

HFXS 1 BOU 201300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 020A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 20 JAN 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 19/1200Z TO 20/1200Z: SOLAR ACTIVITY INCREASED DISTINCTLY IN THE PAST 24 HOURS BUT DID NOT EXCEED THE LOW-ACTIVITY CATEGORY. NUMEROUS SUBFLARES OCCURRED, INCLUDING C9 EVENTS AT 2036Z AND 2159Z, BUT POOR WEATHER PREVENTED ANY OPTICAL CORRELATIONS. IT IS EXPECTED THAT MOST ACTIVITY ORIGINATED FROM REGION 3549(S10W47) AND REGION 3553(S07W72) BY VIRTUE OF THEIR SIZE, BRIGHTNESS AND STRUCTURE. REGION 3559 (S14W36) HAS GREATLY DIMINISHED IN INTENSITY, BUT ITS LEADER SPOT HAS PENETRATED THE TRAILING PORTION OF REGION 3549 AND FORCED SIGNIFICANT RESTRUCTURING. A SMALL FILAMENT NORTH OF THESE REGIONS HAS DISAPPEARED. REGION 3553 HAS GROWN TO A CLASS E SPOT GROUP AND HAS A BRILLIANT PLAGE AS IT APPROACHES WEST LIMB. REGION 3564(N06W48) HAS EMERGED NEAR REGION 3550(N04W59) AND IS GROWING. THIS ADDS ANOTHER SIGNIFICANT REGION TO THE LARGE ACTIVITY COMPLEX. REGION 3565(N31W12) IS ALSO GROWING AND HAS A STRONG ARCH-FILAMENT SYSTEM. A FILAMENT DISAPPEARED FROM N08E17 AS MAJOR RESTRUCTURING BEGAN AMONG NEARBY NEUTRAL LINES. THIS LOCATION BORDERS A LARGE AND CONSPICUOUS TRANSEQUATORIAL CORONAL HOLE NOW AT CENTRAL MERIDIAN. WEAK RADIO EMISSION CONTINUES FROM BEHIND EAST LIMB.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE NEAR OR SLIGHTLY ABOVE THE C/M THRESHOLD DURING THE NEXT THREE DAYS, WITH ACTIVITY CONCENTRATED IN REGION 3549.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN QUIET WITH A BRIEF INTERVAL OF UNSETTLED CONDITIONS AT ABOUT 0500Z. QUIET CONDITIONS ARE EXPECTED FOR ANOTHER 48 HOURS. THE FILAMENT DISAPPEARANCE EARLY ON 19 JANUARY NEAR THE LARGE CORONAL HOLE IS EXPECTED TO RESULT IN ACTIVE GEOMAGNETIC CONDITIONS THE LATTER HALF OF 23 JANUARY.

III. EVENT PROBABILITIES 21 JAN-23 JAN

CLASS M 60/50/50

CLASS X 02/02/02

PROTON 02/02/02

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 19 JAN 175

ESTIMATED 20 JAN 178

PREDICTED 21 JAN-23 JAN 181/183/183

90 DAY MEAN 19 JAN 197

V. GEOMAGNETIC A INDICES

OBSERVED AFR 18 JAN 012 AP 19 JAN 005

ESTIMATED AFR 19 JAN 004 AFR/AP 20 JAN 006/008

PREDICTED AFR/AP 21 JAN-23 JAN 005/010-008/008-019/020

SOLTERWARN

BT

HFXS BOU 201300

PREDM 06021 05022 05023

PREDX 00221 00222 00223

PREDP 00221 00222 00223

PCAF 00121

TENCM 18121 18322 18323

AFRED 00521 00822 01923

AFAPF 01021 00822 02023

KIK 21122 11112 23222

BT

NNNNZCVZDZEZGVZL梓OUU

KBOU

HEUS 3 BOU 202200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 8203

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 20 JANUARY 1982

I4. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/1200Z TO 2100Z: SOLAR ACTIVITY HAS BEEN AT LOW LEVELS DURING THE PAST 9 HOURS. DURING THE PERIOD ONLY TWO C-CLASS X-RAY EVENTS WERE OBSERVED. THE FIRST (C2.1) MAXED AT 1203Z; THE SECOND (C2.2) PEAKED AT 1224Z. DUE TO POOR WEATHER CONDITIONS, THE SOURCES REMAIN UNIDENTIFIED. REGION 3549 (S10W50) REMAINS THE LARGEST SPOT GROUP, BUT APPEARS STABLE. IN THE EASTERN HEMISPHERE REGIONS 3557 (S01E20) AND 3567 (S37E20) APPEAR TO BE MERGING AS THEY SLOWLY GROW.

I5. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO DECLINE OVER THE NEAR TERM AS THE LARGE COMPLEX IN THE SOUTH-WEST QUADRANT BEGINS ROTATING OFF THE WEST LIMB, LED BY REGION 3553 (S07W51). REGIONS EAST OF CENTRAL MERIDIAN, ALTHOUGH GROWING SLOWLY, APPEAR TO POSE LITTLE THREAT AT THEIR CURRENT STAGE OF GROWTH.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS REMAINED AT QUIET LEVELS DURING THE DAY. A LARGE EQUATORIAL CORONAL HOLE, CURRENTLY PASSING CENTRAL MERIDIAN, IS EXPECTED TO CONTRIBUTE TO INCREASINGLY UNSETLED TO ACTIVE GEOMAGNETIC CONDITIONS BETWEEN NOW AND 23 JANUARY.

III. EVENT PROBABILITIES 21 JANUARY - 23 JANUARY

CLASS M 64/50/50

CLASS X 32/02/22

PROTON 02/02/02

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 20 JANUARY 173

PREDICTED 21-23 JANUARY 173/170/165

90-DAY MEAN 20 JANUARY 197

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 19 JANUARY 22/05

ESTIMATED AFR/AP 20 JANUARY 07/07

PREDICTED AFR/AP 21-23 JANUARY 05/10 - 08/08 - 19/20

SOLTERWARN

BT