

HFUS 3 BOU 152200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 075

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 15 MAR 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY, FROM 14/2100 TO 15/2100Z: SOLAR ACTIVITY WAS LOW DURING THE PAST 24 HOUR PERIOD. REGION 4433 (S10W61) CONTINUED TO GROW IN WHITE LIGHT AREA, BUT STABILIZED ITS SPOT NUMBER AND LONGITUDINAL EXTENT. IT PRODUCED A FEW SMALL C LEVEL X-RAYS WITH ACCOMPANYING SUB-FLARES. REGION 4438 (S04W19) GREW IN WHITE LIGHT AREA, SPOT NUMBER, AND EXTENT. IT PRODUCED SEVERAL LOW C-LEVEL X-RAYS WITH SUB-FLARES ALSO, BUT HAD SEVERAL 245MHZ RADIO BURSTS ACCOMPANYING THEM. BOTH R4433 AND R4438 REMAINED BETA-TYPE MAGNETICALLY. 2 NEW REGIONS WERE ASSIGNED. REGION 4441 (N11E65) AT CAR 129 PRODUCED A C3/0B EVENT AT 15/0800Z. IT WAS A CLASS CSD WITH A BETA MAGNETIC CONFIGURATION. REGION 4442 (S17W50) WAS A SIMPLE B-TYPE. SPRAY WAS OBSERVED AT THE NE LIMB BUT NO SPOTS WERE SEEN PRIOR TO 15/2100Z. IN THIS AREA POINT BRIGHTENINGS, BRIGHT SURGES, ACTIVE PROMINENCES, AND A LITTLE PLAGE WERE REPORTED BY ALL OBSERVATORIES.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE AT A MODERATE LEVEL THROUGHOUT THE FORECAST PERIOD. REGION 4433 CONTINUES TO PROVIDE A SLIGHT CHANCE OF HIGH LEVEL ACTIVITY, AS WELL AS THE NE LIMB AREA (RETURNING REGION 4421). REGION 4438 IS ALSO NOW EXPECTED TO PRODUCE THE ODD M-LEVEL X-RAY.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 14/2100Z TO 15/2100Z: GEOMAGNETIC ACTIVITY WAS AT AN UNSETTLED LEVEL DURING THE PAST 24 HOUR PERIOD. SATELLITE LEVEL PROTONS HELD JUST BELOW THE 10 P/CM²/SEC/STER THRESHOLD AT 10 MEV.

IIIB. GEOPHYSICAL ACTIVITY FORECAST: GEOMAGNETIC ACTIVITY IS EXPECTED TO BE AT ACTIVE LEVELS THROUGHOUT THE FORECAST PERIOD. THIS IS FORECAST AS THE RESULT OF THE M2/2B EVENT OF 14 MAR (0334Z) WITH ACCOMPANYING DISAPPEARING FILAMENT. IN ADDITION, A CHRONAL HOLE AT N11W06 ON 14 MAR SHOULD ALSO EFFECT AN ENHANCEMENT OF THE FIELD AFTER 16 MAR. A SLIGHT CHANCE OF PROTON EVENTS CONTINUES DUE TO THE FAVORABLE POSITION OF REGION 4433.

III. EVENT PROBABILITIES 16 MAR-18 MAR

CLASS M 95/95/95

CLASS X 15/20/25

PROTON 30/25/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 15 MAR 136

PREDICTED 16 MAR-18 MAR 143/150/155

90 DAY MEAN 15 MAR 119

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 14 MAR 005/009

ESTIMATED AFR/AP 15 MAR 010/010

PREDICTED AFR/AP 16 MAR-18 MAR 020/020-020/025-020/020

SOLTERWARN

BT

LONGITUDINAL