

HFUS 1 BOU 601240

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 263A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 1300Z 20 SEPT 1981

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
19/1200Z TO 20/1200Z:

SOLAR ACTIVITY HAS BEEN LOW FOR THE PAST 24 HOURS. THE LARGEST FLARE WAS A C5/1B FROM REGION 3334 (S04W24) AT 19/2303 UT. MOST OF THE SUBFLARE ACTIVITY HAS COME FROM REGION 3344 (N10E23) WHICH IS STILL THE MOST SIGNIFICANT REGION ON THE DISK. MAGNETIC GRADIENTS ARE SLIGHTLY STRONGER TODAY IN THIS REGION AND IT APPEARS TO HAVE MATURED INTO A POTENTIALLY ACTIVE REGION. REGION 3349 (N19W38) GREW RAPIDLY AND NOW HAS THE CHARACTERISTICS OF A SMALL BUT POTENTIALLY ERUPTIVE REGION. A SMALL ACTIVE SURGE REGION EXISTS IN REGION 3351 AT SF 08 AND NOW HAS ONE SPOT VISIBLE.

II. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE LOW TO MODERATE. ALTHOUGH REGION 3344 IS CURRENTLY PRODUCING ONLY SMALL FLARES, IT HAS FEATURES INDICATING A MORE ACTIVE FUTURE. SMALL M-CLASS FLARES ARE PROBABLE IN THIS REGION.

III. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN UNSETLED FOR THE PAST 24 HOURS FOLLOWING THE ACTIVE CONDITIONS WHICH OCCURRED THE FIRST HALF OF 19 SEPT. UNSETLED CONDITIONS ARE EXPECTED FOR THE FORECAST PERIOD.

IV. EVENT PROBABILITIES: 21 - 23 SEP

CLASS M 60/65/65

CLASS X 10/10/10

PROTON 01/05/05

PCAF GREEN

V. OTTAWA 10.7 FLUX

OBSERVED 19 SEP 214

ESTIMATED 20 SEP 214

PREDICTED 21-23 SEP 215/215/210

90 DAY MEAN 19 SEP 208

VI. GEOMAGNETIC INDICES

OBSERVED AFR 18 SEP 13 AP 19 SEP 25

ESTIMATED AFR 19 SEP 22 AFR/AP 20 SEP 08/12

PREDICTED AFR/AP 21-23 SEP 09/12 08/10 10/13

SOLTERWARN

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HFUS 3 POU 202200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 263B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 20 SEPTEMBER 1981

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/1200Z TO 20/2100Z: SOLAR ACTIVITY HAS REMAINED LOW FOR THE PAST NINE HOURS. THE SUN'S FLARE PRODUCTION HAS DIMINISHED SIGNIFICANTLY WITH ONLY A FEW C-CLASS SUBFLARES OBSERVED. REGION 3344 (N 10E 18) HAS PRODUCED MOST OF THESE FLARES. AN UNSPOTTED REGION 3333 (S 12W 43) PRODUCED A C2/SB AT 2049Z MAXIMUM. NEW REGION 3354 (S 20W 20) HAS EMERGED AS A SMALL BIPOLAR GROUP IN THE ALREADY COMPLICATED SOUTHWEST QUADRANT. ALL OTHER REGIONS ARE EITHER STABLE OR DECLINING.

I B. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD REMAIN GENERALLY LOW. REGION 3344 IS SIGNIFICANTLY COMPLEX (BETA-GAMMA) TO PRODUCE A SMALL M-CLASS EVENT, BUT WITH ONLY ONE M-CLASS FLARE SINCE ITS APPEARANCE, ONLY ISOLATED MODERATE FLARES ARE EXPECTED. THE 10.7 CM SOLAR RADIO FLUX IS EXPECTED TO FALL RAPIDLY WITH THE DECLINING ACTIVITY.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETLED DURING THE PAST NINE HOURS. NO SIGNIFICANT CHANGE IS EXPECTED DURING THE FORECAST PERIOD.

III. EVENT PROBABILITIES 21 SEPTEMBER - 23 SEPTEMBER

CLASS M 40/40/40

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 20 SEPTEMBER 199

PREDICTED 21-23 SEPTEMBER 195/190/180

90-DAY MEAN 20 SEPTEMBER 209

V. GEOMAGNETIC ACTIVITIES

OBSERVED AFR/AP 19 SEPTEMBER 28/25

ESTIMATED AFR/AP 20 SEPTEMBER 08/08

PREDICTED AFR/AP 21-23 SEPTEMBER 09/12 - 08/10 - 10/13

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