

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 069

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 10 MAR 1989

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 09/2100Z
TO 10/2100Z: SOLAR ACTIVITY WAS HIGH. REGION 5395 (N34E21)
CONTINUED ITS MAJOR FLARE PRODUCTION WITH AN X4/3B AT 10/1922Z.
THE FLARE WAS ACCOMPANIED BY MAJOR RADIO EMISSIONS INCLUDING A
12000 SFU TENFLARE AND TYPES II AND IV SWEEPS. THIS FLARE WAS
IN PROGRESS AT THE END OF THE ANALYSIS PERIOD. THIS REGION
PRODUCED SEVERAL M-CLASS EVENTS PRIOR TO THE X4, THE LARGEST OF
WHICH WAS AN M1/1B AT 09/2321Z WHICH WAS ACCOMPANIED BY MINOR
RADIO EMISSIONS. TWO NEW REGIONS WERE ASSIGNED TODAY: 5400
(N12E65), A SMALL UNIPOLE, AND 5401 (S22E16), A SMALL BIPOLE.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
HIGH. REGION 5395 PROVIDES A GOOD CHANCE FOR MAJOR FLARE
ACTIVITY.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 09/2100Z TO 10/2100Z:
THE GEOMAGNETIC FIELD HAS BEEN AT UNSETTLED TO ACTIVE
LEVELS FOR THE PAST 24 HOURS. THE SATELLITE PROTON EVENT AT
GREATER THAN 10 MEV WHICH BEGAN AT 08/1735Z REMAINED IN
PROGRESS. THUS FAR, THE MAXIMUM OBSERVED FLUX WAS 270 PFU
AT 10/0000Z. A POLAR-CAP ABSORPTION EVENT WAS OBSERVED AS
WELL, WITH A MAXIMUM OBSERVED ABSORPTION OF 3.4 DB AT
09/2130Z.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS
EXPECTED TO BE ACTIVE ON DAY ONE FOLLOWED BY A DAY OF MAJOR
STORMING WHICH IS EXPECTED IN THE WAKE OF TODAY'S X4/3B FLARE.
THE FINAL DAY IS EXPECTED TO BE AT ACTIVE TO MINOR STORM
LEVELS AS THE FLARE EFFECTS SUBSIDE. THE SATELLITE PROTON
EVENT AT GREATER THAN 10 MEV IS EXPECTED TO CONTINUE THROUGH
THE PERIOD WITH AN ADDITIONAL ENHANCEMENT EXPECTED TO OCCUR
NEAR 11/0000Z AS A RESULT OF TODAY'S FLARE.

III. EVENT PROBABILITIES 11 MAR-13 MAR

CLASS M 95/95/95

CLASS X 70/70/70

PROTON 50/50/50

PCAF RED

IV. OTTAWA 10.7 CM FLUX

OBSERVED 10 MAR 216

PREDICTED 11 MAR-13 MAR 218/220/222

90 DAY MEAN 10 MAR 225

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 09 MAR 021/032

ESTIMATED AFR/AP 10 MAR 019/023

PREDICTED AFR/AP 11 MAR-13 MAR 016/025-060/055-025/030