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[343] Semi-visible dark photons at the NA64 experiment

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Beyond the minimal kinetically-mixed dark photon scenarios predicting fully visible and fully invisible mediator decays, next-to-minimal theories have been considered as compelling frameworks for thermal dark matter and some low-energy anomalies, as the muon g-2.

This talk will showcase the potential of the NA64 experiment in the exploration of rich dark sectors in which the dark photon is semi-visible. The NA64 invisible results have been re-interpreted in the context of two inelastic dark matter models to account for the different signal signature, entailing both missing energy and visible final states.

Theoretical Work

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