

HFUS 1 BOU 271300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 361A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 27 DEC 1981

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 26/1200Z TO 27/1200Z: SOLAR ACTIVITY CONTINUES LOW. THE MOST SIGNIFICANT OCCURRENCE WAS A COMPLEX EVENT WHICH BEGAN WITH A C2/1N FLARE FROM REGION 3523 (S08E06) AT 27/0159UT. THIS FLARE APPARENTLY ACTIVATED A NEARBY FILAMENT (S20E24-S33E33) WHICH ERUPTED BETWEEN 0210-0238UT. SOME MATERIAL IS PRESUMED TO HAVE RETURNED TO THE SURFACE RESULTING IN A LARGE AREA/LONG DURATION FLARE INVOLVING PORTIONS OF REGIONS 3523 AND 3525 (S19E12). A C5 X-RAY ENHANCEMENT BEGAN AT 0245UT, REACHED MAXIMUM AT 0330UT AND REMAINED ENHANCED UNTIL AFTER 0800UT. A MODERATE BUT VERY SLOW DRIFT TYPE II ACCOMPANIED THIS SECOND ERUPTIVE/FLARE. TWO PLAGE AREAS HAVE APPEARED AT NE03 AND NE19. PLAGE AREA AND BRIGHTNESS ARE NOT EXCEPTIONALLY LARGE OR INTENSE. REGIONS 3521 (S24W25) AND 3525 ARE GROWING.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD REMAIN LOW WITH A SLIGHT POSSIBILITY OF AN M CLASS FLARE OCCURRING. PREVIOUSLY ACTIVE LONGITUDES ARE EXPECTED TO RETURN TO THE EAST LIMB ON 28/29 DECEMBER BUT ARE NOT EXPECTED TO SIGNIFICANTLY RAISE FLARE LEVELS.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN QUIET TO MILDLY UNSETLED. ACTIVE CONDITIONS ARE EXPECTED FOR 28 DECEMBER DUE TO A CORONAL HOLE NOW IN THE SOUTHWEST QUADRANT. UNSETLED CONDITIONS SHOULD DOMINATE THE REMAINDER OF THE PERIOD WITH NEAR ACTIVE LEVELS POSSIBLE LATE ON 30 DECEMBER IN RESPONSE TO THE FILAMENT DISRUPTION TODAY. THE BULK OF THIS DISTURBANCE, IF IT OCCURS SINCE THE SUCCESS OF THIS TYPE OF PREDICTION IS LOW, WOULD BE ON 31 DECEMBER.

III. EVFNT PROBABILITIES 28 DEC-30 DEC

CLASS M 20/20/20

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 26 DEC 172

ESTIMATED 27 DEC 181

PREDICTED 28 DEC-30 DEC 187/193/198

90 DAY MEAN 26 DEC 215

V. GEOMAGNETIC A INDICES

OBSERVED AFR 25 DEC 005 AP 26 DEC 006

ESTIMATED AFR 26 DEC 007 AFR/AP 27 DEC 008/014

PREDICTED AFR/AP 28 DEC-30 DEC 016/016-010/014-012/008

SOLTERWARN

PT

HXUS BOU 272200
PREDM 02028 02029 02030
PREFDX 00128 00129 00130
PREDP 00128 00129 00130
PCAFT 00128
TENCM 18728 19329 19830
AFRED 01628 01229 01230
AFAPP 01628 01429 00830
PT

HXUS 3 BOU 272200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 3613

JOINT USAF/NASA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2222Z 27 DEC 1981

I A. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 27/1200Z TO 27/2100Z: SOLAR ACTIVITY REMAINS LOW. ACTIVITY DURING THE PAST NINE HOURS HAS CONSISTED OF ONLY C CLASS X-RAY EVENTS WITH NO OPTICAL CORRELATION DUE TO WEATHER AT MOST OF THE WESTERN HEMISPHERE OBSERVATORIES. REGION 3525 (S20E07) IS NOW CLASSIFIED AS A BETA GAMMA TYPE GROUP, BUT STILL REMAINS SMALL AND UNIMPRESSIVE. THE REMAINING SPOTTED DISK REGIONS HAVE SHOWN LITTLE CHANGE. A BRIGHT PLAGE IS NOW VISIBLE IN H-ALPHA AT N19E82 BUT HAS YET TO SHOW SIGNS OF ASSOCIATED SPOTS. NEW REGION 3529 (S23W33) HAS DEVELOPED ON THE DISK AS A SIMPLE B-TYPE GROUP.

I B. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN LOW DURING THE FORECAST PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN UNSETLED DURING THE PERIOD. THE FIELD IS EXPECTED TO BECOME ACTIVE EARLY ON THE 28TH AS A RESULT OF THE EFFECTS OF A DEVELOPING CORONAL HOLE NOW LOCATED AT S15W48 (CENTER). UNSETLED CONDITIONS SHOULD DOMINATE THE FIELD THE REMAINDER OF THE PERIOD.

III. EVENT PROBABILITIES 28 DEC-30 DEC

CLASS M 20/20/20

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 27 DEC 183

PREDICTED 28 DEC-30 DEC 187/193/198

90 DAY MEAN 27 DEC 215

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 26 DEC 008/006

ESTIMATED AFR/AP 27 DEC 008/008

PREDICTED AFR/AP 28 DEC-30 DEC 016/016-010/014-012/008

SOLTERWARN

PT

HXUS BOU 272200

PREDM 02028 02029 02030

PREFDX 00128 00129 00130

PREDP 00128 00129 00130

PCAFT 00128

TENCM 18728 19329 19830

AFRED 01628 01029 01230

AFAPP 01628 01429 00830

PT