

Probing and Knocking with Muons

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We propose here a set of new methods involving probing and knocking with muons (PKMu). There is a wealth of rich physics to explore with GeV muon beams. Examples include but not limited to: muon scattering can occur at large angles, providing evidence of potential muon-philic dark matter or dark mediator candidates; muon-electron scattering can be used to detect new types of bosons associated with charged lepton flavor violation; precise measurements of GeV-scale muon-electron scattering can be employed to probe quantum correlations.

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