

HFUS 1 BOU 132200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, CO

SDF NUMBER 194

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 13 JULY 1978

IA. SOLAR ACTIVITY HAS BEEN MODERATE. REGION 1203 (N18E10) HAS PRODUCED NO FLARES LARGER THAN CLASS C4. THE REGION REMAINS LITTLE CHANGED FROM YESTERDAY EXCEPT FOR INCREASED RELATIVE SHEAR MOTION EVIDENT ALONG THE NEUTRAL LINE IN THE AREA OF STEEPEST MAGNETIC GRADIENTS. A REGION HAS ROTATED OVER NORTHEAST LIMB AND IS NOW AT N20E74. THE REGION IS CLASSED AS C50.

IB. SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH. REGION 1203 IS EXPECTED TO PRODUCE AT LEAST ONE MAJOR EVENT IN THE NEXT FEW DAYS. THREE REGIONS THAT PRODUCED CLASS M FLARES LAST ROTATION ARE DUE TO RETURN TO THE EAST LIMB IN THE NEXT 72 HOURS AT N18, N25 AND S19.

II. A SMALL SUDDEN COMMENCEMENT OCCURED AT 13/0013 UT. A MAIN PHASE STORM DID NOT ENSUE BUT THE FIELD HAS BEEN UNSETTLED TO ACTIVE SINCE 0000 UT. A SMALL PROTON EVENT BEGAN AT 13/0330 AND REACHED A MAXIMUM AT ABOUT 13/1000 UT. THE PEAK FLUX GREATER THAN 10 MEV WAS ABOUT 20 PROTONS/CM2/SEC/STER. FLUX HAD DROPPED TO EVENT THRESHOLD (10 PROTONS/CM2/SEC/STER) BETWEEN 13/1300 UT AND 13/1400 UT. ACTIVE REGION 1203 IS NOW NEAR CENTRAL MERIDIAN AND A MAJOR FLARE WOULD BE EXPECTED TO PRODUCE A MAJOR MAGNETIC STORM 20-30 HOURS AFTER THE FLARE. THERE IS ALSO SOME POSSIBILITY THAT CO-ROTATING SOLAR WIND STRUCTURES REMAIN FROM EARLIER ACTIVITY IN REGION 1203 AND THAT THESE MAY PRODUCE GEOMAGNETIC ACTIVITY IN THE NEXT 24-36 HOURS. A FLARE IN 1203 WOULD ALSO BE EXPECTED TO PRODUCE A LARGER PROTON EVENT.

III. EVENT PROBABILITIES 14 JULY - 16 JULY

CLASS M 99/99/99

CLASS X 50/50/50

PROTON 50/50/50

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 13 JULY 160

PREDICTED 14 - 16 JULY 162/164/166

90-DAY MEAN 13 JULY 147

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 12 JULY 05

ESTIMATED AFR/AP 13 JULY 11/15

PREDICTED AFR/AP 14 - 16 JULY 50/60 - 40/50 - 30/40

SOLTERWARN

BT