

HFUS 1 BOU 311400

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 090A

ISSUED 1200UT 31 MARCH 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

30/1200 UT TO 31/1200UT:

SOLAR ACTIVITY HAS BEEN LOW IN SPITE OF THE TWENTY REGIONS ON THE DISK. OF THESE TWENTY, ONLY 2993 (N15W87), 2999 (S42W41) AND 3001 (N21W37) APPEAR CAPABLE OF "M" CLASS ACTIVITY. REGION 2993 IS NEARING THE WEST LIMB BUT MAINTAINS AN E TYPE SPOT GROUP AND SURGE ACTIVITY ON THE WEST LIMB ATTEST TO ITS POTENTIAL. REGION 2999 IS PRODUCING AN OCCASIONAL SUBFLARE, IS FLUCTUATING IN BRIGHTNESS AND THE NEUTRAL LINE FILAMENT IS ACTIVE. REGION 3001 IS CHANGING IN STRUCTURE, IS NOW A BETA GAMMA MAGNETICALLY AND IS ALSO PRODUCING AN OCCASIONAL SUBFLARE. MOST OF THE REMAINING REGIONS ARE SMALL AND RELATIVELY SIMPLE BUT SEVERAL OF THESE REGIONS SHOW SOME SIGNS OF GROWTH.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY SHOULD CONTINUE ITS SLOW DECLINE BUT "M" CLASS FLARES WILL REMAIN A THREAT FOR TWO OR THREE MORE DAYS.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD IS GENERALLY UNSETTLED TO SLIGHTLY ACTIVE. UNSETTLED TO ACTIVE CONDITIONS SHOULD CONTINUE. THE PARTICLE EVENT WHICH BEGAN NEAR 300900Z ENDED AT 310055Z BUT HOVERED NEAR THRESHOLD LEVELS UNTIL 310435Z. THE PEAK FLUX WAS 30 PARTICLES/CM<sup>2</sup>/SEC/STER AT 302115Z.

III. EVENT PROBABILITIES: 01 - 03 APRIL

CLASS M 50/50/50

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 30 MAR 209

ESTIMATED 31 MAR 212

PREDICTED 01-03 APR 212/210/209

90 DAY MEAN 30 MAR 194

V. GEOMAGNETIC A INDICES

OBSERVED AFR 29 MAR 14 AP 30 MAR 19

ESTIMATED AFR 30 MAR 13 AFR/AP 31 MAR 15/20

PREDICTED AFR/AP 01-03 APR 15/20 12/15 12/15

SOLTERWARN

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HFUS 3 BOU 312200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 0908

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200UT 31 MARCH 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
31/1200UT TO 31/2200UT:

SOLAR ACTIVITY HAS BEEN MODERATE FOR THE PAST 10 HOURS WITH  
AN M1 X-RAY EVENT MAXING AT 1351 UT. JUDGING FROM A CONCURRENT  
FLARE BRIGHT SURGE NEAR NE04, THIS EVENT IS PROBABLY ASSOCIATED  
WITH NEW REGION 3022 (N08E80), WHICH IS THE RETURN OF A REGION  
WHICH WAS LARGE AND COMPLEX ON ITS PREVIOUS DISK TRANSIT. HOW-  
EVER, A 2N FLARE FROM 2999 (S43W46) MAXING AT 1427 UT MAY HAVE  
ALSO CONTRIBUTED TO THE X-RAY SIGNATURE. TWO OTHER NEW REGIONS  
WERE NUMBERED. THEY ARE 3020 (N17E03), AN A TYPE GROUP, AND  
3021 (S14E72) A B TYPE GROUP.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO CONTINUE OCCASIONALLY MODERATE FOR  
THE NEXT THREE DAYS.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED TO OCCASIONALLY ACTIVE.  
IT IS EXPECTED TO REMAIN UNCHANGED THROUGHOUT THE FORECAST PERIOD  
DUE TO THE PROTON-PRODUCING FLARE OF MARCH 30.

III. EVENT PROBABILITIES: 01 - 03 APRIL

CLASS M 50/50/50

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 31 MAR 219

PREDICTED 01-03 APR 220/225/220

90 DAY MEAN 31 MAR 195

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 30 MAR 15/19

ESTIMATED AFR/AP 31 MAR 17/20

PREDICTED AFR/AP 01-03 APR 15/20 12/15 12/15

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