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KMSC

HAUS BOU 200515Z

FROM SPACE DISTURBANCE FORECAST CENTER ESSA BOULDER COLO

SDF NUMBER 451A ISSUED 0400Z 20 NOV 1969

M AND X FLARES ARE EXPECTED DURING THE NEXT 11 HOURS.

A. WHAT MUST CERTAINLY RANK AS ONE OF THE MOST ACTIVE SOLAR PERIODS DURING THE CURRENT SUNSPOT MAXIMUM IS PRESENTLY IN PROGRESS. ALL

BUT 2 OF THE EVENTS LISTED BELOW FOR THE PREVIOUS ZULU DAY OCCURRED WITHIN THE COMPLEX N13E21 CENTER. FLARES WERE OBSERVED AT 19/0058

(M) 0139(M) 0415(M) 0538(X) 0703(M) 0810(X) 1545(M) 1714(M)

AND 1847(X). MOST OF THESE EVENTS WERE RATED ACCORDING TO THEIR

STRONG X-RAY EMISSIONS AT 0.5-5 AND 1-8 ANGSTROM PASSBANDS.

OPTICALLY THE N13 REGION CONTAINS A VERY INTRICATE NETWORK OF DARK

ABSORPTION LINES AND FILAMENTS. TAKEN TOGETHER BOTH NE GROUPS SPAN

ABOUT 13 DEGREES IN LATITUDE AND ABOUT 17 DEGREES IN LONGITUDE.

THE N13E21 REGION IS OF A CLASS/AREA E/1450 CONTAINING ONE MASSIVE

PENUMBRAL STRUCTURE WITH A RETINUE OF SMALLER SPOTS TO THE SOUTH.

MAGNETICALLY BOTH CENTERS ARE DELTA-GAMMAS; MAXIMUM FIELD STRENGTHS

ARE OF THE ORDER OF 2500 GAUSS. AT RADIO WAVELENGTHS THE PICTURE IS

AS FOLLOWS LISTED ACCORDING TO HEIGHT ABOVE THE PHOTOSPHERE- 9.1CM

BRIGHTNESS TEMPERATURE 300 PERCENT ABOVE BACKGROUND 8MM TEMP 30

PERCENT AND 3MM 11 PERCENT. MODERATE STRENGTH DECA-METRIC CONTINUUM

WAS OBSERVED AT BOULDER THROUGHOUT THE DAY. (AS AN INTERESTING

SIDELIGHT; THE CLARK LAKE RADIO OBSERVATORY REPORTED THAT THE

CONTINUUM SOURCE APPARENTLY DRIFTED FROM ITS POSITION NEAR CM TO ONE

NEAR THE EAST LIMB.) AT THE TIME OF THIS WRITING PARTICLE DETECTORS

ON THE GROUND AT SATELLITE ALTITUDES AND IN INTERPLANETARY SPACE

ALL INDICATE NEGATIVE RESULTS CONCERNING ANY PROTONS ASSOCIATED WITH

THE TOTALITY OF ACTIVITY DESCRIBED ABOVE.

B. THE HIGH LEVEL OF FLARE PRODUCTION IS EXPECTED TO CONTINUE FOR AT LEAST THE NEXT 3 DAYS.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR

PERIODS BEGINNING 20 NOV/0400Z ENDING 23 NOV/0400Z.

CLASS M OR GREATER 100/100/100

CLASS X 70/70/70

PROTON EVENTS 40/50/50

D. OTTAWA 10.7 CM FLUXES FOR 19/1700 AND 2000Z WERE 190 AND 199

RESPECTIVELY.

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HAUS BOU 201710Z

FROM SPACE DISTURBANCE FORECAST CENTER ESSA BOULDER COLO

SDF NUMBER 451B ISSUED 1700Z 20 NOVEMBER 1969

CLASS X FLARES ARE EXPECTED DURING THE NEXT 13 HOURS

A. THE REGION NOW NEARING CENTRAL MERIDIAN CONTINUES AS A MAJOR FLARE PRODUCER WITH M TYPE FLARES REPORTED AT 20/0807Z 20/0940Z 20/1222Z AND 20/1621Z /2B-TENFLARE 219 PERCENT/. FLARE ACTIVITY SEEMS TO HAVE SHIFTED FROM THE NORTH CENTRAL PART TO THE SOUTHWESTERN PART OF THIS LARGE REGION. MINOR FLARE ACTIVITY HAS BEEN REPORTED IN THE NEW GROWING REGION NEAR N12E55.

B. MAJOR FLARE ACTIVITY IS EXPECTED TO CONTINUE THROUGHOUT THE NEXT 3 DAYS WITH SEVERAL M TYPE AND AT LEAST ONE X TYPE FLARE EACH DAY. THE PROBABILITY OF PROTON FLUXES OBSERVABLE NEAR EARTH WILL CONTINUE TO RISE DUE TO THE MAJOR REGIONS PASSAGE ACROSS CM.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 20/1700Z ENDING 22/1700Z.

CLASS M OR GREATER 100/100/100

CLASS X 70/70/70

PROTON EVENTS 40/40/40

D. OTTAWA 10.7 CM FLUX AT 1400Z WAS 198. PREDICTED 200/205/205.

E. MAGNETIC A-FREDERICKSBURG FOR 19 NOV WAS 05. FOR 20 NOV ABOUT 10. PREDICTED AP FOR 21-23 NOV 20/12/10.

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