

HFUS 1 BOU 212200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 233

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 21 AUGUST 1979

IA. SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 24 HOURS. SEVERAL FLARES WERE RECORDED, THE MOST SIGNIFICANT WAS A C6/1B FROM REGION 1925 (N17W51). TYPE II/IV SWEEPS WERE ALSO RECORDED. THIS EVENT PRODUCED PROTONS AT SATELLITE LEVELS WITH A MAXIMUM OF 480 PARTICLES GREATER THAN 10 MEV RECORDED AT 0800 UT ON 21 AUGUST, MINOR RADIO WAS OBSERVED WITH 93 FLUX UNITS AT 2695 MHZ. REGION 1943 (N05E55) PRODUCED A M2/SF FLARE AT 0158 UT, HOWEVER NO SWEEP OR RADIO WERE REPORTED. OTHER FLARES WERE TWO SF NO X-RAY FROM REGION 1946 (S15W04) AT 1654 UT AND 1736 UT. TWO SF NO X-RAY FROM REGION 1942 (S32E53) AT 1206 UT AND 1303 UT. A C3/SB AT 1336 UT FROM REGION 1929 (S27W25). REGION 1943 HAS CHANGED LITTLE TODAY, HOWEVER MAGNETIC INFORMATION SHOWS IT TO BE A GAMMA-DELTA. NEW REGIONS TODAY ARE: 1948 (S15W40) AND 1949 (N27W17) BOTH ARE SIMPLE B-TYPE GROUPS. THE PROTON EVENT WHICH STARTED ON THE 19TH OF AUGUST AT 0850 UT CONTINUES IN PROGRESS. THE POLAR CAP ABSORPTION EVENT WHICH STARTED ON THE 20TH OF AUGUST AT 0015 UT SHOULD END DURING THE NEXT 13 HOURS.

IB. SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH DURING THE FORECAST PERIOD. REGION 1943 CONTINUES TO BE THE MOST LIKELY SOURCE OF X-CLASS ACTIVITY. REGION 1929 MAY BECOME A PRODUCER OF M-CLASS ACTIVITY AS SOME INTERNAL CHANGE POINTS TOWARD A TIGHTING OF MAGNETIC GRADIENTS.

II. THE GEOMAGNETIC FIELD HAS BEEN AT ACTIVE LEVELS DURING THE PAST 24 HOURS. THE FIELD IS EXPECTED TO REMAIN AT ACTIVE LEVELS FOR THE FORECAST PERIOD.

III. EVENT PROBABILITIES 22 AUGUST - 24 AUGUST

CLASS M 90/90/90

CLASS X 60/60/50

PROTON 30/30/30

PCA IN PROGRESS

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 AUGUST 210

PREDICTED 22-24 AUGUST 216/220/222

90-DAY MEAN 21 AUGUST 169

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 20 AUGUST 29

ESTIMATED AFR/AP 21 AUGUST 25/30

PREDICTED AFR/AP 22-24 AUGUST 16/20 - 20/25 - 22/25

SOLTERWARN

BT