

HFUS 1 BOU 301300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 089A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 30 MAR 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 29/1200Z TO 30/1200Z: SOLAR ACTIVITY HAS BEEN HIGH THIS PERIOD. AN X2/2B FLARE OCCURRED IN REGION 3659(N12W21) AT 30/0542 UT. THIS FLARE WAS RICH IN RADIO, INCLUDING TYPES II AND IV RADIO BURSTS AND A TENFLARE OF 860 FLUX UNITS. THE PROTON EVENT EXPECTED FROM THIS FLARE HAD NOT MATERIALIZED BY FORECAST TIME. SEVERAL OTHER REGIONS HAVE PRODUCED NUMEROUS, MUCH LESS SIGNIFICANT FLARES.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BECOME MODERATE DUE, PRIMARILY, TO THE FLARE POTENTIAL SUSTAINED BY REGION 3659. THIS REGION STILL APPEARS CAPABLE OF ENERGETIC EVENTS SIMILAR TO THE X2/2B FLARE.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED FOR THE PAST 24 HOURS AND IS EXPECTED TO REMAIN UNSETTLED UNTIL LATE ON 1 APRIL WHEN A MINOR STORM IS EXPECTED TO RESULT FROM THE X2/2B FLARE. A LOW ENERGY PROTON ENHANCEMENT MAY STILL RESULT FROM THIS FLARE, BUT IS NOT EXPECTED TO REACH THE EVENT THRESHOLD OF 10 PARTICLES/ SEC/CM<sup>2</sup>/STER-RAD GREATER THAN 10 MEV.

III. EVENT PROBABILITIES 31 MAR-02 APR

CLASS M 80/80/70

CLASS X 25/20/10

PROTON 20/15/05

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 29 MAR 199

ESTIMATED 30 MAR 194

PREDICTED 31 MAR-02 APR 190/185/180

90 DAY MEAN 29 MAR 202

V. GEOMAGNETIC A INDICES

OBSERVED AFR 28 MAR 005 AP 29 MAR 019

ESTIMATED AFR 29 MAR 013 AFR/AP 30 MAR 012/014

PREDICTED AFR/AP 31 MAR-02 APR 010/015-014/018-030/035

SOLTERWARN

BT

HXUS BOU 301300

PREDM 08031 08001 07002

PREDX 02531 02001 01002

PREDP 02031 01501 00502

PCAFT 00231

TENCM 19031 18501 18002

AFRED 01031 01401 03002

AFAPF 01531 01801 03502

KKK 22343 32233 34433

BT

HXUS BOU 302200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 089B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 30 MAR 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 30/1200Z TO 30/2100Z: SOLAR ACTIVITY DECREASED TO THE MODERATE LEVEL FOLLOWING THE X2/3B FLARE IN REGION 3659 (N12W26) AT 0541Z MAXIMUM. THIS REGION, WHICH IS APPARENTLY DECAYING VERY SLOWLY, PRODUCED AN M2/1B AT 1424Z MAXIMUM. THE EVENT WAS ACCOMPANIED BY STRONG SHORT WAVE FADES TO 22MHZ ALONG WITH WEAK DISCRETE FREQUENCY BURSTS. REGION 3667 (N13E20) PRODUCED A C8/SN AT 1647Z AND REGION 3656 (S14W52) PRODUCED A C6/SF AT 1606Z MAXIMUM. BOTH THESE REGIONS ARE SMALL AND UNCOMPLICATED. REGION 3661 (N19W27) HAS REGAINED ITS SPOTS TODAY. ITS WEAK DIFFUSE PLAGE COVERS 15 DEGREES, WITH EMERGING FLUX OBSERVED IN THE EASTERN PORTION. THE REMAINING DISK REGIONS ARE SMALL AND INACTIVE.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE. REGION 3659 MAINTAINS ITS POTENTIAL FOR M-CLASS FLARES, BUT ITS POTENTIAL FOR X-CLASS EVENTS WILL DIMINISH DURING THE FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED DURING THE PAST 9 HOURS. UNSETTLED TO OCCASIONALLY ACTIVE CONDITIONS ARE EXPECTED FOR THE NEXT 36 HOURS. ACTIVE TO MINOR STORM LEVELS ARE FORECAST TO FOLLOW A SUDDEN COMMENCEMENT LATE ON THE FIRST OF APRIL. NO PARTICLE FLUX INCREASES WERE OBSERVED ON THE GOES SATELLITE CHANNELS, BUT A SLIGHT ENHANCEMENT IN POLAR CAP ABSORPTION (.4DB) WAS REPORTED BY THE ANCHORAGE RIOMETER.

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IV. OTTAWA 10.7 CM FLUX

OBSERVED 30 MAR 198

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OBSERVED AFR/AP 29 MAR 013/019

ESTIMATED AFR/AP 30 MAR 014/016

PREDICTED AFR/AP 31 MAR-02 APR 012/015-014/013-030/035

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PREDP 02031 01501 00502

PCAF1 00231

TENCM 19531 19001 18002

AFRED 01231 01401 03002

AFAPF 01531 01801 03502

RT