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HFUS 3 BOU 12/200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 347A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1200UT 12 DEC 1980

IA. SOLAR ACTIVITY HAS BEEN MODERATE DURING THE LAST 24 HOURS. FIVE M-CLASS FLARES HAVE BEEN OBSERVED; M1/SF, REGION 2340 (NOSE-63 AT 12/1200UT), 11/1921 UT MAX; M1/SB, REGION 2826 (N14E01), 11/2231 UT; M1/SF, REGION 2340, 11/2307 UT; M4/1N, REGION 2340, 12/0020 UT; M4/1B, REGION 2840, 12/0505 UT. THE GROWTH OF REGION 2826 DURING THE PAST 24 HOURS HAS BEEN REMARKABLE. ITS SPOT AREA HAS MORE THAN TRIPLED AND IS CURRENTLY 370 MILLIONTHS. THIS REGION HAS REMAINED ACTIVE, AND THE NEUTRAL LINE AND OVERALL MAGNETIC STRUCTURE HAS BECOME INCREASINGLY COMPLEX. REGION 2340 ON THE NORTHEAST LIMB HAS BEEN QUIETER SINCE PRODUCING FOUR M-CLASS EVENTS. ITS CURRENT SPOT AREA IS ABOUT 1000 MILLIONTHS.

IB. REGIONS 2826 AND 2340 SHOULD KEEP SOLAR ACTIVITY AT MODERATE OR OCCASSIONALLY HIGH LEVELS FOR AT LEAST THE NEXT THREE DAYS. ANOTHER NEW REGION (NOT YET NUMBERED) HAS BEEN DETECTED BY LEARMONT AT THE SOUTHEAST LIMB (S03). THIS REGION HAS A LARGE H-TYPE SPOT AND SURGING ACTIVITY AND MAY FURTHER INCREASE THE ALREADY HIGH CHANCES OF MAJOR FLARES DURING THE NEXT FEW DAYS.

II. THE GEOMAGNETIC FIELD HAS BEEN AT HIGHLY UNSETTLED LEVELS DURING THE LAST 24 HOURS. IF REGION 2826 SHOULD PRODUCE A MAJOR FLARE AT ITS CURRENT LOCATION (NEAR CENTRAL MERIDIAN), THE CHANCE OF A MAGNETIC STORM 36 TO 48 HOURS LATER IS VERY HIGH. OTHERWISE, THE FIELD WILL BE HIGHLY UNSETTLED TO ACTIVE, BASED ON 27 DAY RECURRENCE.

III. EVENT PROBABILITIES: 13-15 DEC

CLASS M 90/90/90

CLASS X 15/15/15

PROTON 01/01/05

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 11 DEC 215

ESTIMATED 12 DEC 240

PREDICTED 13-15 DEC 260/275/235

90 DAY MEAN 11 DEC 203

V. GEOMAGNETIC A INDICES

OBSERVED AFR 10 DEC 10 AP 11 DEC 12

ESTIMATED AFR 11 DEC 12 AFR/AP 12 DEC 14/12

PREDICTED AFR/AP 13-15 DEC 12/12 10/10 12/12

SOLTERWARN

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HFUS-1 BOU 122200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO
SDF NUMBER 347B

JOINT USAF/NODA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.
ISSUED 2200UT 12 DECEMBER 1980.

ISSUED 1200UT 12 DEC 1980

I. SOLAR ACTIVITY HAS BEEN MODERATE DURING THE LAST 24 HOURS.
FIVE M-CLASS FLARES HAVE BEEN OBSERVED; M1/SF, REGION 2840
(N 28E 68 AT 12/1200UT), 11/1921 UT MAX; M1/SB, REGION 2826
(N 14E 21), 11/2231 UT; M1/SF, REGION 2840, 11/2307 UT; M4/IN,
REGION 2840, 12/0020 UT; M4/1B, REGION 2840, 12/0505 UT. THE
GROWTH OF REGION 2826 DURING THE PAST 24 HOURS HAS BEEN REMARKABLE.
ITS SPOT AREA HAS MORE THAN TRIPLED AND IS CURRENTLY 870
MILLION HS. THIS REGION HAS REMAINED ACTIVE, AND THE NEUTRAL
LINE AND OVERALL MAGNETIC STRUCTURE HAS BECOME INCREASINGLY COM-
PLEX. REGION 2840 ON THE NORTHEAST LIMB HAS BEEN QUIETER SINCE
PRODUCING FOUR M-CLASS EVENTS. ITS CURRENT SPOT AREA IS ABOUT
1000 MILLION HS.

ADDITIONS TO 1200Z: SOLAR ACTIVITY IS MODERATE TO HIGH. THE
FOLLOWING ENERGETIC EVENTS HAVE OCCURRED DURING THE PAST 10
HOURS (X-RAY MAX, REGION): M1/SB (1541Z, 2840); M1/IN
(1557Z, 2838); M2/1B (1721Z, 2826); AND, M1/SB (2116Z, 2826).
SHORT WAVE FADES WITH THESE FLARES HAVE BEEN MODERATE AND
CENTIMETRIC TO METER BURSTS HAVE BEEN MINOR TO INTERMEDIATE IN
STRENGTH. BOTH REGIONS 2826 AND 2840 CONTAIN DELTA CONFIGURA-
TIONS. REGION 2840 IS A NEW REGION AND NOT THE RETURN OF OLD
REGION 2793 AS HAD BEEN STATED IN ERROR IN SDF 346B.

II. REGIONS 2826 AND 2840 SHOULD KEEP SOLAR ACTIVITY AT MODERATE
OR OCCASIONALLY HIGH LEVELS FOR AT LEAST THE NEXT THREE DAYS.
ANOTHER NEW REGION (2842) HAS BEEN DETECTED BY LEARMONT H AT
THE SOUTHEAST LIMB (S08). THIS REGION HAS A LARGE H-TYPE SPOT
AND SURGING ACTIVITY AND MAY FURTHER INCREASE THE ALREADY HIGH
CHANCES OF MAJOR FLARES DURING THE NEXT FEW DAYS.

III. THE GEOMAGNETIC FIELD HAS BEEN AT HIGHLY UNSETTLED LEVELS
DURING THE LAST 24 HOURS. IF REGION 2826 SHOULD PRODUCE A MAJOR
FLARE AT ITS CURRENT LOCATION (NEAR CENTRAL MERIDIAN), THE
CHANCE OF A MAGNETIC STORM 36 TO 48 HOURS LATER IS VERY HIGH.
OTHERWISE, THE FIELD WILL BE HIGHLY UNSETTLED TO ACTIVE, BASED
ON 27 DAY RECURRENCE.

III. EVENT PROBABILITIES: 13-15 DEC

CLASS M 90/90/90

CLASS X 15/15/15

PREDICTED 01/01/05

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 12 DEC 239

PREDICTED 13-15 DEC 255/265/270

90 DAY MEAN 12 DEC 204

V. GEOMAGNETIC INDICES

OBSERVED AFR/AP 11 DEC 14/12

ESTIMATED AFR/AP 12 DEC 11/13

PREDICTED AFR/AP 13-15 DEC 12/12 10/10 12/12

SOLTERWARN

BT