

HFUS 3 BOU 230530

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER COLO

SDF NUMBER 113A

JOINT USAF/NOAA SECONDARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 0600Z 23 APRIL 1978

IA. SOLAR ACTIVITY CONTINUES AT A LOW LEVEL WITH OCCASIONAL SUB-
FLARES NOTED IN REGIONS 1083 (N17W04), 1086 (N21W07), AND 1090
(N18W33). REGIONS 1090 AND 1091 (N23E15) APPEAR TO BE CONTINUING
THEIR GROWTH.

IB. SOLAR ACTIVITY IS EXPECTED TO REMAIN LOW.

II. THE GEOMAGNETIC FIELD WAS QUIET FROM 2200Z TO 0200Z WHEN
ACTIVITY BEGAN TO INCREASE. GENERALLY ACTIVE CONDITIONS ARE
EXPECTED WITH OCCASIONAL PERIODS TO MINOR STORM LEVELS.

III. EVENT PROBABILITIES 23 APRIL - 25 APRIL

CLASS M 30/30/30

CLASS X 05/01/01

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 22 APRIL 145

PREDICTED 23-25 APRIL 146/140/135

90-DAY MEAN 22 APRIL 142

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 21 APRIL 11

ESTIMATED AFR/AP 22 APRIL 07/07

PREDICTED AFR/AP 23-25 APRIL 25/25 - 18/20 - 12/15

SOLTERWARN

BT

MFUS 3 BOU 231500

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, COLO

SDF NUMBER 113B

JOINT USAF/NOAA SECONDARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 1500Z 23 APRIL 1978

IA. SOLAR ACTIVITY WAS AT A LOW TO MODERATE LEVEL DURING THE PAST
12 HOURS. AN M7 X-RAY BURST AT 230455Z (START TIME) WAS ASSOCIATED
WITH AN OPTICAL EVENT FROM THE NE LIMB. CULGOORA, WITH INTERMITTENT
OBSERVATIONS, REPORTED A MAJOR LIMB FLARE IN PROGRESS AT 230658Z.
BRIGHT LOOPS WERE NOTED AT THIS TIME AND WERE EXTENDED OUT TO .1R
WHEN LAST OBSERVED AT 230728Z. THE X-RAY BURST DID NOT DECAY TO HALF
POWER UNTIL 230756Z. ATHENS REPORTED RADIO BURSTS AS HIGH AS 4300
FLUX UNITS ON 2695 MHZ. SHORT WAVE FADES TO 16 MHZ WERE ALSO OBSERVED
THE X-RAY CHANNELS ARE STILL RECORDING A BACKGROUND LEVEL OF C-6.
REGION 1086 (N21W11) PRODUCED TWO SUBNORMAL FLARES BUT THEY WERE
RELATIVELY UNENERGETIC. LITTLE CHANGE OTHERWISE.

IB. SOLAR ACTIVITY IS EXPECTED TO INCREASE AS A RESULT OF THE APP-
ARENTLY ENERGETIC SOURCE BEHIND THE NE LIMB.

II. THE GEOMAGNETIC FIELD HAS BEEN QUIET TO UNSETTLED. THE EAST LIMB
EVENT CAUSED FLUCTUATIONS IN THE HIGH ENERGY PARTICLE BACKGROUND
TRACE BUT EVENT CRITERIA IS NOT EXPECTED TO BE REACHED.

III. EVENT PROBABILITIES 23 - 25 APRIL

CLASS M 50/60/70

CLASS X 10/20/30

PROTON 05/05/05

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 22 APRIL 145

PREDICTED 23 - 25 APRIL 150/153/156

90-DAY MEAN 22 APRIL 142

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 21 APRIL 11

ESTIMATED AFR/AP 22 APRIL 07/07

PREDICTED AFR/AP 23 - 25 APRIL 16/20 - 12/15 - 10/12

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HFUS 1 BOU 232200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, CO

SDF NUMBER 113

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 23 APR 1978

IA. SOLAR ACTIVITY HAS BEEN LOW TO MODERATE DURING THE PAST 24 HOURS. THE NE LIMB 20-30 DEG IS OF PRIME INTEREST AS LARGE, BRIGHT LONG LIVED LOOPS IN THAT AREA WERE MOST CERTAINLY THE AFTERMATH OF AN M7 X-RAY BURST THAT STARTED NEAR 230455Z. CULGOORA GUESSED THAT THE FLARE WAS AT LEAST A 2N. ATHENS REPORTED A 10 CM RADIO BURST OF 4300 FLUX UNITS AND SHORTWAVE FADES TO 16 MHZ WERE OBSERVED. REGION 1090 (N18 W41) PRODUCED ANOTHER ENERGETIC EVENT AT 232015Z THAT OCCURRED CONCURRENTLY WITH ANOTHER SET OF LOOPS ON THE NORTHEAST LIMB. THIS FLARE WAS AN M5 WITH OPTICAL CLASS OF 1B. NO MAJOR RADIO BURSTS WERE REPORTED WITH THE M5 (2695 EQUALS 24 F.U.) BUT TYPE II TYPE IV SWEEP BURSTS WERE OBSERVED. REGION 1086 (N22W17) ALSO PRODUCED A SMALL FLARE (SUBNORMAL) NEAR THE SAME TIME (232030 U.T.)

IB. SOLAR ACTIVITY WILL BE AT MODERATE TO HIGH LEVELS.

II. THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED. UNSETTLED TO ACTIVE CONDITIONS SHOULD CONTINUE FOR ANOTHER 24 HOURS. THE TYPE II TYPE IV SWEEP BURST MAY HAVE BEEN ASSOCIATED WITH THE EVENT THAT PRODUCED THE 232046Z LOOPS. THIS POSSIBILITY, ALONG WITH THE SMALL DISCRETE FREQUENCY BURST, WOULD SUGGEST THAT A PROTON EVENT IS NOT IMMINENT.

III. EVENT PROBABILITIES 24-26 APRIL

CLASS M 90/90/90

CLASS X 30/40/50

PROTON 05/05/05

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 23 APRIL 161

PREDICTED 24 - 26 APRIL 155/160/165

90-DAY MEAN 23 APRIL 143

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 22 APRIL 09

ESTIMATED AFR/AP 23 APRIL 15/20

PREDICTED AFR/AP 24 - 26 APRIL 15/25 - 12/20 - 10/18

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