

# Muon Flux and CME magnetic field disturbance Aug 6-22, 2024

QuarkNet detector at Fermilab: 4 scintillators (25cmx30cm) stacked on top of each other; each separated vertically by 10cm.

Muon flux corrected by atmospheric pressure shows two decreases: first drop of 2.5% and a second smaller decrease both lasting ~1 day; both with recovery times ~ 5 days.

A measure of the Earth's magnetic field disturbance  $k_p$  demonstrates the the rate drops are correlated with times where  $k_p > 4$ .

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