

# The KPIPE Concept: Searching for Muon Neutrino Disappearance with Kaon Decay-at-Rest

*Thursday, 15 June 2023 11:25 (4 minutes)*

A new high-power BNB beam dump target station would provide a unique opportunity to probe the sterile neutrino oscillation explanation of the short-baseline neutrino anomalies. The KPIPE concept, described in Ref. [PRD 92 092010 (2015)], calls for a long and thin cylindrical detector oriented radially outward from an intense beam-dump source of monoenergetic 236 MeV muon neutrinos from charged kaon decay-at-rest to obtain sensitivity to short-baseline muon neutrino disappearance. The idea is to search for an L/E-dependent oscillation wave using single-energy neutrinos with minimal background and modest detector requirements. This talk will present the KPIPE concept for possible implementation at Fermilab.

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**Session Classification:** Short remarks & Synergies intro