

HFUS 1 BOU 121300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 255A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 12 SEPTEMBER 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
11/1200Z TO 12/1200Z:

SOLAR ACTIVITY HAS CONTINUED MODERATE. AN M2 X-RAY BURST WAS
OBSERVED AT 11/2313UT AND WAS ACCOMPANIED BY A MODERATE RADIO
BURST AT 4995 MHZ OF 480 F.U. ACTIVE SURGING FROM REGION 3310
(SW10) WAS OBSERVED AT THIS TIME. REGION 3317 (N09W27) HAS
PRODUCED SEVERAL HIGH CLASS C FLARES WITH MOST PRODUCING MINOR
CM BURSTS. OPTICALLY, THE FLARES TAKE THE FORM OF SEVERAL ERUP-
TIVE CENTERS SOMETIMES QUITE DISTANT. MAXIMUM MAGNETIC GRADIENTS
ARE HIGH BUT ARE RESTRICTED TO SMALL ISLANDS SURROUNDING THE
LEADER POLARITY. REGION 3329 (N19E56) HAS PRODUCED SEVERAL SUB-
FLARES AND APPEARS TO BE GROWING. TWO NEW REGIONS ARE ROTATING
OVER THE SOUTHEAST LIMB AT SE05 AND SE17. THE REGION AT SE05
APPEARS TO BE ACTIVE.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY SHOULD CONTINUE AT A MODERATE LEVEL. 3317 IS
STILL CAPABLE OF PRODUCING A MAJOR FLARE BUT MAGNETIC STRUC-
TURES AND RECENT FLARES SUGGEST IMPULSIVE LOW CLASS M FLARES
SHOULD BE THE NORM FROM THIS REGION. REGIONS CURRENTLY AND
EXPECTED AT THE EAST LIMB SHOULD HELP MAINTAIN MODERATE LEVELS
FOR THE FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN ACTIVE. ACTIVE CONDITIONS ARE
EXPECTED TO CONTINUE FOR 13 AND 14 SEPTEMBER DUE TO A CORONAL
HOLE HIGH SPEED WIND STREAM. UNSETTLED GEOMAGNETIC CONDITIONS ARE
EXPECTED ON 15 SEPTEMBER.

III. EVENT PROBABILITIES: 13 SEPTEMBER - 15 SEPTEMBER

CLASS M 90/90/90

CLASS X 20/20/20

PROTON 20/20/20

CAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 11 SEPTEMBER 238

ESTIMATED 12 SEPTEMBER 228

PREDICTED 13-15 SEPTEMBER 223/225/235

90 DAY MEAN 11 SEPTEMBER 202

V. GEOMAGNETIC A INDICES

OBSERVED AFR 10 SEP 08 AP 11 SEP 22

ESTIMATED AFR 11 SEP 20 AFR/AP 12 SEP 18/22

PREDICTED AFR/AP 13-15 SEP 25/18 20/15 13/15

SOLTERWARN

BT