

HFUS 3 BOU 282200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 028

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 28 JAN 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 27/2100
TO 28/2100Z: SOLAR ACTIVITY HAS BEEN LOW FOR THE PAST 24 HOURS.
THE LARGEST EVENT WAS A C4/SF FLARE FROM REGION 4398 (N14W16)
AT 0736Z. REGION 4398 CONTINUED TO GROW IN WHITE LIGHT AND
REMAINS EXTREMELY MAGNETICALLY COMPLEX (BETA-GAMMA-DELTA).
REGION 4399 (N12E06) ALSO GREW SIGNIFICANTLY SO THAT THE
COMBINED SPOT AREA (87 SPOTS) OF THE TWO REGIONS EXCEEDS 3000
MILLIONTHS OF THE SOLAR DISK. REGION 4399 HAS NOT YET PRODUCED
AN M-CLASS FLARE BUT IT IS MAGNETICALLY COMPLEX (BETA-DELTA)
AND HAS THE POTENTIAL FOR MAJOR ACTIVITY. BOTH REGIONS HAVE
EXHIBITED PLAGE FLUCTUATIONS ACTIVE DARK FILAMENTS AND NUMEROUS
SMALL FLARES. REGION 4403 (N13E31) GREW TO A C-TYPE GROUP AND
PRODUCED A C-CLASS X-RAY FLARE AT 1918Z. A NEW REGION, 4404
(N16W37) EMERGED AS A B-TYPE GROUP. SURGING ON THE WEST LIMB
INCLUDED A BSL TO .19 SOLAR RADIUS NEAR SOUTH 05 AT
APPROXIMATELY 1820Z.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE
MODERATE FOR THE NEXT THREE DAYS WITH A GOOD POSSIBILITY FOR
MAJOR FLARES FROM REGIONS 4398 AND 4399. BOTH REGIONS ARE
IDEALLY SITUATED TO IMPACT THE EARTH WITH HIGH-ENERGY PROTONS
IF THEY PRODUCE THEM.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 27/2100Z TO 28/2100Z:
THE GEOMAGNETIC FIELD HAS BEEN ACTIVE DURING THE PAST 24 HOURS
WITH PERIODS AT MINOR STORM LEVELS AT MID LATITUDES AND MAJOR
STORM LEVELS AT HIGH LATITUDES. THIS ACTIVITY IS ATTRIBUTED TO
RECENT FLARE ACTIVITY.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS
EXPECTED TO BE AT ACTIVE LEVELS TOMORROW INCREASING TOWARD
GENERAL STORM CONDITIONS FOR THE NEXT TWO DAYS. THE SOURCE OF
THIS ANTICIPATED DISTURBANCE IS A COMBINATION OF FLARE EJECTA,
HIGH SPEED SOLAR WIND FROM A POSITIVE CORONAL HOLE CENTER DISK
AT SOUTH 25 ON 27 JANUARY, AND FILAMENT ACTIVATIONS OBSERVED
OVER THE PAST SEVERAL DAYS.

III. EVENT PROBABILITIES 29 JAN-31 JAN

CLASS M	90/90/90
CLASS X	15/15/15
PROTON	15/15/10
PCAF	YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED	28 JAN	174
PREDICTED	29 JAN-31 JAN	175/175/170
90 DAY MEAN	28 JAN	098

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP	27 JAN	005/009
ESTIMATED AFR/AP	28 JAN	020/025
PREDICTED AFR/AP	29 JAN-31 JAN	020/025-025/025-025/025

SOLTERWARN

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