

HFUS 1 BOU 291300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 241A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 29 AUGUST 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 28/1200Z TO 29/1200Z:

SOLAR ACTIVITY HAS BEEN MODERATE. CLASS M1 FLARES OCCURRED IN THREE REGIONS: 28/1511Z REGION 3300 (S12E43), 28/1925Z REGION 3287 (S10W53) AND 29/0527Z REGION 3293 (N11W60). STRONG CLASS C9 EVENTS OCCURRED AT 0644Z (REGION 3284, S11W69) AND 0805Z (REGION 3300). THE APPEARANCE OF A LARGE BRIGHT REGION AT S23E76 (REGION 3307) BRINGS TO 16 THE NUMBER OF SPOTTED REGIONS NOW ON THE VISIBLE SOLAR HEMISPHERE. SURGES PROMISE ADDITIONAL REGIONS AT S20 AND N15 EAST LIMB. FOUR OF THESE REGIONS HAVE PRODUCED CLASS M FLARES IN THE PAST 48 HOURS. REGION 3284 IS THE LARGEST PLAGE BUT WITH A SMALL AND COMPACT SPOT GROUP. ITS MAGNETIC STRUCTURE CONTINUES COMPLEX AND A DELTA CONFIGURATION MAY NOW EXIST IN THE LEADING PENUMBRA. GROWTH IS SLOW. REGION 3300 HAS STRONGER SPOTS AND NOW IS DEVELOPING NEW SPOTS THAT MAY LEAD TO A DELTA CONFIGURATION AND A MORE COMPLEX FORM FOR THE ENTIRE REGION. EMERGING FLUX ON THE SOUTH-EAST BORDER OF REGION 3287 IS PROBABLY RESPONSIBLE FOR ITS CLASS M EVENT. NO FURTHER GROWTH IS REPORTED THERE. REGION 3293 HAS SIMPLIFIED ITS SPOT GROUP BUT RETAINS SOME SMALL-SCALE COMPLEXITIES IN ITS PLAGE. REGION 3288 (N22W26) HAS DEVELOPED AN ACTIVE FILAMENT AND IS EXHIBITING INTERACTION WITH NEARBY REGION 3295 (N16W05). THE LATTER HAS BECOME POPULATED WITH NUMEROUS SPOTS OF SMALL AREA. THE H-ALPHA ASPECT OF THIS REGION IS STRONGER THAN THE SPOTS IMPLY. SURGES MARK THE DEPARTURE OF REGION 3279 AT S20W90.

IB. SOLAR ACTIVITY FORECAST:

THE RETURN OF A COMPLEX REGION TO SE LIMB TOMORROW WILL MAINTAIN HIGH SOLAR INDICES EVEN AS REGION 3284 AND 3293 DEPART. CONTINUED GROWTH IN EITHER REGION 3284 OR 3300 IS EXPECTED TO CREATE CONDITIONS FOR CLASS X FLARES AND PROTON EMISSION.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN UNSETLED TO OCCASIONALLY ACTIVE DURING THIS PERIOD. ACTIVE TO MINOR STORM CONDITIONS ARE EXPECTED FOR THE NEXT 36 HOURS. THE REMAINDER OF THE FORECAST INTERVAL IS EXPECTED TO BE UNSETLED WITH BRIEF PERIODS OF ACTIVE CONDITIONS.

III. EVENT PROBABILITIES: 30 AUGUST - 01 SEPTEMBER

CLASS M 90/80/80

CLASS X 20/20/10

PROTON 10/10/05

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 28 AUGUST 270

ESTIMATED 29 AUGUST 262

PREDICTED 30 AUGUST - 01 SEPTEMBER 253/246/241

90 DAY MEAN 28 AUGUST 187

V. GEOMAGNETIC A INDICES

OBSERVED AFR 27 AUGUST 20 AP 28 AUGUST 18

ESTIMATED AFR 28 AUGUST 18 AFR/AP 29 AUGUST 20/18

PREDICTED AFR/AP 30 AUG - 01 SEP 20/23 12/15 15/17

SOLTERWARN

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HFUS 3 BOU 292200
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 241B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 29 AUG 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

29/1200Z TO 29/2100Z:

SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST 9 HOURS. ABOUT A DOZEN C-CLASS SUBFLARES HAVE BEEN OBSERVED DURING THAT TIME. HOWEVER, ABOUT 1940UT A SLOW-RISING M2 X-RAY EVENT BEGAN WHICH LASTED ALMOST 2 HOURS. LOOPS WERE OBSERVED IN REGION 3307 (S26E65), BUT THEY TRAILED BACK OVER THE LIMB AND THE SIGNATURE OF THE X-RAY EVENT IS WHAT IS NORMALLY PRODUCED BY A FLARE BEHIND THE LIMB.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO CONTINUE MODERATE DURING THE NEXT 72 HOURS. THE 10 CM EAST-WEST SCAN TODAY SHOWS LITTLE EAST LIMB EMISSION SO IT IS DIFFICULT TO BELIEVE A BIG FLARING REGION IS ABOUT TO ROTATE ONTO THE SOLAR DISK.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD WAS ACTIVE TO UNSETTLED DURING THE PAST 9 HOURS. THE FIELD IS EXPECTED TO BE GENERALLY UNSETTLED TO MILDLY ACTIVE FOR THE NEXT ~2 HOURS.

III. EVENT PROBABILITIES: 30 - 01 SEPT

CLASS M 90/80/80

CLASS X 20/20/10

PROTON 10/10/05

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 29 AUG 249

PREDICTED 30 AUG 01 SEP 246/237/233

90 DAY MEAN 29 AUG 188

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 28 AUG 16/18

ESTIMATED AFR/AP 29 AUG 20/20

PREDICTED AFR/AP 30 - 01 SEPT 20/23 12/15 15/17

SOLTERWARN

BT