

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 070

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 11 MAR 1989

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 10/2100Z
TO 11/2100Z: SOLAR ACTIVITY WAS HIGH. REGION 5395 (N34E08)
PRODUCED THREE MAJOR FLARES. THE FIRST WAS AN M9/2B AT 11/0904Z
WHICH WAS WEAK IN RADIO CHARACTERISTICS. THE SECOND WAS AN X1/3N
AT 11/1540Z, ALSO WEAK IN RADIO ASPECTS. THE THIRD WAS AN X1/3B
AT 11/1938Z AND WAS ACCOMPANIED BY A MAJOR DISCRETE RADIO BURST
AT 245 MEGAHERTZ. IN ADDITION, THIS LARGE AND EXTREMELY COMPLEX
REGION PRODUCED SIX M-CLASS FLARES, ALL OF WHICH WERE WEAK IN
RADIO ASPECTS. NO NEW REGIONS WERE NUMBERED TODAY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
HIGH. REGION 5395 IS EXPECTED TO PRODUCE MAJOR FLARES.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 10/2100Z TO 11/2100Z:
THE GEOMAGNETIC FIELD HAS BEEN AT MOSTLY UNSETTLED LEVELS FOR
THE PAST 24 HOURS. THE SATELLITE PROTON EVENT AT GREATER THAN
10 MEV THAT BEGAN AT 08/1735Z CONTINUED. THUS FAR, THE
MAXIMUM OBSERVED FLUX WAS 270 PFU NEAR 10/0000Z. THE POLAR-
CAP ABSORPTION EVENT THAT BEGAN AT 09/1700Z CONTINUED. THE
MAXIMUM ABSORPTION OBSERVED DURING THE PERIOD WAS 2.2 DB.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS
EXPECTED TO BE AT MAJOR STORM LEVELS ON DAY ONE. ON DAY TWO
THE FIELD IS EXPECTED TO BE AT ACTIVE TO MINOR STORM LEVELS
SUBSIDING TO MOSTLY ACTIVE LEVELS BY THE THIRD DAY. THIS
ACTIVITY IS EXPECTED IN RESPONSE TO THE X4/3B FLARE OF
10 MARCH. BOTH THE SATELLITE PROTON AND POLAR-CAP ABSORPTION
EVENTS ARE EXPECTED TO CONTINUE THROUGH THE PERIOD.

III. EVENT PROBABILITIES 12 MAR-14 MAR

CLASS M 95/95/95

CLASS X 80/80/80

PROTON 50/50/50

PCAF IN PROGRESS

IV. OTTAWA 10.7 CM FLUX

OBSERVED 11 MAR 246

PREDICTED 12 MAR-14 MAR 251/252/255

90 DAY MEAN 11 MAR 226

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 10 MAR 017/020

ESTIMATED AFR/AP 11 MAR 012/018

PREDICTED AFR/AP 12 MAR-14 MAR 060/045-025/030-016/030