

HFUS-1 BOU 301250
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 242A
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 1300Z 30 AUGUST 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
29/1200Z TO 30/1200Z:

SOLAR ACTIVITY REMAINS MODERATE WITH EIGHT M-CLASS EVENTS
OBSERVED DURING THE PAST 24 HOURS FROM A VARIETY OF REGIONS.
THE LARGEST, AN M4/1B AT 30/1141Z MAXIMUM WAS IN REGION 3298
(N15E01). SMALL RADIO EMISSION AND SHORT WAVE FADES WERE OBSERVED
WITH THIS FLARE. AN M1 AT 29/1940Z WAS SIGNIFICANT IN THAT IT
HAD AN ACCOMPANING TYPE II AND IV RADIO SWEEP. A SN FLARE WAS
OBSERVED IN REGION 3307 (S26E58) AT THAT TIME, BUT LOOPS AND A
BSL AT S32E90, ALONG WITH THE X-RAY SIGNATURE, INDICATE POSSIBLE
CONTRIBUTION FROM AN ACTIVE REGION JUST BEHIND THE LIMB AT S30.
REGION 3300 (S12E29), WHICH HAS BEEN RELATIVELY QUIET DURING THE
PERIOD, IS STILL SHOWING SOME GROWTH WITH SMALL AREAS OF EMERGING
FLUX. REGIONS 3310 (S10E76) AND 3311 (N12E76) WERE NUMBERED AS
THEY CAME OVER THE EAST LIMB. 3310 HAS BEEN ACTIVE, PRODUCING AN
M2/1N AT 30/0912Z. THE REMAINING DISK REGIONS HAVE SHOWN LITTLE
CHANGE. REGION 3308 (S10E13), WAS INCORRECTLY NUMBERED YESTERDAY,
SINCE IT IS IN THE SAME LOCATION AS REGION 3302. NUMBER 3308
WILL BE DROPPED ON THE NEXT 0200UT BOULDER REGION REPORT.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO CONTINUE MODERATE. THE EVIDENCE OF
ACTIVITY ON THE EAST LIMB SHOULD COMPENSATE FOR THE LOSS OF
SEVERAL REGIONS OVER WEST LIMB (INCLUDING 3284, S11W79). M-CLASS
ACTIVITY IS POSSIBLE FROM REGIONS 3284, 3295 (N15W19), 3298, 3300,
3307 AND 3310 ALONG WITH THE SOUTH-EAST LIMB.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN ACTIVE DURING THE PAST 24 HOURS
WITH THE STRONGEST VALUES OBSERVED DURING THE PAST 3 HOURS (K-INDEX
OF 4 FROM 09-12Z AT BOULDER). THE ACTIVITY WAS FORECAST FOR TODAY
DUE TO A FAVORABLY LOCATED CORONAL HOLE. THESE ACTIVE CONDITIONS
ARE EXPECTED TO LAST FOR THE NEXT 24 HOURS.

III. EVENT PROBABILITIES: 31 AUG - 02 SEPT

CLASS M 90/90/90

CLASS X 20/20/20

PROTON 10/10/10

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 29 AUG 249

ESTIMATED 30 AUG 250

PREDICTED 31 AUG-02 SEP 247/243/240

90 DAY MEAN 29 AUG 188

V. GEOMAGNETIC A INDICES

OBSERVED AFR 28 AUG 16 AP 29 AUG 21

ESTIMATED AFR 29 AUG 20 AFR/AP 30 AUG 20/23

PREDICTED AFR/AP 31 AUG-02 SEP 12/15 15/17 12/15

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HFUS 3 BOU 302200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO
SDF NUMBER 242B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 0200Z 30 AUGUST 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 30/1200Z TO 30/2100Z: SOLAR ACTIVITY HAS CONTINUED MODERATE FOR THIS PERIOD. REGION 3298 (N16W05) PRODUCED AN M2/1N AT 1341Z (1N FLARE IN REGION 3310 COINCIDENT IN TIME). REGION 3298 ALSO PRODUCED AN M1/2B AT 1853Z. NONE OF THIS ACTIVITY WAS ACCCOMPANIED BY SIGNIFICANT RADIO WAVELENGTH BURSTS. A C9/1N FLARE WAS OBSERVED IN REGION 3310 (S10E71) AT 1952Z. DELTA CONFIGURATIONS HAVE BEEN DETECTED TODAY IN BOTH REGION 3298 AND 3300 (S12E23). WHILE THESE DELTAS ARE NOT EXCEPTIONALLY STRONG THEY DO INDICATE AN INCREASE IN MAGNETIC COMPLEXITY AND GRADIENT IN BOTH REGIONS.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE AT A MODERATE LEVEL. BETWEEN REGIONS 3298, 3310, AND 3300, SEVERAL CLASS M FLARES PER DAY ARE EXPECTED. NO MORE SIGNIFICANT REGIONS ARE EXPECTED TO ROTATE OVER THE EAST LIMB DURING THE FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE, MOST LIKELY DUE TO A HIGH SPEED CORONAL HOLE INDUCED SOLAR WIND STREAM. GENERALLY UNSETLED TO ACTIVE CONDITIONS ARE EXPECTED FOR THE NEXT THREE DAYS. NONE OF THE RECENT FLARE ACTIVITY SEEM CAPABLE OF PRODUCING SIGNIFICANT TERRESTRIAL EFFECTS.

III. EVENT PROBABILITIES 31 AUGUST - 02 SEPTEMBER

CLASS M 90/90/90

CLASS X 20/20/20

PROTON 10/10/10

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 30 AUGUST 241

PREDICTED 31 AUGUST - 02 SEPTEMBER 241/240/240

90-DAY MEAN 30 AUGUST 189

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 29 AUGUST 20/21

ESTIMATED AFR/AP 30 AUGUST 16/20

PREDICTED AFR/AP 31 AUGUST-02 SEPTEMBER 12/15 -15/17 -12/15

SOLTERWARN

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