

HFUS 1 BOU 212200  
FROM SPACE ENVIRONMENT SERVICES CENTER BOULDER, COLO  
SO F NUMBER 173

JOINT USAF/NOAA PRIMARY REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY  
ISSUED 2200Z 21 JUNE 1980

I A. SOLAR ACTIVITY HAS BEEN HIGH DURING THE PAST 24 HOURS. REGION 2528 (S14E03) STARTED THE ACTIVITY AT 0003 UT PRODUCING AN M2/2N FLARE WITH A 0059Z MAXIMUM. TYPE III/IV RADIO SWEEPS AND A 180 FLUX UNIT BURST AT 2.695 MHZ ACCCOMPANIED THIS FLARE. AT 0117Z REGION 2502 (N17W91 AT FLARE TIME), PRODUCED AN X2/1B REACHING MAXIMUM AT 0120Z. THIS FLARE PRODUCED A SPECTACULAR SPRAY EXTENDING TO .3 RADII ALONG WITH AN ERUPTIVE PROMINENCE TO .3 RADII. SHORT WAVE FADES, AN IMPORTANCE THREE TYPE III/IV SWEEP, AND A 2.695 MHZ BURST OF 5.60 F.U. WERE OBSERVED. FLARE EJECTA WAS REPORTED VISIBLE IN WHITE LIGHT. SINCE THESE EVENTS, ALL THE ACTIVITY HAS BEEN CONFINED TO C-CLASS SUBFLARES FROM REGIONS 2522 (S27E17) AND 2524 (N23W30). NEW REGIONS 2532 (S10E67) 2533 (S14W39) 2534 (S22W28) AND 2535 (N13E75) HAVE APPEARED TODAY, WHILE REGION 2530 (S22E29) DEVELOPED SPOTS WHICH ARE GROWING RAPIDLY. REGION 2517 (S10W00) NOW CONTAINS A DELTA AND STRONG AFS. A FILAMENT AT N10E20/N50E90 ERUPTED LATE ON THE 20TH.

I B. SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH. THE SOUTH-EAST QUADRANT CONTINUES TO BE STRESSED BY CONVERGING MOTIONS EVIDENCED BY RAPID STRUCTURAL CHANGES. RETURNING REGION 2495 (N13E CAR 090) IS DUE BACK TOMORROW AND IS EXPECTED TO BE ACTIVE.

II. THE GEOMAGNETIC FIELD HAS BEEN AT LOW UNSETLED LEVELS DURING THE PAST 24 HOURS. A SLIGHT INCREASE IS EXPECTED THROUGH THE NEXT 24 HOURS. A PROTON EVENT BEGAN AT APPROXIMATELY 1200Z TODAY. THE EVENT (RESULT OF THE X2/1B, REGION 2502) REACHED THRESHOLD (10P/CM<sup>2</sup>/SEC/STER) AT 2530Z WITH A MAXIMUM COUNT OF 19 RECORDED AT 1755Z. THE EVENT PASSED BELOW THRESHOLDS APPROXIMATELY 1930Z.

III. EVENT PROBABILITIES 22 JUNE - 24 JUNE

CLASS M 80/80/80

CLASS X 10/15/20

PROTON 01/01/01

PCAF GREEN

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 JUNE 221

PREDICTED 22 JUNE - 24 JUNE 223/225/225

90-DAY MEAN 21 JUNE 208

V. GEOMAGNETIC A INDICES

OBSERVED FREDERICKSBURG 20 JUNE 06

ESTIMATED AFR/AP 21 JUNE 07/10

PREDICTED AFR/AP 22 JUNE - 24 JUNE 12/14 15/20 15/20

SOLTERWARN

BT