

HFUS 3 BOU 241400

FROM SPACE ENVIRONMENT SERVICES CENTER , BOULDER , COLORADO  
SDF NUMBER 329A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 1200UT 24 NOVEMBER 1980

IA. SOLAR ACTIVITY REACHED THE MODERATE LEVEL BRIEFLY DURING THE PAST 24 HOURS WITH THE OCCURRENCE OF AN M2/1B FLARE IN REGION 2793 (N12W28) AT 23/1905Z MAXIMUM. A STRONG TYPE II RADIO SWEEP WAS OBSERVED WITH THIS EVENT. DECAY NOTED IN THIS REGION YESTERDAY HAS BEEN REPLACED BY GROWTH AND RESTRUCTURING IN DIFFERENT PORTIONS OF THE REGION TODAY WITH ARCH FILAMENTS NOW VISIBLE. ITS SISTER REGION, 2794 (N11W43) HAS ALSO SHOWN SLOW GROWTH WITH MINOR ACTIVITY. REGION 2797 (S18E07) AND PREVIOUSLY SPOTLESS REGION 2799 (S12E05) HAVE SHOWN SOME DEVELOPMENT AND INTERACTION ALONG A COMMON NEUTRAL LINE. NEW REGION 2802 (S08W48) NOW APPEARS TO HAVE STABILIZED AFTER PRODUCING MINOR ACTIVITY IN ITS GROWTH PHASE.

IB. SOLAR ACTIVITY SHOULD BE LOW TO MODERATE THROUGH THE NEXT 24 HOURS. SOLAR INDICES (10.7 CM FLUX AND SUNSPOT COUNT) SHOULD GRADUALLY INCREASE WITH THE RETURN OF ACTIVE LONGITUDES AFTER TODAY.

II. THE GEOMAGNETIC FIELD WAS QUIET TO OCCASIONALLY UNSETTLED DURING THE PAST 24 HOURS. NO CHANGE IS EXPECTED UNTIL THE 26TH OF NOVEMBER WHEN ACTIVE CONDITIONS ARE LIKELY AS THE RESULT OF RECURRENCE AND/OR FILAMENT ACTIVITY. A GRADUAL PROTON ENHANCEMENT WAS RECORDED AT SATELLITE ALTITUDES BEGINNING ABOUT 23/2300Z WITH A SLOW RISE TO A MAXIMUM OF 8 PARTICLES/CM2/SEC/STER AT GREATER THAN 10 MEV AT 24/0440Z. THE PROBABLE CAUSE OF THIS PARTICLE ENHANCEMENT IS THE M2/1B FLARE ON THE 23RD. ITS IDEAL LOCATION (N11W23) AND TYPE II SWEEP ARE GOOD INDICATORS EVEN THOUGH THE X-RAY EVENT WASN'T THAT LARGE.

III. EVENT PROBABILITIES: 25 - 27 NOVEMBER

CLASS M 65/70/75

CLASS X 01/01/05

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 23 NOV 172

ESTIMATED 24 NOV 175

PREDICTED 25-27 NOV 175/178/182

90 DAY MEAN 23 NOV 202

V. GEOMAGNETIC A INDICES

OBSERVED AFR 22 NOV 07 AP 23 NOV 07

ESTIMATED AFR 23 NOV 07 AFR/AP 24 NOV 08/08

PREDICTED AFR/AP 25-27 NOV 06/08 15/15 12/12

SOLTERWARN

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HFUS 1 BOU 242200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLORADO

SDF NUMBER 329B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY

ISSUED 2200Z 24 NOVEMBER 1980

IA. SOLAR ACTIVITY HAS BEEN LOW FOR THE PAST 24 HOURS. THE STRONGEST CLASS C EVENTS CONTINUE TO OCCUR IN REGIONS 2793 (N11W34) AND 2794 (N11W50). THE LATTER HAS DEVELOPED MINOR NEW SPOTS AND INCREASED IN FLARE INTENSITY. SLOW GROWTH HAS OCCURRED IN REGION 2801 (N16W63) AND 2802 (S07W55) AND NEW REGIONS HAVE APPEARED: 2804 (N09W64), 2805 (S05E31), 2806 (S32E38), AND 2807 (N22E32). A LARGE SURGE AND/OR SPRAY OCCURRED AT 1943Z FROM N14E90, SIGNALLING THE RETURN OF REGION 2772, A SOURCE OF CLASS M FLARES ON ITS PREVIOUS DISK PASSAGE.

IB. SOLAR ACTIVITY SHOULD BE LOW TO MODERATE AS POTENTIAL FOR ACTIVITY REMAINS IN REGION 2794 AND POSSIBLY FROM THE NORTHEAST LIMB.

II. THE GEOMAGNETIC FIELD HAS BEEN QUIET TO SLIGHTLY UNSETTLED TODAY. ACTIVE CONDITIONS ARE EXPECTED 26-27 NOVEMBER FROM A COMBINATION OF THE M2 FLARE YESTERDAY, THE DISAPPEARING FILAMENT ON 22 NOVEMBER AND THE CORONAL HOLE LYING SOUTH OF AND ADJACENT TO THE SITE OF THE DISRUPTED FILAMENT. A WEAK PROTON ENHANCEMENT BEGAN 23/2300Z AND PEAKED AT 8 PARTICLES/CM<sup>2</sup>/SEC/STER AT GREATER THAN 10 MEV AT 24/0440Z. THE PROBABLE CAUSE WAS THE M2/1B FLARE ON THE 23RD. ITS IDEAL LOCATION (N11W23) AND TYPE II SWEEP RADIO BURST ARE GOOD PARTICLE PREDICTORS EVEN THOUGH THE X-RAY INTENSITY WAS RELATIVELY LOW.

III. EVENT PROBABILITIES 25 NOVEMBER - 27 NOVEMBER

CLASS M 65/70/75

CLASS X 01/01/05

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 24 NOVEMBER 180

PREDICTED 25-27 NOVEMBER 185/190/195

90-DAY MEAN 24 NOVEMBER 203

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 23 NOVEMBER 10/07

ESTIMATED AFR/AP 24 NOVEMBER 10/08

PREDICTED AFR/AP 25-27 NOVEMBER 06/08 - 15/15 - 15/15

NOTE - TO ALL 1200Z AND 2200Z FORECAST CUSTOMERS:

SINCE 01 OCTOBER 1980, SESC HAS BEEN ISSUING TWO FORECASTS DAILY, AT 1200Z AND 2200Z. AT A FUTURE DATE, PARTS IA AND II OF THE 2200Z REPORT MAY BE SHORTENED TO INCLUDE ONLY SIGNIFICANT CHANGES/ACTIVITY SINCE THE 1200Z REPORT. IF YOU WISH TO BE DELETED AS AN ADDRESSEE ON EITHER THE 1200Z OR 2200Z REPORT, REQUEST YOU SUBMIT YOUR REQUIREMENTS NOT LATER THAN 15 DECEMBER 1980. IF YOU HAVE WORKED OUT A STANDING PROCEDURE WITH THE SESC COMM CENTER - DISREGARD THIS NOTICE. CIVILIAN CUSTOMERS PLEASE ADDRESS YOUR RESPONSE AND/OR COMMENTS TO KURT L CARRAN, COMM MANAGER, SESC; MILITARY CUSTOMERS TO