

HFUS 1 BOU 211300
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 021A
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 1300Z 21 JAN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
20/1200Z TO 21/1200Z: SOLAR ACTIVITY HAS BEEN AT LOW LEVELS FOR
OVER A WEEK NOW, BUT THE FREQUENCY OF C-CLASS XRAY EVENTS HAS
STILL BEEN FAIRLY HIGH. THE FEW OBSERVATORY REPORTS THAT HAVE
BEEN RECEIVED IN BOULDER INDICATE AN OVERALL LEVELING OFF IN
SPOT GROWTH ON THE SOLAR DISK. REGION 3549 (S10W62) REMAINS
THE ONLY REGION WITH SIGNIFICANT SIZE OR COMPLEXITY.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO
CONTINUE AT LOW LEVELS OVER THE NEXT FEW DAYS, ALTHOUGH THERE
IS A REASONABLE CHANCE OF AN ISOLATED M-CLASS EVENT FROM REGION
3549 BEFORE IT PASSES THE WEST LIMB. THE LONG RANGE FORECAST
IS FOR ACTIVITY LEVELS AND THE BACKGROUND 10 CM RADIO FLUX TO
DECLINE SLIGHTLY OVER THE NEXT THREE DAYS, BEFORE INCREASING
AGAIN WITH THE RETURN OF ACTIVE SOLAR LONGITUDES NEAR
CARRINGTON 280.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS
QUIET UNTIL 0600Z, WHEN IT BECAME HIGHLY UNSETTLED. A LARGE,
WELL-DEFINED CORONAL HOLE IS SUGGESTED BY HELIUM 10830 DATA.
THE EFFECTS OF THIS CORONAL HOLE SHOULD BRING ACTIVE CONDITIONS
ON 23 JAN.

III. EVENT PROBABILITIES 22 JAN-24 JAN

CLASS M 50/50/40
CLASS X 02/02/01
PROTON 02/02/01
PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 20 JAN 173
ESTIMATED 21 JAN 173
PREDICTED 22 JAN-24 JAN 170/166/163
90 DAY MEAN 20 JAN 197

V. GEOMAGNETIC A INDICES

OBSERVED AFR 19 JAN 002 AP 20 JAN 005
ESTIMATED AFR 20 JAN 007 AFR/AP 21 JAN 008/010
PREDICTED AFR/AP 22 JAN-24 JAN 008/008-020/020-012/015

SOLTERWARN

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HXUS BOU 211300

PREDM 05022 05023 04024

PREDX 00222 00223 00124

PREDP 00222 00223 00124

PCAF 00122

TENCM 17022 16623 16324

AFRED 00822 02023 01224

AFAPF 00822 02023 01524

KKK 23232 22222 22443

BT

HFUS 3 BOU 212200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 021B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 21 JAN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM
21/1200Z TO 21/2100Z: SOLAR ACTIVITY HAS BEEN LOW WITH ONLY
SMALL CLASS C FLARES BEING OBSERVED. MINOR CHANGES HAVE
OCCURRED IN PREEXISTING REGIONS. HOWEVER, NEW REGIONS HAVE
EMERGED ON THE DISK, MOST SIGNIFICANTLY REGION 3569 (S08E52)
WHICH IS GROWING QUITE RAPIDLY AND IS CURRENTLY A D CLASS
SUNSPOT GROUP. A SMALL GROWING REGION HAS EMERGED NORTH OF
3556 (N07W22) AT N12W18 AND HAS BEEN NUMBERED 3568.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE LOW
WITH A MODERATE PROBABILITY OF AN M CLASS FLARE BEING OBSERVED
DURING THE FORECAST PERIOD. SHOULD REGION 3569 CONTINUE ITS
RAPID GROWTH TREND IT COULD BECOME CAPABLE OF MODERATE FLARE
PRODUCTION WITHIN THE NEAR FUTURE. PREVIOUSLY ACTIVE
LONGITUDES ARE EXPECTED TO BEGIN RETURNING TO THE EAST LIMB
NEAR THE END OF THE FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS
BEEN ACTIVE DURING THE LAST NINE HOURS. ISEE SOLAR WIND DATA
INDICATE A DENSE CLOUD OF MATERIAL IN THE EARTH'S NEIGHBORHOOD
VERY LIKELY RELATED TO A LARGE FILAMENT DISRUPTION IN THE
SOUTHWEST QUADRANT LATE ON 17 JANUARY. THIS DISTURBANCE IS
EXPECTED TO DECLINE SLOWLY WITH UNSETTLED CONDITIONS EXPECTED
TOMORROW. THE FIELD SHOULD BECOME ACTIVE ON 23 JANUARY DUE TO
CORONAL HOLE EFFECTS AND THEN RETURN TO UNSETTLED LEVELS ON 24
JANUARY.

III. EVENT PROBABILITIES 22 JAN-24 JAN

CLASS M 50/50/50

CLASS X 02/02/01

PROTON 02/02/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 JAN 169

PREDICTED 22 JAN-24 JAN 166/160/167

90 DAY MEAN 21 JAN 196

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 20 JAN 007/005

ESTIMATED AFR/AP 21 JAN 014/012

PREDICTED AFR/AP 22 JAN-24 JAN 012/012-020/020-014/015

SOLTERWARN

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