

HFUS 1-POU 081240

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 251A

JOINT USAE/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 1300Z 08 SEPT 81

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

07/1200Z TO 08/1200Z:

SOLAR ACTIVITY WAS MODERATE DURING THE PAST 24 HOURS. DURING THAT PERIOD 5 M-CLASS EVENTS WERE NOTED, 4 OF THEM FROM REGION 3317 (N10E27). THE STRONGEST OF THE REGION 3317 FLARES WAS AN M4/SB WITH MAXIMUM AT 07/2226Z. THIS EVENT WAS ACCCOMPANIED BY A STRONG TYPE II SWEEP FREQUENCY RADIO EVENT. HOWEVER, THE MOST ENERGETIC X-RAY EVENT OF THE PAST 24 HOURS WAS AN M7/IN FROM REGION 3300 (S13W03) WITH MAXIMUM AT 2007Z. REGION 3300 IS NOW WELL OVER THE WEST LIMB.

1B. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO CONTINUE MODERATE THROUGH THE NEXT SEVERAL DAYS. ALTHOUGH REGION 3317 IS REPORTED TO LOOK AWESOME IN WHITE LIGHT IT IS SHOWING A TENDENCY TO FLARE MORE FREQUENTLY AT THE C-CLASS LEVEL. IT IS LIKELY, HOWEVER, THAT THE REGION WILL PRODUCE ONE OR MORE ISOLATED X-CLASS FLARES DURING ITS DISK PASSAGE. REGIONS 3310 (S10W44) AND 3319 (N29W03) BOTH HAVE SOME M-CLASS FLARE POTENTIAL AND CAN BE COUNTED ON TO HELP REGION 3317 MAINTAIN FLARE ACTIVITY AT MODERATE LEVELS.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN ESSENTIALLY QUIET FOR THE PAST 24 HOURS. A HIGH SPEED STREAM IN THE SOLAR WIND IS STILL EXPECTED TO MAKE ITS PRESENCE FELT ON THE 9TH OR 10TH OF SEPTEMBER. A MINOR ENHANCEMENT OF GREATER THAN 10 MEV. PROTONS WAS NOTED BETWEEN 07/1600Z AND 08/0800Z, BUT EVENT THRESHOLDS OF 10 PARTICLES PER SECOND WERE NOT REACHED. WITH THE PRESENCE OF SOLAR PARTICLES IN THE VICINITY OF THE EARTH AND THE OCCURENCE OF SOME 15 M-CLASS FLARES DURING THE PAST 60 HOURS, AN INCREASE IN MAGNETIC ACTIVITY COULD OCCUR AT ANY TIME.

III. EVENT PROBABILITIES: 09 - 11 SEPT 1981

CLASS M 85/85/85

CLASS X 20/20/20

PROTON 15/10/15

RCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 07 SEP 255

ESTIMATED 08 SEP 257

PREDICTED 09-11 SEP 257/253/240

90 DAY MEAN 07 SEP 198

V. GEOMAGNETIC A INDICES

OBSERVED AFR 06 SEP 10 AP 07 SEP 09

ESTIMATED AFR 07 SEP 05 AFR/AP 08 SEP 11/12

PREDICTED AFR/AP 09-11 SEP 16/18 23/23 14/18

SOLTERWARN

BT

HRUS 3 POU 082200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 251B

JOINT USAF/NASA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 0200Z 08 SEPTEMBER 1981

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 08/1200Z TO 08/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE SINCE 08/1200Z DUE TO AN M6.1N FLARE AT 08/1706Z FROM REGION 3317 (N08E21). THIS REGION IS A VERY IMPRESSIVE FKI SPOT GROUP WITH A BETA-GAMMA-DELTA MAGNETIC CONFIGURATION AND STRONG MAGNETIC GRADIENTS. REGION 3310 (S09W51) IS THE ONLY OTHER REGION WHICH PRODUCED FLARES THIS PERIOD. ONE NEW REGION WAS NUMBERED TODAY, 3327 (S14E22).

II. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE FOR THE NEXT THREE DAYS. HOWEVER, REGION 3317 APPEARS TO HAVE THE POTENTIAL OF PRODUCING AT LEAST ONE X-CLASS FLARE BEFORE THE END OF THE FORECAST PERIOD.

III. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN QUIET FOR THE PAST 24 HOURS. THE FIELD IS EXPECTED TO BECOME ACTIVE FOR THE NEXT TWO DAYS IN RESPONSE TO THE NUMEROUS M-CLASS FLARES OCCURRING THE PAST SEVERAL DAYS. UNSETTLED CONDITIONS ARE EXPECTED 11 SEPTEMBER. A SHOCK WAS OBSERVED AT THE ISEE-3 SATELLITE AT 08/2110Z.

III. EVENT PROBABILITIES 09 SEPTEMBER - 11 SEPTEMBER

CLASS M 85/85/85

CLASS X 20/20/20

PROTON 20/20/20

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 08 SEPTEMBER 254

PREDICTED 09-11 SEPTEMBER 252/248/235

90-DAY MEAN 08 SEPTEMBER 199

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 07 SEPTEMBER 05/09

ESTIMATED AFR/AP 08 SEPTEMBER 07/12

PREDICTED AFR/AP 09-11 SEPTEMBER 16/18 - 23/23 - 14/18

SOLTER WARM

PT