

HEUS.1 BOU 171300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 290A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 17 OCT 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

16/1200Z TO 17/1200Z:

SOLAR ACTIVITY WAS MODERATE DURING THIS PERIOD, WITH 3 M-CLASS EVENTS OBSERVED. FLARES ARE BEING REPORTED FROM MOST OF THE DOZEN REGIONS ON THE DISK, BUT AN M2.2/2B AT 1248Z IN REGION 3397 (S21W49) WAS THE LARGEST. THE 3390/3397 COMPLEX, ALONG WITH 3403 (S10E19) AND 3406 (S09E31), ARE ALL KEEPING THE 10 CM BACKGROUND FLUX QUITE HIGH (305 FU). SLOW DECAY IS APPARENT IN REGION 3390, WITH A 40 PERCENT DECREASE IN SPOT AREA. REGION 3403 IS NOW THE MOST IMPRESSIVE, WITH AN EXTREMELY COMPLEX NEUTRAL LINE AND OVER 2000 MILLIONTHS AREA.

IP. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY WILL BE MODERATE TO HIGH. AN X-CLASS EVENT IS LIKELY FROM REGION 3403 WITHIN THE NEXT 48 HOURS.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED. UNSETTLED TO ACTIVE CONDITIONS ARE FORECAST, BUT FOR THE NEXT WEEK GEOMAGNETIC ACTIVITY WILL BE HIGHLY DEPENDENT UPON MAJOR FLARE OCCURRENCES.

III. EVENT PROBABILITIES: 18-20 OCT

CLASS M 90/90/90

CLASS X 30/30/30

PROTON 30/30/30

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 16 OCT 305

ESTIMATED 17 OCT 312

PREDICTED 18-20 OCT 315/310/300

90 DAY MEAN 16 OCT 221

V. GEOMAGNETIC A INDICES

OBSERVED AFR 15 OCT 21 AP 16 OCT 08

ESTIMATED AFR 16 OCT 09 AFR/AP 17 OCT 12/15

PREDICTED AFR/AP 18-20 OCT 15/15 20/20 15/15

SOLTERWARN

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HEUS 3 BOU 172200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLO

SDE NUMBER 2908

JOINT JISAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 17 OCT 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM  
17/1200Z TO 17/2100Z:

SOLAR ACTIVITY HAS BEEN LOW DURING THE PERIOD WITH ONLY CLASS C  
FLARES BEING OBSERVED. REGION 3390 (S18W46) HAS SHOWN A DECREASE  
IN AREA IN WHITE LIGHT BUT IS DISPLAYING CONSTANT MAGNETIC  
EVOLUTION AND INCREASE IN GRADIENTS. REGION 3402 (S20W36) HAS  
DISPLAYED A SIGNIFICANT GROWTH TREND WHICH SHOULD CONTINUE INTO  
TOMORROW. REGION 3403 (S10E13) IS A MASSIVE REGION WITH SEVERAL  
DELTA CONFIGURATIONS. OVERALL THOUGH, THIS REGION HAS A  
BASICALLY NORTH-SOUTH NEUTRAL LINE WITH ONE DEEP INTRUSION  
IN ITS CENTER. 3403 MAY BE REACHING MATURITY. REGION 3406 (S09E36)  
HAS LOST ITS DELTA AND MAXIMUM GRADIENTS HAVE DECREASED. A BROAD  
SURGING AREA WAS OBSERVED WITH A C4/1B FLARE FROM DEPARTED REGION  
3401 (N19W96).

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY SHOULD RESUME MODERATE TO HIGH LEVELS. REGIONS 3390  
AND 3403 RETAIN MAJOR FLARE CAPABILITIES AND SHOULD PRODUCE THAT  
CLASS OF EVENTS IN SPITE OF THE CURRENT LULL. SHOULD GROWTH IN 3402  
CONTINUE FOR AN EXTENDED PERIOD, INTERACTION WITH 3390 COULD RESULT  
WHICH WOULD INCREASE THE FREQUENCY OF FLARING FROM THE SOUTHWEST  
QUADRANT. NO SIGNIFICANT REGIONS ARE EXPECTED TO RETURN DURING THE  
FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED. BARRING THE OCCURRENCE  
OF A MAJOR FLARE, SLIGHTLY ACTIVE TO UNSETTLED CONDITIONS ARE  
EXPECTED FOR THE NEXT THREE DAYS.

THE PROTON EVENT, AFTER A SMALL FLUX INCREASE AT ABOUT 0600 UT,  
IS CURRENTLY CONTINUING A SLOW DECLINE AND SHOULD END WITHIN THE  
NEXT FEW HOURS.

III. EVENT PROBABILITIES: 18 - 20 OCT

CLASS M 90/90/90

CLASS X 30/30/30

PROTON 30/30/30

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 18 OCT 305

PREDICTED 19 -21 OCT 300/295/285

90 DAY MEAN 18 OCT 222

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 16 OCT 06/08

ESTIMATED AFR/AP 17 OCT 13/15

PREDICTED AFR/AP 18 -21 OCT 15/15 12/12 10/10

SOLTERWARN

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