

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 065

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 06 MAR 1989

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 05/2100Z
TO 06/2100Z: SOLAR ACTIVITY WAS HIGH. SOLAR ACTIVITY
INCREASED DRAMATICALLY TO HIGH WHEN NEW REGION 5395
(N31E70) PRODUCED A MAJOR FLARE AT 06/1405Z. THIS FLARE
WAS 3B OPTICALLY AND SATURATED THE GOES X-RAY SENSOR AT
X12 (ESTIMATED PEAK IS X15). SIGNIFICANT RADIO BURSTS WERE
ASSOCIATED WITH THIS FLARE INCLUDING 25,000 SFU AT 2800 MHZ,
290,000 SFU AT 245 MHZ, AND STRONG TYPE II/IV SWEEP ACTIVITY.
IN WHITE LIGHT THIS REGION APPEARS TO BE AN EXTREMELY LARGE
GROUP WITH ALL VISIBLE SPOTS WITHIN THE SAME PENUMBRA.
THIS REGION IS AT AN UNUSUALLY HIGH LATITUDE FOR SUCH A LARGE
SUNSPOT GROUP. REGION 5394 (S36E78) WAS ALSO NUMBERED.
NOTE THAT THE DAILY OTTAWA 10.7 CM FLUX BELOW (212) IS
ESTIMATED.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
MODERATE TO HIGH. ADDITIONAL MAJOR FLARES ARE EXPECTED
FROM REGION 5394.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 05/2100Z TO 06/2100Z:
THE GEOMAGNETIC FIELD WAS UNSETTLED TO ACTIVE WITH ISOLATED
PERIODS OF MAJOR STORM AT HIGH LATITUDES.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS
EXPECTED TO BE UNSETTLED TO ACTIVE FOR THE FIRST DAY OF
THE FORECAST PERIOD. ACTIVE TO MINOR STORM CONDITIONS ARE
EXPECTED AS A RESULT OF TODAY'S MAJOR FLARE ON THE SECOND
AND THIRD DAYS. ISOLATED PERIODS OF MAJOR TO SEVERE STORM
CONDITIONS MAY OCCUR AT HIGH LATITUDES WITH THIS DISTURBANCE.
A SATELLITE PROTON EVENT AT GREATER THAN 10 MEV IS FORECAST
TO BEGIN NEAR 0800Z ON 7 MARCH. THE PEAK FLUX MAY REACH
150 PFU AT 07/2000Z.

III. EVENT PROBABILITIES 07 MAR-09 MAR

CLASS M 80/90/90

CLASS X 25/50/50

PROTON 10/20/20

PCAF RED

IV. OTTAWA 10.7 CM FLUX

OBSERVED 06 MAR 212

PREDICTED 07 MAR-09 MAR 225/250/275

90 DAY MEAN 06 MAR 223

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 05 MAR 028/028

ESTIMATED AFR/AP 06 MAR 018/025

PREDICTED AFR/AP 07 MAR-09 MAR 010/020-025/035-040/045