

HFUS 3 BOU 292200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 029

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 2200Z 29 JAN 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 28/2100  
TO 29/2100Z: SOLAR ACTIVITY HAS BEEN LOW FOR THE PAST 24 HOURS.  
THE BIGGEST EVENT WAS A C3/SB FROM REGION 4398 (N14W29) MAXING  
AT 28/2157Z. REGION 4398, AN EXTREMELY COMPLEX REGION WHICH HAS  
CONTINUED TO GROW IN WHITE LIGHT, PRODUCED NUMEROUS OTHER LOW  
C-CLASS FLARES BUT HAS NOT YET LIVED UP TO ITS POTENTIAL.  
REGION 4399 (N12W07), THE OTHER REGION ON THE DISK OF AWESOME  
PROPORTIONS, GREW ENOUGH PENUMBRA TO TOTALLY ENCLOSE THE LEADER  
AND TRAILER SPOTS AND IS NOW ALSO OF THE HIGHEST MAGNETIC CLASS  
- BETA-GAMMA-DELTA. BUT REGION 4399 HAS PRODUCED ONLY ONE  
C-CLASS FLARE IN THE PAST 70 HOURS, A C1/SF MAXING TODAY AT  
1915Z. REGION 4404 (N15W50) CONTINUED TO GROW AND PRODUCED SOME  
C-CLASS SUBFLARES. NEW REGIONS 4405 (S18W06) AND 4406 (S15E29)  
EMERGED TODAY AS C-TYPE AND A-TYPE GROUPS, RESPECTIVELY. LIMB  
ACTIVITY HAS BEEN CONFINED TO SURGING FROM THE SOUTHWEST LIMB  
(SW05) LATE ON 28 JANUARY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE  
MODERATE WITH A HIGH PROBABILITY OF M-CLASS FLARES FROM BOTH  
4398 AND 4399. MAJOR, X-CLASS FLARES WHICH WOULD LIKELY PRODUCE  
ENERGETIC PROTONS, ARE ALSO POSSIBLE.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 28/2100Z TO 29/2100Z:  
THE GEOMAGNETIC FIELD HAS BEEN GENERALLY ACTIVE FOR THE PAST 24  
HOURS WITH ISOLATED PERIODS AT MINOR STORM LEVELS AT BOTH MID  
AND HIGH LATITUDES. THIS ACTIVITY IS ATTRIBUTED TO MODERATE  
FLARES WHICH OCCURRED ON 26 AND 27 JANUARY.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS  
EXPECTED TO BECOME INCREASINGLY ACTIVE OVER THE NEXT 48 HOURS,  
APPROACHING GENERAL MINOR TO MAJOR STORM CONDITIONS. THE SOURCE  
OF THIS ANTICIPATED DISTURBANCE IS A COMBINATION OF FLARE  
EJECTA, HIGH SPEED SOLAR WIND FROM A POSITIVE CORONAL HOLE  
CENTERED AT SOUTH 25 ON 27 JANUARY, AND FILAMENT ACTIVATIONS  
OBSERVED OVER THE PAST SEVERAL DAYS. OVERALL GEOMAGNETIC  
ACTIVITY SHOULD BEGIN TO SUBSIDE BY THE END OF THE FORECAST  
PERIOD.

III. EVENT PROBABILITIES 30 JAN-01 FEB  
CLASS M 90/90/80  
CLASS X 15/15/10  
PROTON 15/10/05  
PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX  
OBSERVED 29 JAN 180  
PREDICTED 30 JAN-01 FEB 175/170/165  
90 DAY MEAN 29 JAN 099

V. GEOMAGNETIC A INDICES  
OBSERVED AFR/AP 28 JAN 020/021  
ESTIMATED AFR/AP 29 JAN 022/025  
PREDICTED AFR/AP 30 JAN-01 FEB 025/025-025/025-020/020

SOLTERWARN

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