

499-7111

HFUS 3 BOU 201400

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 355A

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 1200UT 20 DECEMBER 1980

IA. SOLAR ACTIVITY HAS CONTINUED LOW DURING THE PAST 24 HOURS. ONLY A DOZEN C-CLASS SUBFLARES HAVE BEEN SEEN DURING THE PERIOD, MOSTLY FROM REGIONS 2840 (N08W34) AND 2841 (N14W25) WHICH CONTINUE TO DECAY. THE DECLINE OF THESE TWO REGIONS IS RESPONSIBLE FOR THE SUDDEN SLUMP IN SOLAR ACTIVITY. REGIONS 2845 (S17E15), 2847 (N04E28), 2849 (S07E41) AND NEW REGION 2851 (S18E33) ARE ALL REPORTED GROWING BUT NONE HAS YET DECLARED EITHER ITS CAPACITY OR INTENT TO PRODUCE EVEN MODERATE M-CLASS EVENTS.

IB. SOLAR ACTIVITY IS EXPECTED TO CONTINUE LOW WITH A DIMINISHING PROBABILITY OF M-CLASS FLARES. REGIONS CURRENTLY ON THE DISK WILL HAVE TO UNDERGO SUBSTANTIAL DEVELOPMENT BEFORE THIS TREND IS REVERSED.

II. THE GEOMAGNETIC FIELD REACHED SURPRISINGLY HIGH LEVELS OF ACTIVITY DURING THE PAST 24 HOURS. MAJOR GEOMAGNETIC STORM CONDITIONS WERE OBSERVED BETWEEN 1200 AND 1800 UT AT MID LATITUDES FOLLOWING A SUDDEN IMPULSE AT 19/0457 UT. A PLAUSIBLE CASE CAN BE MADE THAT M-CLASS EVENTS IN THE REGIONS 2840/2841 COMPLEX A FEW DAYS AGO SLIPPED LOW ENERGY PLASMA INTO THE SOLAR WIND STREAM AND THIS WAS SOMEHOW CONFINED BY A NEARBY SOLAR SECTOR BOUNDARY AT L.A.U.. IT IS EXPECTED THAT THE DISTURBANCE WILL DIE AWAY RATHER QUICKLY AND BE FOLLOWED BY A BRIEF QUIET SPELL.

III. EVENT PROBABILITIES: 21 DECEMBER - 23 DECEMBER 1980

CLASS M 30/25/25

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 19 DEC 246

ESTIMATED 20 DEC 242

PREDICTED 21-23 DEC 237/232/227

90 DAY MEAN 19 DEC 212

V. GEOMAGNETIC A INDICES

OBSERVED AFR 18 DEC 13 AP 19 DEC 46

ESTIMATED AFR 19 DEC 50 AFR/AP 20 DEC 16/20

PREDICTED AFR/AP 21-23 DEC 13/15 08/09 05/06

SOLTERWARN

BT

HFUS 1 BOU 202200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 355B

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200UT 20 DECEMBER 1980

IA. SOLAR ACTIVITY HAS CONTINUED LOW DURING THE PAST 24 HOURS. ONLY A DOZEN C-CLASS SUBFLARES HAVE BEEN SEEN DURING THE PERIOD, MOSTLY FROM REGIONS 2840 (N08W34) AND 2841 (N14W25) WHICH CONTINUE TO DECAY. THE DECLINE OF THESE TWO REGIONS IS RESPONSIBLE FOR THE SUDDEN SLUMP IN SOLAR ACTIVITY. REGIONS 2845 (S17E15), 2847 (N04E28), 2849 (S07E41) AND NEW REGION 2851 (S18E33) ARE ALL REPORTED GROWING BUT NONE HAS YET DECLARED EITHER ITS CAPACITY OR INTENT TO PRODUCE EVEN MODERATE M-CLASS EVENTS.

ADDITIONS TO 1200UT. FORECAST: NEW REGIONS 2852 (N03E33) AND 2853 (N18E21) WERE NUMBERED TODAY.

IB. SOLAR ACTIVITY IS EXPECTED TO CONTINUE LOW WITH A DIMINISHING PROBABILITY OF M-CLASS FLARES. REGIONS CURRENTLY ON THE DISK WILL HAVE TO UNDERGO SUBSTANTIAL DEVELOPMENT BEFORE THIS TREND IS REVERSED.

II. THE GEOMAGNETIC FIELD REACHED SURPRISINGLY HIGH LEVELS OF ACTIVITY DURING THE PAST 24 HOURS. MAJOR GEOMAGNETIC STORM CONDITIONS WERE OBSERVED BETWEEN 1200 AND 1800 UT AT MID LATITUDES FOLLOWING A SUDDEN IMPULSE AT 19/0457 UT. A PLAUSIBLE CASE CAN BE MADE THAT M-CLASS EVENTS IN THE REGIONS 2840/2841 COMPLEX A FEW DAYS AGO SLIPPED LOW ENERGY PLASMA INTO THE SOLAR WIND STREAM AND THIS WAS SOMEHOW CONFINED BY A NEARBY SOLAR SECTOR BOUNDARY AT 1 A.U.. IT IS EXPECTED THAT THE DISTURBANCE WILL DIE AWAY RATHER QUICKLY AND BE FOLLOWED BY A BRIEF QUIET SPELL.

III. EVENT PROBABILITIES: 21 DECEMBER - 23 DECEMBER 1980

CLASS M 30/25/25

CLASS X 01/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 FLUX

OBSERVED 20 DEC 248

PREDICTED 21-23 DEC 237/232/227

90 DAY MEAN 20 DEC 213

V. GEOMAGNETIC INDICES

OBSERVED AFR/AP 19 DEC 43/46

ESTIMATED AFR/AP 20 DEC 16/15

PREDICTED AFR/AP 21-23 DEC 13/15 08/09 05/06

SOLTERWARN

BT