

HFUS 1 BOU 261300

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 330A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1300Z 26 NOV 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 25/1200Z TO 26/1200Z: SOLAR ACTIVITY HAS BEEN HIGH. AN X4/2B FLARE OCCURRED IN REGION 3994 (S11W84) WITH XRAY MAXIMUM AT 26/0253Z. A TYPE IV RADIO EVENT OF IMPORTANCE 3 AND A POSSIBLE TYPE II EVENT BURIED IN THE TYPE IV WERE REPORTED WITH THIS EVENT. STRONG RADIO BURSTS FROM 610 MHZ TO 15400 MHZ INCLUDING A 10 CM BURST OF 1600 FLUX UNITS ALSO ACCOMPANIED THIS FLARE. NUMEROUS CLASS C XRAY EVENTS OCCURRED DURING THIS PERIOD BUT LIMITED OPTICAL OBSERVATIONS PROHIBITED REGION CORRELATION. REGION 4000 (S22E07) DID HOWEVER PRODUCE TWO OPTICAL FLARES (SF AND SN) WITHOUT XRAYS. REGION 3994 SHOWED SOME DECAY PRIOR TO THE FLARE, AND PRODUCED LOOPS AS IT WAS TRANSITING THE WEST LIMB. REGION 4000 HAS GROWN IN WHITE LIGHT AND HAD AN ARCHED FILAMENT SYSTEM DURING THIS PERIOD. SURGING HAS OCCURRED ON THE EAST LIMB AT S15 WHERE PLAGE OF A RETURNING REGION IS VISIBLE.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO RETURN TO LOW AS REGION 3994 ROTATES OFF OF THE DISK.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD WAS AT MINOR STORM LEVELS DURING THIS PERIOD. A PROTON EVENT ASSOCIATED WITH THE FLARE BEGAN AT 26/0605Z AND APPEARS TO HAVE MAXED AT 26/1045Z WITH A FLUX OF 89 / CM2 / SEC / STER AT GREATER THAN 10 MEV. THIS FLUX INDICATES THAT A POLAR CAP ABSORPTION EVENT MAY HAVE BEGUN AT 26/0930Z AND SUGGESTS THAT THE PCA WOULD BE ON THE ORDER OF 3 DB FOR A 30 MHZ RIOMETER. THE GEOMAGNETIC FIELD IS EXPECTED TO BE AT ACTIVE LEVELS FOR THE 27 TH AND THEN RETURN TO MINOR STORM LEVELS IN RESPONSE TO THE X4 FLARE. THE ARRIVAL TIME OF THIS ACTIVITY IS UNCERTAIN BUT IT IS EXPECTED TO BE ON THE 23TH OR THE 29TH.

III. EVENT PROBABILITIES 27 NOV-29 NOV

CLASS M 15/15/15

CLASS X 01/01/01

PROTON 10/01/01

PCAF IN PROGRESS

IV. OTTAWA 10.7 CM FLUX

OBSERVED 25 NOV 169

ESTIMATED 26 NOV 158

PREDICTED 27 NOV-29 NOV 154/151/149

90 DAY MEAN 25 NOV 156

V. GEOMAGNETIC A INDICES

OBSERVED AFR 24 NOV 043 AP 25 NOV 059

ESTIMATED AFR 25 NOV 038 AFR/AP 26 NOV 025/035

PREDICTED AFR/AP 27 NOV-29 NOV 020/020-015/030-025/035

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HFUS 3 BOU 262200
FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 330B
JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200Z 26 NOV 1982

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 26/1200Z TO 26/2100Z: SOLAR ACTIVITY HAS BEEN MODERATE DURING THE PAST NINE HOURS FOLLOWING THE X4/2B FLARE AT 25/0253Z MAXIMUM FROM REGION 3994 (S11W100). SEVERAL M-CLASS XRAY EVENTS HAVE OCCURRED WITH NO OPTICAL CORRELATION, THUS ASSUMING ALL WERE PRODUCED FROM REGION 3994. THE LARGEST OF THE PERIOD WAS AN M2.7 AT 1612Z MAXIMUM WITH MODERATE DISCRETE FREQUENCY RADIO EMISSION AND SHORT WAVE FADES TO 15MHZ. NEW REGION 4005 (S11E69) HAS ROTATED ONTO THE DISK AS A LARGE H-TYPE SPOT WITH POSSIBLE TRAILER SPOTS YET TO BECOME VISIBLE. THIS GROUP COULD CONTAIN A MAGNETIC DELTA CONFIGURATION, BUT LIMB PROXIMITY PROHIBITS EXTENSIVE ANALYSIS. A SPOTLESS PLAGE REGION (NOW NUMBERED 4006) AT S26W14 PRODUCED A C6/2B FLARE AT 2044Z WITH A WEAK TYPE II RADIO SWEEP ASSOCIATED WITH IT. THE REMAINING DISK REGIONS HAVE BEEN QUIET AND LITTLE CHANGED.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO CONTINUE MODERATE FROM ANOTHER 24 HOURS UNTIL REGION 3994 IS WELL BEHIND WEST LIMB. LOW LEVELS OF ACTIVITY SHOULD THEN PERSIST FOR THE REMAINDER OF THE PERIOD.

II. GEOPHYSICAL SUMMARY AND FORECAST: THE GEOMAGNETIC FIELD HAS BEEN ACTIVE DURING THE PERIOD AT MID-LATITUDES. AT HIGH-LATITUDE STATIONS ACTIVITY HAS VARIED FROM ACTIVE LEVELS TO MAJOR STORM CONDITIONS. THE FIELD IS EXPECTED TO REMAIN AT GENERALLY ACTIVE LEVELS FOR MID-LATITUDES WITH OCCASIONAL MINOR STORM CONDITIONS NEAR POLAR LATITUDES. THE LAST DAY OF THE PERIOD IS EXPECTED TO RETURN TO MINOR STORM CONDITIONS IN RESPONSE TO TODAY'S X4 EVENT. THE PROTON EVENT WHICH BEGAN THIS MORNING AT 0605Z REMAINS IN PROGRESS. THE GEOSYNCHRONOUS SATELLITES INDICATE THIS EVENT REACHED MAXIMUM APPROXIMATELY 1500Z WITH A COUNT OF 250P/CM2/SEC/STER AT GREATER THAN 10MEV. THE POLAR CAP ABSORPTION EVENT REMAINS IN PROGRESS.

III. EVENT PROBABILITIES 27 NOV-29 NOV

CLASS M 30/10/10
CLASS X 10/01/01
PROTON 10/01/01
PCAF IN PROGRESS

IV. OTTAWA 10.7 CM FLUX

OBSERVED 26 NOV 173
PREDICTED 27 NOV-29 NOV 160/151/149
90 DAY MEAN 26 NOV 165

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 25 NOV 037/059
ESTIMATED AFR/AP 26 NOV 023/055
PREDICTED AFR/AP 27 NOV-29 NOV 020/020-015/030-030/035

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