

FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO  
SDF NUMBER 025A ISSUED 0400Z 25 JANUARY 1971  
CLASS M AND X FLARES CONSIDERED POSSIBLE IN THE NEXT 13 HOURS.  
A. A GROUND LEVEL EVENT OCCURRED AT 24/2309Z. OPTICALLY THE FLARE  
WAS CLASSIFIED AS 1B, N18W48, AND WAS AN X5 EVENT WITH ASSOCIATED  
MAJOR IONOSPHERIC DISTURBANCES. DEEP RIVER SHOWED NEUTRON COUNTS  
ENHANCED AT 24/2350Z AND A MAXIMUM ENHANCEMENT OF 12 PER CENT  
OCCURRED AT 25/0010Z. A MAJOR RADIO BURST OCCURRED AT 24/2325Z WITH  
3300 FLUX UNITS AT TEN CM. THE ATS-1 PROTON FLUXES AT 25/0330Z ARE  
GREATER THAN 1000 AT 5-20 MEV AND GREATER THAN 200 AT 20-70 MEV.  
THE EVENT BEGAN AT 2350Z ON THE 20-70 MEV CHANNEL AND 0020Z ON THE  
5-20 MEV CHANNEL. SOLAR ACTIVITY HAS BEEN DOMINATED BY THIS NW  
COMPLEX OF REGIONS AT N19W41 AND N18W51 WITH SEVERAL 1B FLARES OF  
CLASS M VARIETY IN THE PAST 12 HOURS.  
B. ADDITIONAL ENERGETIC FLARES ARE EXPECTED FROM THE NW COMPLEX. A  
MAJOR MAGSTORM IS EXPECTED TO BEGIN AROUND 26/1800Z. MODERATE TO  
STRONG POLAR CAP ABSORPTION IS EXPECTED FOR THE NEXT 2-3 DAYS.  
C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR  
PERIODS BEGINNING 25 JAN/0400Z ENDING 28 JAN/0400Z  
CLASS M OR GREATER 100/100/100  
CLASS X 30/30/30  
PROTON EVENTS 30/30/30  
D. OTTAWA 10.7 CM FLUXES FOR 24/1700Z AND 24/2000Z WERE 183 AND 187  
RESPECTIVELY.  
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FROM SPACE DISTURBANCE FORECAST CENTER BOULDER COLO

SDF NUMBER 025B ISSUED 1700Z 25 JAN 1971

CLASS M EVENTS ARE EXPECTED DURING THE NEXT 11 HOURS.

A. SOLAR ACTIVITY HAS BEEN LIMITED TO FIVE SUBFLARES SINCE THE IMPORTANCE 1B/2B CLASS X5 PLUS GROUND LEVEL PROTON EVENT AT 24/2309Z. THE N18W60 COMPLEX WHICH PRODUCED THIS MAJOR EVENT PRODUCED ONLY ONE OF THESE SUBFLARES. THE DEEP RIVER NEUTRON MONITOR, WHICH BECAME ENHANCED AT 24/2350Z AND PEAKED AT 12 PERCENT ABOVE NORMAL AT 25/0010Z, WAS AGAIN AT BACKGROUND BY 24/0600Z. THE PROTON DETECTORS ABOARD ATS-1 ARE SATURATED. OTHER SATELLITES INDICATE THAT THE PROTON FLUX AT ENERGIES GREATER THAN 25 MEV PEAKED AT 5600 PARTICLES/CM<sup>2</sup>/SEC AT 25/0800Z. THE ATS-1 5-21 MEV DETECTOR IS CURRENTLY RUNNING AT SOMETHING IN EXCESS OF 5000 PARTICLES/CM<sup>2</sup>/SEC. FORT CHURCHILL REPORTED 4 DB ABSORPTION AT 30 MHZ UNDER TWILIGHT CONDITIONS AT 25/1500Z. THE GEOMAGNETIC FIELD HAS BEEN QUIET.

B. ADDITIONAL ENERGETIC EVENTS ARE EXPECTED FROM THE N18W60 COMPLEX UNTIL IT IS WELL BEHIND THE WEST LIMB ON 29 JANUARY. PEAK POLAR CAP ABSORPTION OF 6 DB IS PROBABLE FOR THE NEXT 48 HOURS. A MAJOR GEOMAGNETIC STORM IS EXPECTED TO BEGIN NEAR 26/1200Z WITH A PEAK A-INDEX OF 60 OR GREATER.

C. FLARE AND PROTON EVENT PROBABILITIES FOR THE NEXT THREE 24 HOUR PERIODS BEGINNING 25 JAN/1700Z ENDING 28 JAN/1700Z.

CLASS M OR GREATER 95/95/95

CLASS X 25/25/25

PROTON EVENTS 25/25/25

D. OTTAWA 10.7 CM FLUX FOR 25/1400Z WAS 177. PREDICTED 10.7 CM FLUX FOR 26-28 JAN IS 173/172/168.

E. MAGNETIC A-FREDERICKSBURG FOR 24 JAN WAS 11. FOR 25 JAN ABOUT 08. PREDICTED AP FOR 26-28 JAN, 062/020/014.

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