

HFUS 1 BOU 231300  
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO  
SDF NUMBER 327A  
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.  
ISSUED 1300Z 23 NOV 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 22/1200Z TO 23/1200Z: SOLAR ACTIVITY HAS BEEN MODERATE TO HIGH. REGION 3994 (S11W49) PRODUCED A M7/IN FLARE WITH X-RAY MAXIMUM AT 1828Z. DISCRETE FREQUENCY RADIO BURSTS WERE STRONG AND COMPLEX WITH 8,200 FU BURST BEING RECORDED AT 2695 MHZ. TYPE II AND IV DEKAMETRIC BURSTS OCCURRED WITH THIS FLARE. REGION 3994 ALSO PRODUCED A M2/SB AT 2343Z AND A M1/SB AT 0219Z. ADDITIONALLY, M1 X-RAY FLARES OCCURRED AT 0315Z, 0806Z, AND 1115Z. REGION 3994 REMAINS LARGE, COMPLEX, AND FLARE RICH. REGIONS 4003 (N12W86) AND 4004 (N17W57) EMERGED RAPIDLY ON 22 NOVEMBER.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO REMAIN MODERATE TO HIGH AS REGION 3994 CONTINUES AS A DOMINANT CENTER OF ACTIVITY.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS QUIET TO SLIGHTLY UNSETTLED UNTIL 0918Z WHEN BOULDER RECORDED A SUDDEN IMPULSE. ISSE-3, NOW BEHIND THE EARTH, RECORDED THE SHOCK AT A LATER TIME. UNSETTLED TO ACTIVE CONDITIONS ARE EXPECTED TO CONTINUE FOR ABOUT 24 HOURS. THE FIELD IS EXPECTED TO GO TO STORM LEVEL THE LATTER HALF OF 24 NOVEMBER IN RESPONSE TO YESTERDAYS M7 FLARE. IT IS THEN EXPECTED TO REMAIN AT OR NEAR STORM LEVEL FOR THE BALANCE OF THE FORECAST PERIOD. THE GREATER THAN 10 MEV SATELLITE PROTON FLUX CROSSED THE THRESHOLD OF 10 P/CM<sup>2</sup>/SEC/STER AT 22/1940Z AND REACHED A MAXIMUM FLUX OF 40 AT 22/2140Z. THE FLUX CURRENTLY IS NEAR 15 BUT THE LEVELS ARE EXPECTED TO RISE LATER TODAY IN RESPONSE TO THE M7 FLARE. THE SOURCE OF THIS INITIAL PROTON EVENT IS BELIEVED TO BE THE LONG-LIVED M1/2B ON 21 NOVEMBER. THE CALCULATED PCA ABSORPTION REACHED A MAXIMUM OF 2.4 DB AT 22/2145Z.

III. EVENT PROBABILITIES 24 NOV-26 NOV

CLASS M 90/90/90

CLASS X 15/15/15

PROTON 15/15/15

PCAF IN PROGRESS

IV. OTTAWA 10.7 CM FLUX

OBSERVED 22 NOV 222

ESTIMATED 23 NOV 225

PREDICTED 24 NOV-26 NOV 222/220/213

90 DAY MEAN 22 NOV 165

V. GEOMAGNETIC A INDICES

OBSERVED AFR 21 NOV 016 AP 22 NOV 328

ESTIMATED AFR 22 NOV 025 AFR/AP 23 NOV 012/015

PREDICTED AFR/AP 24 NOV-26 NOV 028/020-035/040-028/045

SOLTERWARN

BT

REF ID: A652800 FOR TAPE

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDE NUMBER 327B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 23 NOV 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 23/1200Z TO 23/2100Z: SOLAR ACTIVITY HAS CONTINUED MODERATE. REGION 3994(S11W56) REMAINS THE SOURCE AND ALTHOUGH OBSERVATIONS ARE LIMITED, THERE IS NO REASON TO BELIEVE THAT IT WILL NOT CONTINUE DYNAMIC UNTIL WEST LIMB PASSAGE. DURING THE PAST NINE HOURS, M1 FLARES WERE OBSERVED AT 1344UT AND 1451UT. NEITHER OF THESE EVENTS CORRELATED WITH THE OPTICAL DATA BUT IT IS ASSUMED THAT THEY CAME FROM REGION 3994. RADIO NOISE AT ALL FREQUENCIES IS BEING REPORTED FREQUENTLY AND THIS TOO IS BELIEVED TO BE FROM 3994 AS ARE THE SHORTWAVE FADES AT 1457UT (MAX) AND 1525UT(MAX). THE LACK OF OBSERVATIONS PRECLUDES FURTHER EVALUATION.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY SHOULD CONTINUE MODERATE UNTIL 3994 CROSSES WEST LIMB.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD EXPERIENCED MINOR TO MAJOR STORM CONDITIONS BETWEEN 1500Z AND 2100Z TODAY. DISTURBED CONDITIONS ARE LIKELY DURING THE NEXT 72 HOURS AS THE FIELD EXPERIENCES INTERVALS OF MINOR TO MAJOR STORM CONDITIONS. THE SATELLITE PROTON EVENT CONTINUES WITH FLUX VALUES READING 24 PARTICLES/CM<sup>2</sup>/SEC/STER AT FORECAST TIME.

III. EVENT PROBABILITIES 24 NOV-26 NOV

CLASS M 90/90/90

CLASS X 15/15/15

PROTON 15/15/15

PCAF IN PROGRESS

IV. OTTAWA 10.7 CM FLUX

OBSERVED 23 NOV 201

PREDICTED 24 NOV-26 NOV 196/190/185

90 DAY MEAN 23 NOV 165

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 22 NOV 024/028

ESTIMATED AFR/AP 23 NOV 024/034

PREDICTED AFR/AP 24 NOV-26 NOV 028/040-035/045-028/030

SOLTERWARN

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