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HFUS 1 BOU 201300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 293A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 20 OCT 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
19/1200Z TO 20/1200Z:

SOLAR ACTIVITY DURING THIS PERIOD WAS LOW TO MODERATE, WITH ONLY ONE M-CLASS EVENT OBSERVED. THAT FLARE OCCURRED IN REGION 3406 (S07E02) AT 0330Z AND WAS CLASSIFIED M1/1B BY CULGOORA SOLAR OBSERVATORY. THERE HAS BEEN VIRTUALLY NO CHANGE IN THE SUN'S ACTIVE REGIONS DURING THE PAST 24 HOURS. REGION 3403 (S11W22) IS STILL THE MOST IMPRESSIVE REGION BUT HAS PRODUCED ONLY ISOLATED SUBFLARES. REGION 3402 (S18W69) HAS SLOWED DOWN IN ITS GROWTH WHICH COULD INDICATE THAT IT IS READY TO PRODUCE A MAJOR FLARE. REGION 3390 (S17W84) WILL TRANSIT THE WEST LIMB ON 21 OCT.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE MODERATE. REGIONS 3390, 3402, 3403, AND 3406 ALL HAVE AREA OF 500 MILLIONTHS OR MORE. THUS, THERE ARE STILL SEVERAL LARGE REGIONS ON THE DISK, MOST OF WHICH ARE CAPABLE OF M-CLASS EVENTS.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD WAS AT ACTIVE LEVELS THROUGHOUT THIS PERIOD. UNSETTLED CONDITIONS ARE FORECAST FOR 21-22 OCT. ACTIVE CONDITIONS SHOULD BE EXPECTED ON 23 OCT, BASED ON A PATTERN THAT HAS BEEN RECURRENT FOR THE LAST FEW SOLAR ROTATIONS.

III. EVENT PROBABILITIES: 21-23 OCT

CLASS M 80/80/80

CLASS X 20/20/20

PROTON 20/20/20

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 19 OCT 281

ESTIMATED 20 OCT 265

PREDICTED 21-23 OCT 250/235/220

90 DAY MEAN 19 OCT 224

V. GEOMAGNETIC A INDICES

OBSERVED AFR 18 OCT 05 AP 19 OCT 23

ESTIMATED AFR 19 OCT 16 AFR/AP 20 OCT 15/19

PREDICTED AFR/AP 21-23 OCT 10/12 10/12 15/15

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FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO
SDF NUMBER 293B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 20 OCTOBER 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/1200Z
TO 20/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE. REGION 3403
(S10W27) PRODUCED AN M1/1B FLARE AT 20/1449Z. TODAY THIS
REGION HAS BEEN REPORTED AS GENERALLY STABLE WITH SOME SMALL
ACTIVE FEATURES. REGION 3406 (S08W02) HAS BEEN QUIET SINCE THE
M1 FLARE 20/0330Z. THIS REGION APPEARS TO BE SIMPLIFYING NOW
BEING A WEAK PETA GAMMA.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE
AT A MODERATE LEVEL. REGIONS 3403 AND 3406 SHOULD CONTINUE TO
PRODUCE CLASS M EVENTS WITH MAJOR FLARES STILL POSSIBLE FROM
3403.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD
HAS BEEN AT MAJOR STORM LEVELS SINCE APPROXIMATELY 20/1000Z.
THE SOURCE OF THIS DISTURBANCE IS UNKNOWN. WHILE THE STORM
APPEARS TO BE FLARE RELATED BY ITS SOLAR WIND CHARACTERISTICS,
THE ONLY POSSIBLE SOURCE FLARE OCCURRED TOO RECENTLY TO BE THE
CULPRIT. STORM CONDITIONS SHOULD CONTINUE INTO 21 OCTOBER
SLOWLY DECREASING TO ACTIVE LEVELS BY LATE THAT DAY. UNSETTLED
TO ACTIVE CONDITIONS SHOULD BE EXPERIENCED ON THE SUBSEQUENT
TWO DAYS.

III. EVENT PROBABILITIES 21 OCTOBER - 23 OCTOBER

CLASS M 80/80/80

CLASS X 20/20/20

PROTON 20/20/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 20 OCTOBER 267

PREDICTED 21-23 OCTOBER 250/245/240

90-DAY MEAN 20 OCTOBER 224

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 19 OCTOBER NO DATA/23

ESTIMATED AFR/AP 20 OCTOBER 41/45

PREDICTED AFR/AP 21-23 OCTOBER 18/18 - 10/12 - 15/15

SOLTERWARN

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