

HFUS 1 BOU 292200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER CO

SDF NUMBER 363

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 29 DECEMBER 1978

IA. SOLAR ACTIVITY HAS BEEN LOW THE PAST 24 HOURS; HOWEVER THERE ARE NUMEROUS REGIONS ON THE DISK. REGION 1484 (S35E 61) APPEARS MOST INTERESTING AS AN E-TYPE, BETA-GAMMA CONFIGURATION, WITH LARGE ASYMMETRIC PENUMBRA ON THE LEADER, STRONG ARCH FILAMENT SYSTEM, AND POINT BRIGHTENINGS TO NEAR FLARE INTENSITY. REGION 1474 (N12W 14) ALSO HAS SHOWN SOME ACTIVITY WITH AN ARCH FILAMENT AND BRIGHT POINTS. THE OTHER REGIONS HAVE BEEN RELATIVELY QUIET WITH ONLY MINOR C-CLASS X-RAY EVENTS.

IB. SOLAR ACTIVITY SHOULD BE INCREASING TO MODERATE OR HIGH LEVELS AS ACTIVE REGIONS CONTINUE TO ROTATE ON TO THE VISIBLE DISK. REGION 1484 APPEARS CAPABLE OF PRODUCING AN ENERGETIC EVENT. REGIONS 1476/1482 COMPLEX AND REGION 1474 COULD PRODUCE MODERATELY ENERGETIC EVENTS.

II. THE GEOMAGNETIC FIELD HAS BEEN AT UNSETTLED TO ACTIVE LEVELS DURING THE PAST 24 HOURS. A SUDDEN COMMENCEMENT OCCURRED AT 29/1625Z WITH AN ACTIVE PERIOD THAT FOLLOWED AT MID-LATITUDES AND MINOR STORM LEVELS AT HIGHER LATITUDES. THE FIELD SHOULD REMAIN AT UNSETTLED TO ACTIVE LEVELS OVER THE NEXT 24 HOURS WITH MINOR STORMS RECURRING AT THE HIGHER LATITUDES.

III. EVENT PROBABILITIES 30 DECEMBER - 01 JANUARY

CLASS M 60/65/70

CLASS X 30/30/30

PROTON 10/10/10

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 29 DECEMBER 173

PREDICTED 30 DEC-01 JANUARY 178/183/185

90-DAY MEAN 29 DECEMBER 163

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 28 DECEMBER 08

ESTIMATED AFR/AP 29 DECEMBER 16/18

PREDICTED AFR/AP 30 DEC-01 JANUARY 15/23 - 08/10 - 08/10

SOLTERWARN

BT

HFUS 1 BOU 292200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, COLO

ADF NUMBER 363

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 29 DECEMBER 1979

IA. SOLAR ACTIVITY HAS BEEN MODERATE FOR THE PAST 24 HOURS.
NUMEROUS C-CLASS AND THREE LOW M-CLASS X-RAY EVENTS OCCURRED, TWO
OF THEM BEING ASSOCIATED WITH REGION 2204 (S17) WHICH TRANSITED
THE WEST LIMB TODAY. REGION 2215 (S13E57) PRODUCED THE THIRD M-
CLASS EVENT (M1/SB) WHICH WAS A RIBBON FLARE MAXING AT 1626 UT.
REGION 2215 INCREASED MARKEDLY IN SPOT COUNT AND REMAINS MAGNETICAL-
LY COMPLEX. REGION 2212 (S14E08) ALSO GREW IN WHITE LIGHT AND HAS
DEVELOPED A DELTA MAGNETIC CONFIGURATION. TWO NEW REGIONS WERE
NUMBERED. THEY ARE 2218 (S21E37) WHICH IS A C-TYPE AND 2219 (S22E77)
WHICH IS AN A-TYPE SPOT ON THE EAST LIMB.

IB. SOLAR ACTIVITY SHOULD CONTINUE TO BE MODERATE WITH INCREASING
PROBABILITIES OF MAJOR FLARE OCCURENCE DEPENDING ON CONTINUED
DEVELOPMENT IN REGIONS 2212 AND 2215.

II. THE GEOMAGNETIC FIELD HAS BEEN MOSTLY ACTIVE FOR THE PAST 24
HOURS, APPARENTLY OWING TO SOLAR WIND ENHANCEMENT ASSOCIATED WITH
THE DISAPPEARANCE OF TWO LARGE SOLAR FILAMENTS NEAR 0000 UT 26
DECEMBER. THE FIELD IS EXPECTED TO REMAIN MOSTLY ACTIVE TOMORROW,
DECREASING TO UNSETTLED LEVELS FOR THE FOLLOWING 2 DAYS.

III. EVENT PROBABILITIES 30 DECEMBER - 01 JANUARY

CLASS M 80/90/90

CLASS X 20/25/25

PROTON 10/10/15

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 29 DEC 181

PREDICTED 30 DEC-01 JAN 187/194/200

90-DAY MEAN 29 DEC 219

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 28 DEC 19

ESTIMATED AFR/AP 29 DEC 22/28

PREDICTED AFR/AP 29 DEC-01 JAN 20/20 15/15 10/10

SOLTERWARN

BT