

HFUS 1 BOU 120500

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, CO

SDF NUMBER 285A

JOINT AFGWC/SESC SECONDARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 0500Z 12 OCTOBER 1974

IA. SOLAR ACTIVITY HAS BEEN LOWER DURING THE PAST 8 HOURS. A FEW
MINOR X RAY EVENTS HAVE BEEN NOTED BUT ALL BELOW CLASS M CATEGORY.

IB. SOLAR ACTIVITY WILL BE MODERATE DURING THE NEXT 8 HOURS. CLASS
C EVENTS ARE EXPECTED AND CLASS M EVENTS ARE PROBABLE.

II. THE GEOMAGNETIC FIELD HAS BEEN QUIET DURING THE PAST 8 HOURS
BUT A MAGNETIC DISTURBANCE IS EXPECTED DURING THE NEXT 24 HOURS.

III. EVENT PROBABILITIES NO CHANGE

IV. OTTAWA 10.7 CM FLUX NO CHANGE

V. GEOMAGNETIC A INDICES NO CHANGE

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HFUS BOU 121430

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, CO

SDF NUMBER 285B

JOINT AFGWC/SESC SECONDARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 1430Z 12 OCT 1974

IA. ALTHOUGH NUMEROUS SUBFLARES HAVE OCCURRED ONLY ONE SIGNIFICANT
ENERGETIC EVENT HAS BEEN REPORTED DURING THE PAST 10 HOURS. THIS
EVENT BEGAN AT 12/1130Z IN REGION 503 (N08W08) AND REACHED A FIRST
MAXIMUM AS AN IMPORTANCE ONE-NORMAL FLARE AT 1144Z. A SUB-
BRILLIANT SECOND MAXIMUM OCCURRED AT 1148Z, AFTER WHICH THE
ENTIRE FLARE DECAYED VERY SLOWLY. A CLASS X1 (VELA) X-RAY BURST
AND A RADIO BURST OF 133 FLUX UNITS ABOVE BACKGROUND AT 2695
MHZ ACCOMPANIED THE SECOND MAXIMUM OF THE FLARE. REGION 503 HAS
SHOWN SIGNIFICANT RECENT PENUMBRAL GROWTH AND REMAINS MAGNETICALLY
COMPLEX WITH SEVERAL DELTA CONFIGURATIONS IN THE EASTERN PART OF
THE REGION. REGION 505 (N10W17) HAS SHOWN SOME RECENT RESTRUCTURING,
BUT MAGNETIC GRADIENTS REMAIN HIGH. OTHER REGIONS ARE RELATIVELY
UNIMPRESSIVE.

IB. SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH. THE COMPLEX
OF REGIONS 503 AND 505 IS EXPECTED TO PRODUCE NUMEROUS SMALL FLARES
AND TWO OR THREE SIGNIFICANT ENERGETIC FLARES DURING THE NEXT 3
DAYS. DUE TO THE RECENT DEVELOPMENT AND MAGNETIC COMPLEXITY OF
THESE REGIONS, THE PROBABILITY FOR MAJOR FLARE ACTIVITY, INCLUDING A
PROTON EVENT AND/OR FLARE-PRODUCED MAGNETIC STORM NEAR EARTH HAS
INCREASED.

II. THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED DURING THE PAST 10
HOURS. A SMALL DISTURBANCE RESEMBLING A WEAK SUDDEN COMMENCEMENT WAS
OBSERVED ON ALL COMPONENTS AT BOULDER AT 12/1245Z, BUT NO GEOMAG-
NETIC STORM VARIATIONS HAVE BEEN OBSERVED SO FAR. THE RECURRENT
DISTURBANCE THAT WAS PREDICTED TO BEGIN TODAY HAS NOT YET BEGUN,
BUT THIS DISTURBANCE IS EXPECTED TO BEGIN DURING THE NEXT 12 HOURS.

