

HFUS 1 BOU 19 1400

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 050A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2000UT 19 FEBRUARY 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 18/1200UT
TO 19/1200UT:

SOLAR ACTIVITY CONTINUES MODERATE WITH FOUR M-CLASS EVENTS OBSERVED IN THE PAST 24 HOURS. THE LARGEST OF THESE, AN M8/2B OCCURRED IN REGION 2941 (N18W40) AT 19/0349UT (X-RAY MAXIMUM). THIS FLARE, WHICH HAD A SECONDARY M2 MAXIMUM AT 0256UT, WAS UNUSUAL IN ITS EXCEPTIONALLY LONG DURATION (3 HRS, 21 MINS) ESPECIALLY IN THE DECAY PHASE. DISCRETE RADIO BURSTS WERE OBSERVED THROUGH THE SPECTRUM WITH 330 FLUX UNITS AT 2695MHZ. THIS REGION CONTINUES TO DEVELOP BOTH IN SIZE AND COMPLEXITY. REGIONS 2943 (N12W38) AND 2947 (N12W28) HAVE ALSO SHOWN SIGNIFICANT GROWTH BUT HAVE NOT BEEN CAPABLE OF LARGE FLARE PRODUCTION AS YET. ALL THREE REGIONS HAVE MAGNETIC DELTA CONFIGURATIONS PRESENT. A FLARE OBSERVED AT SE20 AT 0347Z MAXIMUM COULD HAVE CONTRIBUTED TO THE M8 X-RAY LEVEL, BUT AT THIS TIME LITTLE MORE IS KNOWN ABOUT THE EVENT. CULGOORA SAW IT AS A 1B WITH LOOP SHAPED PROMINENCES VISIBLE. THIS COULD BE THE FIRST INDICATION OF OLD REGION 2911 (S13, CAR102).

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE WITH M-CLASS EVENTS POSSIBLE FROM REGIONS 2941, 2943, AND 2947. AN ISOLATED X-CLASS FLARE IS POSSIBLE ESPECIALLY IF ALL THREE REGIONS INTERACT. RETURNING REGION 2911 COULD MAINTAIN THE MODERATE LEVEL IF IT DOES COME BACK ACTIVE.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN QUIET DURING THE PAST 24 HOURS. UNSETTLED CONDITIONS ARE EXPECTED FOR THE REMAINDER OF THE ZULU DAY FOLLOWED BY ACTIVE LEVELS AS THE RESULT OF RECENT FLARE ACTIVITY AND A FAVORABLY LOCATED CORONAL HOLE.

III. EVENT PROBABILITIES: 20 FEBRUARY - 22 FEBRUARY

CLASS M 80/80/70

CLASS X 20/20/15

PROTON 20/20/15

PCAF YELLOW

IV. OTTAWA 10.7 FLUX

OBSERVED 18 FEB 199

ESTIMATED 19 FEB 206

PREDICTED 20-22 FEB 205/202/195

90-DAY MEAN 18 FEB 199

V. GEOMAGNETIC A INDICES

OBSERVED AFR 17 FEB 06 AP 13 FEB 05

ESTIMATED AFR 18 FEB 05 AFR/AP 19 FEB 08/10

PREDICTED AFR/AP 20-22 FEB 19/23 - 15/18 - 12/15

SOLTERWARN

BT

HFUS 3 BOU 192200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 0508

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200UT 19 FEB 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
19/1200UT TO 19/2200UT:

SOLAR ACTIVITY HAS BEEN LOW SINCE THE M2 FLARE AT 1052Z. A
LARGE SUNSPOT (REGION 2953) HAS ROTATED INTO VIEW AT SE17 NEAR
THE SITE OF THE M8/1B FLARE OF 0349Z; HOWEVER, THE 10 CM RADIO
FLUX FROM THIS LOCATION IS LOW. SMALL NEW REGIONS HAVE FORMED
AT N09E20 (REGION 2951) AND N11E01 (REGION 2952). THE ACTIVITY
COMPLEX 2941-2943-2947 NEAR N15W40 HAS DECAYED SLIGHTLY, APPAR-
ENTLY ACCOUNTING FOR THE SHARP DROP IN RADIO FLUX.

IB. SOLAR ACTIVITY FORECAST:

SOLAR ACTIVITY IS EXPECTED TO INCLUDE ONE OR TWO CLASS M EVENTS
EACH DAY FOR THIS FORECAST PERIOD FROM EITHER THE NW OR SE
ACTIVITY CENTERS. A MAJOR ACTIVITY COMPLEX IS EXPECTED TO RE-
TURN TO SE LIMB BY THE THIRD DAY.

II. GEOPHYSICAL SUMMARY AND FORECAST:

THE GEOMAGNETIC FIELD HAS BEEN QUIET FOR THE PAST 24 HOURS.
UNSETTLED TO SLIGHTLY ACTIVE CONDITIONS MAY OCCUR AS THE SUN-
EARTH CONNECTION LONGITUDE PASSES THE RAPIDLY-EVOLVING ACTIVITY
COMPLEX 2941-43-47. NO EFFECT IS EXPECTED FROM A LARGE CORONAL
HOLE AS IT HAS BEEN ALIGNED WITH EARTH FOR THE PAST DAY WITH-
OUT CHANGING GEOMAGNETIC ACTIVITY.

III. EVENT PROBABILITIES: 20-22 FEBRUARY

CLASS M 80/80/80

CLASS X 20/20/20

PROTON 20/20/15

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 19 FEB 183

PREDICTED 20-22 FEB 183/186/195

90 DAY MEAN 19 FEB 199

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 18 FEB 07/05

ESTIMATED AFR/AP 19 FEB 06/07

PREDICTED AFR/AP 20-22 FEB 12/15 15/15 12/15

SOLTERWARM

BT