

HFUS 1 BOU 012200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO.

SOT NUMBER 245

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 01 SEPTEMBER 1980

I A. SOLAR ACTIVITY HAS BEEN LOW TO MODERATE DURING THE PAST 24 HOURS. REGION 2646 (N11E10) AND COMPLEX OF REGIONS 2645/2648 (S09E09/S04E22) WERE RESPONSIBLE FOR ALL BUT TWO OF THE TWENTY ONE C-CLASS SUBFLARES OBSERVED DURING THAT PERIOD. THE STRONGEST X-RAY BURST CAME, HOWEVER FROM REGION 2655 (N2E40) WHICH ONLY EMERGED IN THE PAST 24 HOURS. THIS WAS A C7/SB WITH A MAXIMUM AT 1304 UT. THE COMPLEX 2645/2648 PRODUCED A SLIGHTLY WEAKER C7 EVENT WITH A MAXIMUM AT 0526 UT. THE OTHER ELEVEN SUBFLARES PRODUCED IN THE COMPLEX FAILED TO EXCEED C1 OR C2 BURST LEVELS. THE COMPLEX PRODUCED ABOUT TWICE THE NUMBER OF SMALL EVENTS AS REGION 2646. BOTH AREAS APPEAR SLIGHTLY STRONGER TODAY ALTHOUGH HUNTSVILLE REPORTS SIGNS OF RELAXATION IN THE MAGNETIC FIELDS OF BOTH AREAS. MT WILSON REPORTED NUMEROUS NEW SPOTS SWINGING INTO VIEW BETWEEN (NE10) AND (NE16).

I B. AT THE MOMENT, THE COMPLEX 2645/2648 APPEARS TO BE FLARING MORE FREQUENTLY AND HAS STEEPER MAGNETIC GRADIENTS. HOWEVER, DURING THE PAST FEW DAYS REGION 2646 HAS HAD HIGHER ENERGETIC FLARE POTENTIAL (DETERMINED FROM RADIO BURST BEHAVIOR). SINCE THERE HAS BEEN SOME SYMPATHETIC REACTION BETWEEN THE TWO AREAS, IT IS POSSIBLE THAT EITHER AREA MAY FLARE AND RECEIVE AN INFUSION OF ENERGY FROM THE OTHER. THUS, IT IS A TOSSUP AS TO WHICH AREA WILL PRODUCE THE BIGGEST FLARE. IT IS LIKELY THAT ONE OR BOTH AREAS WILL PRODUCE MAJOR FLARES (GREATER THAN M5) BEFORE DEPARTING THE VISIBLE DISK.

II. THE GEOMAGNETIC FIELD HAS BEEN UNSETLED TO QUIET DURING THE PAST 24 HOURS. THE FIELD IS EXPECTED TO BE MILDLY UNSETLED DURING THE NEXT 24 HOURS. THE FIELD SHOULD THEN BECOME UNSETLED TO MILDLY ACTIVE DURING THE NEXT 48 HOURS.

III. EVENT PROBABILITIES 02 SEPTEMBER - 04 SEPTEMBER

CLASS M 80/85/80

CLASS X 20/20/20

PROTON 05/05/10

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 01 SEPTEMBER 211

PREDICTED 02-04 SEPTEMBER 215/218/220

90-DAY MEAN 01 SEPTEMBER 183

V. GEOMAGNETIC INDICES

OBSERVED FREDERICKSBURG 31 AUGUST 10

ESTIMATED AFR/AP 01 SEPTEMBER 10/10

PREDICTED AFR/AP 02-04 SEPTEMBER 08/15 - 12/15 - 16/12

SOLITERWARN

BT