III. EVENT PROBABILITIES 12 - 14 OCT

CLASS M 90/90/90

CLASS X 50/50/50

PROTON 30/30/35

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 11 OCT 144

PREDICTED 12 - 14 OCT 138/132/128

90-DAY MEAN 11 OCT 90

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 10 OCT 09

ESTIMATED AFR/AP 11 OCT 11/12

PREDICTED AFR/AP 12 - 14 OCT 17/20 - 35/50 - 31/45

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HFUS BOU 122200

FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER CO

SDF NUMBER 285

JOINT AFGWC/SESC PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY
ISSUED 2200Z 12 OCTOBER 1974

IA. A GENERALLY MODERATE LEVEL OF SOLAR ACTIVITY HAS BEEN OBSERVED DURING THE PAST 24 HOURS. THE MOST ENERGETIC EVENT REPORTED WAS A CLASS X1 (VELA) FLARE THAT OCCURRED IN REGION 503 (N09W11) AT 12/1148Z. THIS FLARE BEGAN AT 1130Z AND REACHED AN IMPORTANCE ONE-NORMAL FIRST MAXIMUM AT 1144Z. A SUB-BRILLIANT SECOND MAXIMUM OCCURRED AT 1148Z, FOLLOWED BY VERY GRADUAL DECAY OF THE ENTIRE FLARE. A RADIO BURST OF 130 FLUX UNITS ABOVE BACKGROUND AT 2695 MHZ ACCOMPANIED THIS EVENT. REGION 503 HAS SHOWN RECENT PENUMBRAL GROWTH, AND SEVERAL STRONG DELTA CONFIGURATIONS EXIST IN THE GAMMA-TYPE SPOT GROUP. REGION 505 (N11W22) HAS SHOWN SOME RESTRUCTURING RECENTLY. A SPOT FOLLOWER POLARITY HAS SHOWN PROPER MOTION EASTWARD AND AWAY FROM THE MAIN LEADER, WEAKENING THE MAGNETIC GRADIENTS AND ELIMINATING A DELTA CONFIGURATION THAT HAD EXISTED BETWEEN THE MAIN LEADER AND THE MOVING SPOT. REGIONS 503 AND 505 ARE INTERACTING CLOSELY AND ARE EXHIBITING NUMEROUS DYNAMIC H-ALPHA FEATURES. OTHER REGIONS ARE RELATIVELY STABLE.

IB. SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH THROUGH THE FORECAST PERIOD. REGIONS 503 AND 505 ARE EXPECTED TO PRODUCE FREQUENT SUBFLARES AND SPORADIC ENERGETIC FLARES. DUE TO THE CONSIDERABLE MAGNETIC COMPLEXITY OF THESE TWO REGIONS, THERE IS A SIGNIFICANT CHANCE THAT ONE OR TWO MAJOR FLARES MAY OCCUR IN THESE REGIONS DURING THE NEXT THREE DAYS. THESE REGIONS POSSESS CHARACTERISTICS OF PREVIOUS REGIONS THAT HAVE PRODUCED PROTON FLARES AND GEOMAGNETIC STORMS, AND THE WESTERN HEMISPHERE LOCATION OF REGIONS 503 AND 505 IS FAVORABLE TO THE PRODUCTION OF SUCH EVENTS AT EARTH.

II. THE GEOMAGNETIC FIELD WAS QUIET TO UNSETTLED UNTIL 12/2016Z, WHEN A MINOR GEOMAGNETIC STORM BEGAN ABRUPTLY WITHOUT A CLASSIC SUDDEN COMMENCEMENT FEATURE. AN APPARENT WEAK SUDDEN COMMENCEMENT FEATURE WAS OBSERVED BY SEVERAL OBSERVATORIES AT 12/1245Z, BUT NO SIGNIFICANT DISTURBANCE OCCURRED UNTIL 2016Z. MINOR STORM ACTIVITY IS EXPECTED TO CONTINUE FOR 48-72 HOURS, WITH MAXIMUM DISTURBANCE DURING LOCAL NIGHTTIME.

III. EVENT PROBABILITIES 13 OCT - 15 OCT

CLASS M 90/90/90

CLASS X 50/50/45

PROTON 30/35/35

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 12 OCT 145

PREDICTED 13 OCT - 15 OCT 140/133/128

90-DAY MEAN 12 OCT 90

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 11 OCT 07

ESTIMATED AFR/AP 12 OCT 15/17

PREDICTED AFR/AP 13 OCT - 15 OCT 29/40 - 29/40 - 24/30

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