

HFUS 1 BOU 041300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 277A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 04 OCTOBER 1981

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

SOLAR ACTIVITY HAS DECREASED DURING THE PAST 24 HOURS TO A LOW LEVEL. ONLY SMALL C-CLASS SUBFLARES HAVE BEEN OBSERVED FROM A VARIETY OF REGIONS. REGION 3375 (N13W11) HAS BEEN THE MOST ACTIVE, BUT ITS FLARE PRODUCTION IS DOWN SIGNIFICANTLY FROM YESTERDAY. THIS REGION'S GROWTH HAS CONTINUED, BUT ITS MAGNETIC GRADIENTS HAVE RELAXED. REGION 3377 (N10E37), THE SECOND MOST COMPLEX REGION ON THE DISK, HAS BEEN VERY QUIET DURING THE PERIOD. REGIONS 3374 (S17W04), 3376 (S07E30), 3379 (S07E10), AND 3381 (S27E05) ARE ALL GROWING SLOWLY, AND HAVE BEEN SOMEWHAT ACTIVE, BUT THIS GROWTH CANNOT COMPENSATE FOR THE OVERALL DECAY OF THE REMAINING DISK REGIONS.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE GENERALLY LOW THROUGH THE PERIOD, HOWEVER, THE NEW GROWTH NOW OCCURRING IN REGION 3375 COULD TRIGGER A SMALL M-CLASS FLARE. THE REMAINING GROWING REGIONS SHOULD ONLY PRODUCE C-CLASS EVENTS. A GENERAL DECREASE IN ALL SOLAR ACTIVITY INDICES IS EXPECTED DURING THE FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN SETTLING SLOWLY FROM ITS MINOR STORM LEVELS OBSERVED INTERMITTENTLY ON THE 3RD. ACTIVE CONDITIONS ARE FORECAST THROUGH THE NEXT 12 HOURS FOLLOWED BY UNSETLED LEVELS FOR THE REMAINDER OF THE PERIOD.

III. EVENT PROBABILITIES: 05 OCTOBER - 07 OCTOBER

CLASS M 60/50/50

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 03 OCT 196

ESTIMATED 04 OCT 190

PREDICTED 05-07 OCT 185/180/175

90 DAY MEAN 03 OCT 212

V. GEOMAGNETIC A INDICES

OBSERVED AFR 02 OCT 27 AP 03 OCT 28

ESTIMATED AFR 03 OCT 30 AFR/AP 04 OCT 15/18

PREDICTED AFR/AP 05-07 OCT 12/12 - 12/12 - 10/12

SOLTERWARN

BT

HFUS 3 BOU 042200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 277B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 04 OCTOBER 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 04/1200Z TO 04/2100Z: SOLAR ACTIVITY CONTINUES LOW. SEVERAL OF THE 16 SMALL SPOT GROUPS ARE SHOWING MINOR GROWTH. CHIEF AMONG THEM ARE REGIONS 3380 (S16W44) AND 3386 (N19E28). THE GROWTH IN REGION 3386 IS EXPECTED TO DISRUPT A NEARBY LARGE FILAMENT, PRECIPITATING AN IMPORTANT FLARE IN REGION 3377 (N10E30). REGION 3377 IS FOLLOWER-DOMINANT, BUT OF REVERSED-POLARITY ARRANGEMENT. IT APPEARS TO HAVE FORMED BY THE EMERGENCE OF TWO SMALL REGIONS CLOSE TO THE EDGE OF THE LEADER SPOT RETURNED FROM THE PREVIOUS SOLAR ROTATION. THE MAGNETIC CONFIGURATION IS ALSO SLIGHTLY COMPLICATED IN REGION 3376 (S07E24) AND REGION 3374 (S17W10). A NEW BIPOLE GROUP OF SMALL SIZE (REGION 3385, S11E08) HAS FORMED VERY NEAR REGION 3379 (S07E04) AND MAY COMPLICATE THIS AREA. REGION 3383 (N07W01) HAS EMERGED WITH MIXED POLARITIES BUT IS SMALL AND NOT GROWING. NEW REGIONS 3381 (S27W02) AND 3384 (S25W33) ARE VERY SMALL AND UNLIKELY TO GROW. NO IMPORTANT AREAS OF 10 CM FLUX ARE NEARING EAST LIMB. NONE OF THE SPOT GROUPS EXCEED 200 MILLIONTHS HEMISPHERIC AREA, A RELATIVELY SMALL SIZE.

IB. SOLAR ACTIVITY FORECAST: AN ISOLATED CLASS M FLARE IS EXPECTED FROM REGION 3377 AND POSSIBLY FROM REGION 3376. PRESENT GROWTH TRENDS ARE NOT EXPECTED TO COMPENSATE FOR DECAYING REGIONS AFTER TOMORROW, SO SOLAR INDICES ARE EXPECTED TO DECLINE.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE TO UNSETTLED. UNSETTLED CONDITIONS ARE EXPECTED THROUGHOUT THIS FORECAST PERIOD.

III. EVENT PROBABILITIES 05 OCTOBER - 07 OCTOBER

CLASS M 60/50/40

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 04 OCTOBER 191

PREDICTED 05-07 OCTOBER 195/189/183

90-DAY MEAN 04 OCTOBER 213

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 03 OCTOBER 29/28

ESTIMATED AFR/AP 04 OCTOBER 16/18

PREDICTED AFR/AP 05-07 OCTOBER 12/17 - 12/15 - 10/12

SOLTERWARN

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