

HFUS3 BOU 102200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 223

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 10 AUG 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 09/2100 TO 10/2100Z: SOLAR ACTIVITY WAS VERY LOW. REGION 4554 (N08W12) GREW IN WHITE-LIGHT SPOT DISTRIBUTION TO ENCOMPASS OLD REGION 4555 (N08W18) AHEAD OF ITS MAIN GROUP. IT STILL RETAINED A BETA MAGNETIC CONFIGURATION AND APPARENTLY HAD PEAKED IN MOST GROWTH CHARACTERISTICS. OCCASSIONAL POINT BRIGHTENINGS AND ARCHED FILAMENT SYSTEMS CONTINUED. REGION 4559 (N13W05) REEMERGED AT THE NORTH-EAST QUADRANT OF REGION 4554 BUT REMAINED A SMALL ALPHA-TYPE. REGION 4558 (N09W85) PRODUCED A B2/0F EVENT (10/0720Z) BUT IT HAD NO ASSOCIATED RADIO EVENT. IT ALSO REMAINED A SIMPLE ALPHA-TYPE. NO NEW REGION WAS ASSIGNED.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE VERY LOW. REGION 4554 PROVIDES THE ONLY PROMISE OF ENERGETIC ACTIVITY AS IT DECAYS. NO RETURNING REGIONS OFFER ANY SIGNIFICANT POTENTIAL ACTIVITY.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 09/2100Z TO 10/2100Z: GEOMAGNETIC ACTIVITY WAS ACTIVE. MINOR STORM LEVELS WERE REPORTED AT HIGH LATITUDES 9/2230-2400Z. UNSETTLED TO ACTIVE LEVELS PREVAILED AT MID-LATITUDES WITH THE SAME 9/2230-2400Z TIME-FRAME PROVIDING THE ONLY ACTIVE PERIOD. KITT PEAK CORONAL HOLE DATA WAS NOT AGAIN OBTAINABLE DUE TO CLOUDY CONDITIONS. LITTLE CORONAL HOLE DATA HAS BEEN AVAILABLE TO VERIFY THE RECURRING HIGH-SPEED SOLAR WIND SOURCE OF THE PAST THREE ROTATIONS. THE ICE SATELLITE POSITION AHEAD OF EARTH (WEST IN SOLAR LONGITUDE) HAD A NOTICIBLE DROP IN MEAN DENSITY IMPLYING THE TREND TOWARDS A CORONAL HOLE SIGNATURE, BUT ITS POSITION SENSES DATA APPROXIMATELY ONE DAY LATER THAN TERRESTRIAL EFFECTS.

IIB. GEOPHYSICAL ACTIVITY FORECAST: GEOMAGNETIC ACTIVITY IS EXPECTED TO BE AT ACTIVE LEVELS THROUGHOUT THE PERIOD. MINOR STORM LEVELS ARE EXPECTED AT HIGH LATITUDES WITH OCCASSIONAL MAJOR LEVELS DURING NIGHT-TIME PERIODS OF THE FIRST AND SECOND DAYS (11-12 AUG). THE MOST PROBABLE MINOR LEVELS AT MID-LATITUDES ARE EXPECTED TO BE NIGHT-TIME PERIODS ON THE FIRST DAY (11 AUG). THIS INCREASED ACTIVITY IS BASED ON RECURRENT ACTIVE CARRINGTON LONGITUDE 055 WITH A NEGATIVE CORONAL HOLE SOURCE CENTERED AT N30 DURING THE PAST THREE ROTATIONS.

III. EVENT PROBABILITIES 11 AUG-13 AUG

CLASS M 01/01/01

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 10 AUG 093

PREDICTED 11 AUG-13 AUG 092/089/087

90 DAY MEAN 10 AUG 101

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 09 AUG 015/018

ESTIMATED AFR/AP 10 AUG 012/010

PREDICTED AFR/AP 11 AUG-13 AUG 026/025-025/025-022/025

SOLTERWARN