S12E56) RESPECTIVELY. A MAJOR EPISODE OF EMERGING MAGNETIC FLUX FORMED A LARGE AND COMPLEX SPOT WITH IN REGION 3284 EARLY YESTERDAY. THE INTERACTION OF THESE STRONG NEW FIELDS WITH THE DENSE OVERLYING CORONA PRESUMABLY PRODUCED THE M9 FLARE. RADIO EMISSION WAS WEAK FROM BOTH FLARES. CULGOORA REPORTED ONLY WEAK TYPE III BURSTS. A REDUCTION IN SPOT AREA WAS REPORTED IN REGION 3284 AFTER ITS FLARE. REGION 3300 IS NOW VISIBLE AS A LARGE COMPLEX PLACE WITH EKI SPOT GROUP. IMPORTANT GROWTH WITH INCREASED MAGNETIC COMPLEXITY HAS OCCURRED IN REGIONS 3281 (N11W78), 3288 (N20W13) AND 3293 (N12W45). NEW REGIONS ARE APPEARING AT N04, N14 AND N30 AT EAST LIMP.

IB. SOLAR ACTIVITY FORECAST:

MAJOR FLARES ARE LIKELY IN REGION 3284 IF ADDITIONAL GROWTH TAKES PLACE. REGION 3288 IS ATTAINING CLASS M POTENTIAL. REGION 3300 IS EXPECTED TO CONTINUE ITS MODERATE ACTIVITY.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED, WITH AN INCREASE IN ACTIVITY NEAR THE END OF THE PERIOD. UNSETTLED CONDITIONS TOMORROW WILL GIVE WAY TO ACTIVE CONDITIONS AS TURBULENT SOLAR WIND FROM THE VICINITY OF A CORONAL HOLE ENCOUNTERS EARTH.

III. EVENT PROBABILITIES: 28 - 30 AUGUST

CLASS M 90/90/90

CLASS X 30/20/20

PROTON 10/10/10

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 26 AUG 268

ESTIMATED 27 AUG 280

PREDICTED 28-30 AUG 270/260/260

90 DAY MEAN 26 AUG 185

V. GEOMAGNETIC A INDICES

OBSERVED AFR 25 AUG 15 AP 26 AUG 08

ESTIMATED AFR 26 AUG 07 AFR/AP 27 AUG 11/13

PREDICTED AFR/AP 28-30 AUG 08/10 15/18 20/23

COLTER/WARN

BT

HFUS 3 BOU 272200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 239B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 27 AUGUST 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 27/1200Z TO 27/2100Z: SOLAR ACTIVITY HAS BEEN LOW TO MODERATE DURING THE PAST 9 HOURS. FIFTEEN C-CLASS SUBFLARES HAVE BEEN REPORTED DURING THAT TIME WITH ABOUT 3 SUBFLARES EACH FROM REGIONS 3284 (S10W49), 3293 (N12W39), 3294 (S03W59), 3295 (N16E15) AND 3300 (S13E62). THE LARGEST OF THE SUBFLARES WAS A C9/SF FROM REGION 3293 AT 1831Z. REGIONS 3302 (S11E46) AND 3303 (N13E74) WERE NUMBERED TODAY.

IB. SOLAR ACTIVITY FORECAST: WHEREAS YESTERDAY MOST OF THE REGIONS ON THE DISK WERE GROWING, TODAY MOST OF THE FOURTEEN REGIONS ON THE VISIBLE DISK ARE REPORTED TO BE DECAYING. A COUPLE OF THE REGIONS ARE STABLE BUT NONE APPEAR TO BE GROWING AT THE MOMENT. ISOLATED M-CLASS FLARES ARE STILL POSSIBLE, PRINCIPALLY FROM REGIONS 3284 AND 3300.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD BECAME DISTURBED ABOUT 1300Z TODAY. MID-LATITUDE K-VALUES OF 5 WERE OBSERVED FOR A COUPLE OF 3-HOURLY PERIODS. THE DISTURBANCE IS EXPECTED TO GRADUALLY DIMINISH OVER THE NEXT 48 HOURS.

III. EVENT PROBABILITIES 28 AUGUST - 30 AUGUST

CLASS M 60/50/40

CLASS X 10/05/05

PROTON 10/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 27 AUGUST 255

PREDICTED 28-30 AUGUST 252/249/241

90-DAY MEAN 27 AUGUST 186

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 26 AUGUST 07/08

ESTIMATED AFR/AP 27 AUGUST 23/25

PREDICTED AFR/AP 28-30 AUGUST 17/20 - 13/18 - 20/23

SOLTERWARN

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