

HFUS 1 BOU 161230

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 197A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 1300Z 16 JULY 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

15/1200Z TO 16/1200Z:

SOLAR ACTIVITY HAS BEEN MODERATE FOR THE PAST 24 HOURS. REGION 3203 (S08W22) PRODUCED THREE M-CLASS XRAY EVENTS WHICH WERE AN M3/SB MAXING AT 16/1020UT, AN M2/1B MAXING AT 15/1650UT, AND AN M1/1B MAXING AT 16/0643UT. ONLY SMALL RADIO BURSTS WERE OBSERVED WITH THESE EVENTS. REGION 3203 IS STILL DEVELOPING IN MAGNETIC COMPLEXITY AND FURTHER ACTIVITY IS EXPECTED. REGION 3204 (S27W20) PRODUCED SEVERAL C-CLASS FLARES THIS PERIOD BUT GROWTH HAS CEASED. 3204 STILL CONTAINS A MARKED DELTA MAGNETIC CONFIGURATION. REGION 3210 (N22W27) HAS DECAYED TO A D-TYPE GROUP AND IS NOW LESS LIKELY TO PRODUCE SIGNIFICANT ACTIVITY. AN ERUPTIVE PROMINENCE ON THE WEST LIMB AT NORTH 09 BEGAN AT 15/2358UT AND REACHED A MAXIMUM EXTENT IN EXCESS OF .25 SOLAR RADIUS. SEVERAL STRONG GROUPS OF TYPE III BURSTS HAVE OCCURRED ABOVE THE EAST LIMB CLEARLY INDICATING THE PRESENCE OF A DYNAMIC REGION APPROACHING EAST LIMB PASSAGE.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO CONTINUE AT MODERATE LEVELS WITH REGION 3203 PROVIDING SEVERAL M-CLASS EVENTS. ISOLATED SIGNIFICANT FLARES ARE POSSIBLE FROM 3204 AND 3210.

IC. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN PREDOMINANTLY QUIET FOR THE PAST 24 HOURS. HOWEVER, AN INTERPLANETARY SHOCK WAS OBSERVED AT ISEE-3 SPACECRAFT AT 0331UT WHICH WAS FOLLOWED BY A SMALL SUDDEN IMPULSE AT 0445 IN THE H COMPONENT OF MID AND LOW LATITUDE GROUND BASED MAGNETOMETERS. THIS DISTURBANCE IS POTENTIALLY LINKED WITH A FILAMENT DISAPPEARANCE BETWEEN 11 AND 12 JULY NEAR SOLAR HELIOGRAPHIC COORDINATES N10W20. THE FIELD IS EXPECTED TO BE UNSETTLED TO OCCASIONALLY ACTIVE THROUGHOUT THE FORECAST PERIOD IN RESPONSE TO RECENT FLARE ACTIVITY.

III. EVENT PROBABILITIES: 17 - 19 JULY

CLASS M 90/90/80

CLASS X 30/25/20

PROTON 10/10/10

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 15 JULY 187

ESTIMATED 16 JULY 195

PREDICTED 17-19 JULY 200/200/200

90 DAY MEAN 15 JULY 177

V. GEOMAGNETIC A INDICES

OBSERVED AFR 14 JULY 06 AP 15 JULY 07

ESTIMATED AFR 15 JULY 05 AFR/AP 16 JULY 11/11

PREDICTED AFR/AP 17-19 JULY 12/12 18/15 15/12

SOLTERWARN

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HFUS 3 BOU 162200
FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO
SDF NUMBER 197B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 16 JULY 1981

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 16/1200Z TO 16/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 9 HOURS. REGION 3203 (S09W31) PRODUCED AN M1/1B FLARE AT 1607Z AND AN M1/SB AT 1935Z. REGION 3204 (S28W26), WHICH HAS BEEN QUIET FOR THE PAST FEW DAYS, PRODUCED AN M1/1B AT 1635Z. THESE M1 BURSTS WERE ACCCOMPANIED BY MINOR DISCRETE FREQUENCY RADIO BURSTS AND SHORT WAVE FADES TO 15 MHZ. NEW REGIONS 3219 (S09W21) AND 3220 (N06E02) APPEARED TODAY. REGION 3220 HAS BEGUN PRODUCING C-CLASS SURFLARES.

II. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO CONTINUE AT MODERATE LEVELS. REGION 3203 SHOULD CONTINUE TO BE THE MOST FREQUENT PRODUCER OF M-CLASS FLARES.

III. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN QUIET TO MILDLY UNSETTLED DURING THE PAST 9 HOURS. THE FIELD IS EXPECTED TO BE UNSETTLED TO ACTIVE OVER THE NEXT 3/DAYS.

IV. EVENT PROBABILITIES 17 JULY - 19 JULY

CLASS M 90/90/80

CLASS X 30/25/20

PROTON 10/10/10

PCAF GREEN

V. OTTAWA 10.7 CM FLUX

OBSERVED 16 JULY 195

PREDICTED 17-19 JULY 200/200/200

90-DAY MEAN , 16 JULY 177

VI. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 15 JULY 04/07

ESTIMATED AFR/AP 16 JULY 10/11

PREDICTED AFR/AP 17-19 JULY 12/12 - 18/15 - 15/15

SOLTERWARN

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