

HFUS 1 BOU 202200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, COLO

SDF NUMBER 051

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 20 FEBRUARY 1979

I A. SOLAR ACTIVITY HAS BEEN MODERATE THE PAST 24 HOURS. REGION 1574 (N 16W 15) PRODUCED AN M1/1F FLARE AT 20/0455Z (X-RAY² MAX) AND M1/1B AT 20/1649Z (OPTICAL MAX). REGION 1568 (N 18W 34²) PRODUCED AN M2/1B AT 20/1649Z (OPTICAL MAX). THE MOST INTERESTING EVENT WAS A LONG LIVED X-RAY EVENT REACHING M3 AT 20/1824Z. THIS X-RAY EVENT WAS PRODUCED BY A PARALLEL RIBBON 2N FLARE (175² MAX) IN REGION 1572 (N 03W 36) AND A MULTIPLE ERUPTIVE CENTERS 1B FLARE (180² MAX) WEST AND NORTH OF THE LEADER OF REGION 1574. BOTH OPTICAL FLARES FOLLOWED THE DISRUPTION OF ACTIVE FILAMENTS. ALL THESE EVENTS PRODUCED CENTIMETRIC BURSTS AND SHORT WAVE FADES. REGIONS 1568 AND 1574 ARE MAGNETICALLY COMPLEX. REGION 1574 IS EXTENSIVE IN SIZE WITH SEVERAL MAGNETIC ANAMOLIES. REGION 1586 (N 36E 64) HAS CROSSED EAST LIMB AS A SIMPLE H-TYPE SPOT.

IB. SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE WITH BOTH REGIONS 1568 AND 1574 CAPABLE OF PRODUCING CLASS M OR GREATER EVENTS. BOTH REGIONS HAVE MOVED INTO FAVORABLE GEOMETRY FOR PROTON PROPAGATION TO EARTH.

II. THE GEOMAGNETIC FIELD HAS BEEN QUIET THIS ZULU DAY. THE GEOMAGNETIC FIELD IS EXPECTED TO BE ACTIVE ON THE 21ST AND 23RD WITH GENERALLY UNSETLED CONDITIONS ON THE 22ND. THESE FORECASTS ARE BASED ON APPARENT SECTOR STRUCTURES AND FLARE ACTIVITY IN REGIONS 1568 AND 1574.

III. EVENT PROBABILITIES 21-23 FEB

CLASS M 95/95/95

CLASS X 50/50/50

PROTON 50/60/60

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 20 FEB 238

PREDICTED 21-23 FEB 236/234/232

90-DAY MEAN 20 FEB 193

V. GEOMAGNETIC INDICES

OBSERVED FREDERICKSBURG 19 FEB 12

ESTIMATED AFR/AP 20 FEB 04/06

PREDICTED AFR/AP 21-23 FEB 20/25 - 12/10 - 25/25

SOLTERWARN

BT