

HFUS 1 BOU 121300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 224A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 12 AUG 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM

11/1200Z TO 12/1200Z:

SOLAR ACTIVITY REACHED A HIGH LEVEL DURING THE PAST 24 HOURS.

AN X2/1B FLARE AT 1206Z 11U.T. WAS PRECEDED BY THREE "M".

LEVEL FLARES. ALL OF THESE EVENTS WERE PRODUCED BY REGION 3257 (S10W36). THE X2/1B PRODUCED A WEAK TYPE JI BURST, 14 MINUTES OF SHORT WAVE FADES UP TO 26 MHZ AND A "J" SHAPED SPECTRUM IN THE FIXED FREQUENCY EMISSION WITH 660 FLUX UNITS REPORTED AT 2695 MHZ. REGION 3257 IS SLOWLY RESTRUCTURING BUT ITS OVERALL POTENTIAL DOES NOT APPEAR DIMINISHED. ALTHOUGH SMALLER IN AREA, ITS SPOT COUNT IS NOW BACK TO 91. THIS INCREASE IN SPOT COUNT IS BELIEVED TO BE A RESULT OF THE EMERGING FLUX REPORTED IN THE REGION IN RECENT DAYS AS OPPOSED TO FRAGMENTATION OF THE LARGER SPOTS. REGION 3266 (S18E77) IS PRODUCING RATHER SIGNIFICANT SURGE ACTIVITY BUT IS STILL TOO CLOSE TO THE LIMB FOR A COMPLETE ANALYSIS. OUR 112200Z MESSAGE ERRONEOUSLY REFERRED TO THE REGION AT S18E45 AS NUMBER 3265. CORRECT LOCATIONS ARE: REGION 3265 (N03-E06) AND REGION 3266 (S18E77).

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO REMAIN AT MODERATE TO HIGH LEVELS. REGION 3266 MAY JOIN 3257 IN MAINTAINING THIS LEVEL.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD WAS ACTIVE THE LATTER HALF OF 11 AUG BECOMING QUIET EARLY ON 12 AUG. UNSETTLED CONDITIONS ARE EXPECTED FOR THE NEXT 36 TO 48 HOURS WITH POSSIBLE DISTURBED CONDITIONS ON 14 AUG AS A RESULT OF THE X2/1B MENTIONED ABOVE. A SMALL PROTON EVENT IS POSSIBLE LATER TODAY; ALSO A RESULT OF THE X2/1B. EXPECTED MAX FLUX IS 15 PARTICLES/CM²/SEC/STER NEAR 121700 U.T.

III. EVENT PROBABILITIES: 13 AUG - 15 AUG

CLASS M 95/95/95

CLASS X 25/25/25

PROTON 25/25/25

RCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 11 AUG 199

ESTIMATED 12 AUG 205

PREDICTED 13-15 AUG 216/221/228

90 DAY MEAN 11 AUG 176

V. GEOMAGNETIC INDICES

OBSERVED AFR 10 AUG 20 AP 11 AUG 15

ESTIMATED AFR 11 AUG 14 AFR/AP 12 AUG 10/15

PREDICTED AFR/AP 13-15 AUG 10/15 25/25 17/15

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FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLO
SDP NUMBER 224P

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 12 AUG 1981

I. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 12/1200Z
TO 12/2100Z:

SOLAR ACTIVITY HAS BEEN AT A LOW LEVEL SINCE THE X2/1B AT 12/0635UT,
WITH 1 M FLARE AT 1023 UT (UNASSOCIATED) AND MANY CLASS C FLARES.
REGION 3257 (S09W45) HAS INCREASED SLIGHTLY IN AREA AND HAS SHOWN
SIGNS OF REDEVELOPMENT. NEW FLUX HAS EMERGED NORTH OF THE REGION
AND A NEW REGION, 3267 (S17W38), HAS APPEARED SOUTH OF THE TRAILER.
REGION 3257 RETAINS ITS MAGNETIC COMPLEXITY AND POTENTIAL FOR MAJOR
FLARES. REGION 3266 (S16E72) HAS NOW ROTATED ON TO THE DISK AND
APPEARS TO BE SIMILAR IN SIZE AND COMPLEXITY TO 3257. REGION 3266
MAYBE THE RETURN OF 3240 WHICH WAS AN A TYPE AS IT ROTATED OFF
THE DISK. LIMP PROXIMITY PREVENTS DETAILED ANALYSIS. RAPID GROWTH
WAS REPORTED IN 3258 (S24W70) WHILE ALL OTHER OLD REGIONS WERE
STABLE OR DECLINING. FIVE NEW REGIONS WERE ADDED TODAY: 3267 (S17W38),
3268 (N12E35), 3269 (N14E58), 3270 (S20E53) AND 3271 (S07E28).

II. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO BE AT A MODERATE TO HIGH LEVEL THRU
THE FORECAST PERIOD. REGIONS 3257 AND 3268 SHOULD PRODUCE MOST OF
THE ACTIVITY.

III. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED THE PAST NINE HOURS. NO
PROTONS WERE DETECTED FROM THE X2/1B FLARE AT 12/0635 UT
AND ARE NO LONGER EXPECTED. THE GEOMAGNETIC FIELD SHOULD BE
GENERALLY UNSETTLED UNTIL 14 AUG WHEN ACTIVE CONDITIONS SHOULD
BEGIN AS A RESULT OF TODAYS FLARE.

IV. EVENT PROBABILITIES: 13 - 15 AUG

CLASS M 95/95/95

CLASS X 25/25/25

PROTON 25/25/25

PCAF YELLOW

V. OTTAWA 10.7 FLUX

OBSERVED 12 AUG 1981

PREDICTED 13 AUG - 15 AUG 203/208/214

90 DAY MEAN 12 AUG 176

VI. GEOMAGNETIC INDICES

OBSERVED AFR/AP 11 AUG 16/15

ESTIMATED AFR/AP 12 AUG 10/15

PREDICTED AFR/AP 13 - 15 AUG 10/15 25/25 17/15

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