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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 048

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 17 FEB 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 16/2100 TO 17/2100Z: SOLAR ACTIVITY HAS BEEN AT A MODERATE LEVEL DURING THE PAST 24 HOUR PERIOD. A M1 X-RAY EVENT AT 17/1157Z WAS NOT CORELATED TO ANY REGION, BUT WAS PRECEDED AND SUCCEEDED WITHIN 3 HOURS BY SURGES ON THE EAST LIMB AT 15 NORTH. 1 NEW REGION WAS ASSIGNED: REGION 4421 (N15E78) PROBABLY PRODUCED THE M1 X-RAY EVENT AND IS BELIEVED TO BE RETURNING REGION 4398 (N15, L=108 ON 2 FEB 84). IT PRODUCED 2 M LEVEL X-RAY EVENTS AND 4 IMPORTANCE 1 OPTICAL FLARES DURING ITS LAST ROTATION. REGION 4413 (S14W72) PRODUCED A C1/SF EVENT AT 17/1626Z. IT WAS DECREASING IN AREA, H-ALPHA SPOT NUMBER, AND LONGITUDINAL EXTENT BUT REMAINED A BETA-DELTA MAGNETIC CONFIGURATION.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE AT A MODERATE LEVEL THROUGHOUT THE FORECAST PERIOD. REGION 4421 (PROVIOUSLY 4398) AND RETURNING REGION 4399 (N11, L=89 ON 4 FEB 84) PROVIDE A GOOD CHANCE OF M LEVEL X-RAY EVENTS WITH ASSOCIATED BRIGHT OPTICAL FLARES AND A VERY SLIGHT CHANCE OF HIGH LEVEL ACTIVITY THE SECOND AND THIRD DAY (19/20 FEB). THE OUTLOOK IS FOR A MODERATE LEVEL FOR THE DURATION OF THESE 2 REGIONS' REIGN ON THE DISC.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 16/2100Z TO 17/2100Z: GEOMAGNETIC ACTIVITY WAS AT AN UNSETTLED TO ACTIVE LEVEL DURING THE PAST 24 HOUR PERIOD. ONLY THULE REPORTED STORM LEVELS AFTER 17/0900Z AND THROUGHOUT THE REMAINDER OF THE PERIOD. POLAR CAP ABSORBTION BEGAN AT 16/1315Z WITH A MAXIMUM OF 0.8DB AT 1545Z AND ENDED AT 1830Z. THE SUSPECTED SOLAR ORIGIN WAS BEHIND THE SOUTH-WEST LIMB. THE ASSOCIATED PROTON EVENT ENDED AT 17/1335Z WHEN THE GREATER THAN 10MEV VALUE FELL BELOW 10 P/CM²/SEC/STER.

IIB. GEOPHYSICAL ACTIVITY FORECAST: GEOMAGNETIC ACTIVITY IS EXPECTED TO BE AT AN ACTIVE LEVEL FOR THE FIRST AND SECOND DAY (18/19 FEB) OF THE FORECAST PERIOD. A DECREASE TO UNSETTLED/ACTIVE LEVELS IS EXPECTED ON THE THIRD DAY (20 FEB). THE OUTLOOK IS FOR CONTINUED UNSETTLED TO ACTIVE LEVELS TO COMPLETE THE WEEK.

III. EVENT PROBABILITIES 18 FEB-20 FEB

CLASS M 50/60/70

CLASS X 01/05/05

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 17 FEB 119

PREDICTED 18 FEB-20 FEB 121/124/129

90 DAY MEAN 17 FEB 107

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 16 FEB 005/009

ESTIMATED AFR/AP 17 FEB 014/015

PREDICTED AFR/AP 18 FEB-20 FEB 020/025-015/020-010/010

SOLTERWARN

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