

HFUS 1 BOU 042200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, COLO

SDF NUMBER 094

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 24 APRIL 1979

I. SOLAR ACTIVITY HAS BEEN LOW FOR THE PAST 24 HOURS. THE LARGEST EVENT WAS A C7 X-RAY CLASS EVENT ASSOCIATED WITH A SUBNORMAL OPTICAL FLARE FROM REGION 1670 (S20W66) MAXIMIZING AT 0715 UT. REGION 1661 (S25W31), WHICH IS LARGE AND EXTREMELY MAGNETICALLY COMPLEX, SHOWED ONLY MINOR FLARE ACTIVITY. 1661 HAS DECLINED SLIGHTLY IN AREA AND SPOT NUMBER SINCE YESTERDAY, BUT MAJOR FLARING IS POSSIBLE FROM THIS IMPRESSIVE REGION. A MINOR PROTON EVENT AT SATELLITE LEVELS BEGAN 03/2120 UT, MAXIMIZING AT 03/2310 UT AT 49 FLUX UNITS FOR PROTONS OF ENERGY GREATER THAN 10 MEV. THE FLUX FELL BELOW THE THRESHOLD LEVEL OF 10 FLUX UNITS BY 04/1630 UT. THIS PROTON EVENT COULD NOT BE ASSOCIATED WITH A SPECIFIC SOLAR EVENT. TWO NEW REGIONS WERE IDENTIFIED ON THE SOLAR DISK TODAY. THEY ARE 1677 (S26E80), PRESENTLY AN H-TYPE SPOT, AND 1678 (N17W17) WHICH IS A SMALL BIPOLAR GROUP OF 3 SPOTS.

II. SOLAR ACTIVITY IS EXPECTED TO BE LOW TO MODERATE FOR THE NEXT 24 HOURS. REGION 1661 CARRIES THE HIGHEST PROBABILITIES FOR X CLASS X-RAY EVENTS, BUT REGIONS 1670 (S20W66) AND 1665 (S17W15) ARE POTENTIALLY ERUPTIVE (C-CLASS X-RAY EVENTS).

III. THE GEOMAGNETIC FIELD HAS BEEN AT MINOR STORM LEVELS FOR THE PAST 24 HOURS. A POLAR CAP ABSORPTION EVENT BEGAN AT 03/2310 UT AND THEN DROPPED BELOW EVENT CRITERION (2DB) BY 03/2350 UT. HOWEVER, SOME POLAR CAP ABSORPTION IS STILL IN PROGRESS, AND THERE IS A STRONG POSSIBILITY THAT THE ABSORPTION MAY AGAIN REACH EVENT CRITERION DURING THE NEXT 24 HOURS. THE GEOMAGNETIC FIELD IS EXPECTED TO BE ACTIVE TOMORROW, DECREASING TO UNSETLED BACKGROUND LEVELS FOR THE FOLLOWING 48 HOURS. FLARE INDUCED GEOMAGNETIC ACTIVITY IS POSSIBLE.

III. EVENT PROBABILITIES 25 APRIL - 07 APRIL

CLASS M : 85/85/85

CLASS X : 25/25/25

PROTON : 85/50/25

PCAF : RED

IV. OTTAWA 10.7 CM FLUX

OBSERVED 24 APRIL 186

PREDICTED 25-27 APRIL 182/179/177

90-DAY MEAN 24 APRIL 198

V. GEOMAGNETIC INDICES

OBSERVED FREDERICKSBURG 03 APRIL 28

ESTIMATED AFR/APR 04 APRIL 22/45

PREDICTED AFR/APR 05-07 APRIL 15/25 - 12/20 - 12/20

SOLTERWARN

BT