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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDE NUMBER 276A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 03 OCTOBER 1981

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 02/1200Z TO 03/1200Z:

SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 24 HOURS, WITH TWO M-CLASS EVENTS ON THE 2ND OF OCT BUT ONLY FREQUENT C-CLASS FLARES OBSERVED SINCE THE START OF THE NEW ZULU DAY. REGION 3375 (N13E63) PRODUCED THE ONLY OPTICALLY CORRELATED M-EVENT, AN M2.1B AT 02/1636Z. THIS REGION HAS BEEN BY FAR THE MOST ACTIVE ON THE DISK WITH SUBFLARES OCCURRING ABOUT EVERY HOUR. REGION 3377 (N10E50), A SMALL D-TYPE SPOT GROUP NEARLY EQUIVALENT TO 3375, HAS BEEN LESS ACTIVE, PRODUCING INFREQUENT SUBFLARES. REGIONS 3369 (S15W08), 3370 (N16W17), 3376 (S06E45), AND 3380 (S14W69) HAVE ALSO PRODUCED MINOR EVENTS. NONE OF THE VISIBLE DISK REGIONS HAVE CHANGED SIGNIFICANTLY IN THE PAST 24 HOURS.

II. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE WITH AN OCCASIONAL M-CLASS EVENT PROBABLE FROM EITHER REGION 3375 OR 3377. SLOW DEVELOPMENT ON THE DISK COULD CONTRIBUTE TO THE GENERAL LEVEL OF ACTIVITY DURING THE FORECAST PERIOD.

III. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD WAS AT ACTIVE TO MINOR STORM LEVELS FOLLOWING A SUDDEN COMMENCEMENT OBSERVED AT BOULDER AT 02/2022Z. THE FIELD IS EXPECTED TO REMAIN AT HIGH ACTIVE LEVELS WITH BRIEF PERIODS AT MINOR STORM CONDITIONS DURING THE NEXT 36 HOURS. THE COMBINATION OF THE CORONAL TRANSIENT AND THE LARGE FILAMENT ERUPTION SHOULD MAINTAIN THE CURRENT LEVEL OF ACTIVITY FOR AT LEAST 36 HOURS. THE LOW ENERGY PARTICLE ENHANCEMENT SUBSIDED BY LATE IN THE ZULU DAY ON THE 2ND OF OCT.

IV. EVENT PROBABILITIES: 04 OCTOBER - 06 OCTOBER

CLASS M 80/80/80

CLASS X 05/05/05

PROTON 01/01/01

PCAF GREEN

V. OTTAWA 10.7 FLUX

OBSERVED 02 OCT 208

ESTIMATED 03 OCT 205

PREDICTED 04-06 OCT 208/210/210

90 DAY MEAN 02 OCT 211

VI. GEOMAGNETIC A-F INDICES

OBSERVED AFR 01 OCT 08 AP 02 OCT 15

ESTIMATED AFR 02 OCT 15 AFR/AP 03 OCT 23/25

PREDICTED AFR/AP 04-06 OCT 25/25 - 15/15 - 12/12

SOLTERWARN

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FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO
SDS NUMBER 276P

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 03 OCTOBER 1981

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 031200Z
TO 032200Z:

SOLAR ACTIVITY HAS BEEN LOW. VERY FEW FLARES EXCEEDED THE LEVEL
OF PLAGE FLUCTUATIONS. MINOR CHANGES IN THE 17 SPOT GROUPS HAVE
BEEN MORE DECAY THAN GROWTH. SMALL NEW SPOT GROUPS HAVE FORMED
AT S15W30 (REGION 3380) AND S27E12 (REGION 3381). A SMALL FLARE
WITHOUT MEASURABLE X-RAYS (1910Z) ACCOMPANIED THE DISAPPEARANCE
OF A SMALL FILAMENT WITHIN FAINT PLAGE AT N10E26 (REGION 3382).
THE BRIGHTEST REGION CONTINUES TO BE REGION 3375 (N13W03). ITS
CLASS D SPOT GROUP HAS NUMEROUS SMALL SPOTS AND HAS AN ASSOCIATED
ACTIVE FILAMENT. REGION 3377 (N10E44) IS OF SIMILAR SIZE BUT HAS
DECAYED SLIGHTLY. A LARGE DARK FILAMENT LIES NEAR AND POLEWARD
OF THIS REGION, GIVING FLARE POTENTIAL SHOULD IT BECOME ACTIVE.

II. SOLAR ACTIVITY FORECAST:

CLASS M FLARES ARE EXPECTED WHILE REGIONS 3375 AND 3377 RETAIN
THEIR PRESENT COMPLEXITY. OVERALL DECAY OVER THE SOLAR DISK IS
EXPECTED TO DROP FLARE ACTIVITY AND LOWER SOLAR FLUX VALUES.

III. GEOPHYSICAL SUMMARY AND FORECAST:

GEOMAGNETIC ACTIVITY REACHED A PEAK NEAR 1400Z WITH A K-VALUE OF
6 FOR 1200-1500Z. THIS MINOR STORM HAS BEEN PRODUCING BRIEF
SUB-STORMS INTERSPersed WITH UNSETTLED INTERVALS. INDICES ARE
EXPECTED TO REMAIN AT THE 3-4 LEVEL UNTIL 1200Z TOMORROW.

UNSETTLED CONDITIONS SHOULD DOMINATE THE REMAINDER OF THE FORECAST
PERIOD.

IV. EVENT PROBABILITIES 04-06 OCT

CLASS M 80/70/60

CLASS X 05/01/01

PROTON 01/01/01

PCAF GREEN

V. OTTAWA 10.7 CM FLUX

OBSERVED 03 OCT 196

PREDICTED 04-06 OCT 190/184/178

90-DAY MEAN 03 OCT 212

VI. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 02 OCT 27/15

ESTIMATED AFR/AP 03 OCT 30/30

PREDICTED AFR/AP 04-06 OCT 18/18 - 12/12 - 12/12

SOLARFLARE

PT