

HFUS 3 BOU 202200
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 080
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 20 MAR 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 19/2100 TO 20/2100Z: SOLAR ACTIVITY HAS BEEN LOW. THE MOST SIGNIFICANT EVENT WAS A C5/2B AT 0346Z (X-RAY MAX) IN THE TRAILER PORTION OF REGION 4441 (N13W01). ADDITIONAL SIMULTANEOUS EMISSION PRODUCED A SN FLARE IN REGION 4443 (N14E16). DISCRETE RADIO BURSTS VARIED ACROSS THE SPECTRUM WITH 120 FU REPORTED AT 2695 MHZ. A TYPE II DEKAMETRIC BURST ALSO WAS REPORTED WITH THIS FLARE. A SMALL EMBEDDED ACTIVE FILAMENT APPEARS TO BE THE TRIGGER MECHANISM FOR FLARES OCCURRING IN REGION 4441. THE MAIN PENUMBRA OF REGION 4443 HAS DIMINISHED AND FRACTURED; THE DELTA CONFIGURATION NO LONGER EXISTS. HOWEVER, THE LEADING POLARITY PROTRUDES EASTWARD UNDER THE STRONGEST TRAILER SUNSPOT; THEREFORE, REGION 4443 HAS A BETA GAMMA MAGNETIC CLASSIFICATION. REGION 4446 (N13E43) HAS TWO PENUMBRA ORIENTATED ESSENTIALLY N-S WHICH MAY BE THE REMNANTS OF TWO GROUPS. MAGNETIC ANALYSIS SHOWS ALL SPOTS TO BE THE SAME POLARITY; HOWEVER, THE ATTENDANT PLAGE STRUCTURE IS BIPOLAR. OLD AR 4423 RETURNED WITH NOMINAL PLAGE AND IS DESIGNATED REGION 4449 (S13E71). THE SPOTS IN THE PLAGE STRUCTURE ARE DISPERSED BUT BECAUSE OF LIMB PROXIMITY ALL ARE INCLUDED AS REGION 4449 TODAY. SEVERAL FLARES HAVE OCCURRED IN THIS REGION AS WELL AS PLAGE FLUCTUATIONS AND POINT BRIGHTENINGS. SPOTS HAVE REEMERGED IN REGION 4440 (N15W27) AND SLOW GROWTH CONTINUES IN REGION 4445 (N07W45).

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE LOW WITH DIMINISHING LIKELYHOOD FOR A CLASS M FLARE.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 19/2100Z TO 20/2100Z: THE GEOMAGNETIC FIELD HAS BEEN QUIET TO UNSETTLED.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO BE GENERALLY UNSETTLED THROUGHOUT THE FORECAST PERIOD.

III. EVENT PROBABILITIES 21 MAR-23 MAR

CLASS M	40/30/20
CLASS X	01/01/01
PROTON	01/01/01
PCAF	GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED	20 MAR	127
PREDICTED	21 MAR-23 MAR	127/126/124
90 DAY MEAN	20 MAR	121

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP	19 MAR	013/016
ESTIMATED AFR/AP	20 MAR	007/010
PREDICTED AFR/AP	21 MAR-23 MAR	012/015-008/015-010/015

SOLTERWARN

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