

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 073

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 14 MAR 1989

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 13/2100Z
TO 14/2100Z: SOLAR ACTIVITY WAS HIGH. REGION 5395 (N34W27) WAS
STILL AN FKC WITH OVER 3000 MILS. IT PRODUCED AN X1/2B FLARE AT
14/1731Z WITH MAJOR RADIO BURSTS, BUT NO SIGNIFICANT RADIO
SWEEPS. IT ALSO PRODUCED SEVERAL M-CLASS AND LESSER FLARES
THROUGHOUT THE PERIOD.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
HIGH. REGION 5395 PROVIDES A GOOD CHANCE OF A PROTON PRODUCING
FLARE AND A VERY GOOD CHANCE OF CONTINUED MAJOR FLARE ACTIVITY.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 13/2100Z TO 14/2100Z:
THE GEOMAGNETIC FIELD WAS AT SEVERE STORM LEVELS. THE PEAK OF
ACTIVITY OCCURRED DURING THE INITIAL PERIODS AND PRODUCED K
VALUES OF 9 AT BOTH MIDDLE AND HIGH LATITUDES. THIS STORM
IS ATTRIBUTED TO REGION 5395'S X4 FLARE OF 10 MAR. THE 10 MEV
PROTON EVENT ENDED MIDWAY THROUGH THE PERIOD. THE PEAK VALUE
WAS ABOUT 3000 PFU AT 13/0745Z. THIS LONG DURATION EVENT WAS
THE ACCUMULATIVE CONTRIBUTION OF AT LEAST TWO MAJOR FLARES FROM
REGION 5395. THE ACCOMPANYING PCA EVENT MAY ALSO BE NEAR ITS
END. THE FORBUSH DECREASE CONTINUES IN PROGRESS NOW.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS
EXPECTED TO BE AT MINOR STORM TO ACTIVE LEVELS THE FIRST TWO
DAYS AS THE FIELD RECOVERS. THE LAST DAY IS EXPECTED TO BE
ACTIVE TO UNSETTELED UNTIL A SMALL DISTURBANCE FROM TODAY'S
X1 FLARE STARTS. IT IS NOT EXPECTED TO BE AT ANY MORE THAN A
MINOR STORM LEVEL.

III. EVENT PROBABILITIES 15 MAR-17 MAR

CLASS M 99/99/99

CLASS X 80/80/80

PROTON 50/50/50

PCAF IN PROGRESS

IV. OTTAWA 10.7 CM FLUX

OBSERVED 14 MAR 270

PREDICTED 15 MAR-17 MAR 250/240/225

90 DAY MEAN 14 MAR 228

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 13 MAR 248/169

ESTIMATED AFR/AP 14 MAR 175/175

PREDICTED AFR/AP 15 MAR-17 MAR 025/045-019/035-015/030