

HFUS 3 BOU 112200
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 102

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 11 APR 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 10/2100 TO 11/2100Z: SOLAR ACTIVITY WAS LOW. REGION 4468 (N11E59) PRODUCED SEVERAL SUB-FLARES WITH ASSOCIATED B-LEVEL X-RAYS. IT WAS A C4O CLASSIFICATION IN WHITE-LIGHT WITH 7 SPOTS, 170 MILLIONTHS AREA, 9 DEGREES LONGITUDENAL EXTENT, AND A BETA MAGNETICAL CONFIGURATION. IT WAS STILL DEVELOPING AT THE CLOSE OF THE PERIOD. A MAGNETOGRAM IMPLIED THE POSSIBILITY OF A GAMMA CONFIGURATION IN THE TRAILING SPOT GROUP, AND THIS WAS ALSO SUGGESTED BY OBSERVATION. IT HAD ACTIVE DARK FILAMENTS AND POINT BRIGHTENINGS. REGION 4460 (S10W72) PRODUCED A C1N FLARE IN CONGRESS WITH A SURGE ON THE LIMB TO .16 RADII AT 11/0554Z. INVESTIGATION DETERMINED THAT NO LOOPS EXISTED, BUT ARCHES WERE OBSERVED. AN UNCORRELATED C1-LEVEL X-RAY EVENT AT 11/0042Z WAS ACCOMPANIED BY SMALL RADIO BURSTS AND A WEAK TYPE III SWEEP WHICH INDICATED IT CAME FROM REGION 4460, BUT NO OPTICAL VERIFICATION CONFIRMED THIS. OUR PRIMARY ASTROGEOPHYSICAL TELETYPE/COMMUNICATIONS CIRCUIT WAS STILL COMPLETELY OUT-OF-COMMISSION. ESSENTIAL RELAY OF DATA WAS PROVIDED BY AFGWC/WSE WITH REAL-TIME AND POST-EVENT RESEARCH. NO NEW REGION WAS ASSIGNED.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE LOW. REGION 4468 PROVIDES A SLIGHT CHANCE OF MODERATE LEVELS. NO IMMEDIATE RESTORAL OF OUR TELETYPE CIRCUIT IS EXPECTED. MAINTENANCE IS WORKING THE PROBLEMS.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 10/2100Z TO 11/2100Z: GEOMAGNETIC ACTIVITY WAS UNSETTLED TO ACTIVE.

IIB. GEOPHYSICAL ACTIVITY FORECAST: GEOMAGNETIC ACTIVITY IS EXPECTED TO BE ACTIVE THROUGHOUT THE FIRST AND SECOND DAYS (12/13 APR). THIS IS PREMISED ON HISTORICALLY ACTIVE CARRINGTON LONGITUDES INCLUDING A SOLAR SECTOR BOUNDARY PASSAGE OF 8 APR. ~~MINOR STORM LEVELS ARE EXPECTED AT HIGH LATITUDES THROUGH THE FIRST/SECOND DAYS.~~ THE GEOMAGNETIC ACTIVITY IS EXPECTED TO DECREASE TO UNSETTLED-TO-ACTIVE LEVELS FOR THE THIRD DAY (14 APR).

III. EVENT PROBABILITIES 12 APR-14 APR

CLASS M 15/20/25

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 11 APR 097

PREDICTED 12 APR-14 APR 098/108/117

90 DAY MEAN 11 APR 129

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 10 APR 008/010

ESTIMATED AFR/AP 11 APR 016/015

PREDICTED AFR/AP 12 APR-14 APR 021/020-016/025-014/015

SOLTERWARN

BT