

HFUS 3 BOU 132200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 073

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 13 MAR 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 12/2100 TO 13/2100Z: SOLAR ACTIVITY WAS MODERATE DURING THE PAST 24 HOUR PERIOD. REGION 4433 (S09W33) PRODUCED A M2/1B EVENT AT 13/0729Z. THIS REGION CONTINUED TO GROW IN WHITE LIGHT AREA AND SPOT NUMBER. ITS MAGNETIC CONFIGURATION WAS A BETA-GAMMA WITH A STRONG MAGNETIC GRADIENT. IT ALSO PRODUCED NUMEROUS LESSER X-RAY AND SUB-FLARE EVENTS BOTH BEFORE AND AFTER THE 0729Z EVENT. NO NEW REGIONS WERE ASSIGNED.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE MODERATE THROUGHOUT THE FORECAST PERIOD. REGION 4433 PROVIDES A VERY SLIGHT CHANCE OF HIGH LEVEL ACTIVITY. RETURNING REGION 4421 (N16,L-112) IS EXPECTED AT 15/0900Z. THIS REGION PRODUCED 7 M-LEVEL X-RAYS AND 1 X-LEVEL X-RAYS DURING ITS LAST ROTATION. THIS RETURNING REGION SHOULD ALSO CONTRIBUTE TO MAINTAINING THE MODERATE LEVEL OF ACTIVITY WITH THE CHANCE OF HIGH ACTIVITY INCREASING FROM VERY SLIGHT TO SLIGHT BY THE THIRD DAY (16MAR).

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 12/2100Z TO 13/2100Z: GEOMAGNETIC ACTIVITY WAS AT ACTIVE TO MINOR STORM LEVELS DURING THE PAST 24 HOUR PERIOD. MAJOR STORM LEVELS WERE REPORTED AT HIGH LATITUDES. THE DISAPPEARING FILAMENTS OF 3 TO 4 DAYS AGO ARE ATTRIBUTED AS THE CAUSE OF THE CURRENT ACTIVITY. A SATELLITE ALTITUDE PROTON EVENT STARTED AT 13/1440Z AND ENDED AT 13/1450Z. THE MAXIMUM VALUE REPORTED WAS 10 P/CM²/SEC/STER AT 10 MEV. THIS EVENT IS ALSO BELIEVED TO HAVE BEEN INDIRECTLY TRIGGERED BY THE DISAPPEARING FILAMENTS AS THE GEOMAGNETIC ACTIVITY ENERGIZED THE PROTONS TO THE EVENT THRESHOLD.

IIB. GEOPHYSICAL ACTIVITY FORECAST: GEOMAGNETIC ACTIVITY IS EXPECTED TO BE ACTIVE THROUGHOUT THE FORECAST PERIOD. STORM LEVELS ARE EXPECTED AT MID AND HIGH LATITUDES DURING NIGHT-TIME PERIODS. THIS IS IN RESPONSE TO THE AFOREMENTIONED DISAPPEARING FILAMENTS PLUS SUPPLEMENTAL CONTRIBUTIONS OF THE CURRENT AND EXPECTED SOLAR ACTIVITY FROM REGION 4433.

III. EVENT PROBABILITIES 14 MAR-16 MAR

CLASS M 90/90/90

CLASS X 05/10/15

PROTON 05/10/15

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 13 MAR 116

PREDICTED 14 MAR-16 MAR 125/130/135

90 DAY MEAN 13 MAR 119

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 12 MAR 011/014

ESTIMATED AFR/AP 13 MAR 023/030

PREDICTED AFR/AP 14 MAR-16 MAR 020/025-020/025-020/020

SOLTERWARN

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