

Abstract Submitted
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A Dark Neutrino Solution to Low Energy Anomalies ASLI ABDULLAHI, SILVIA PASCOLI, Durham University, MATHEUS HOSTERT, University of Minnesota — We introduce a renormalizable and anomaly-free $U(1)'$ gauge extension of the standard model, and show that it can provide a consistent explanation of a number of prominent low energy anomalies. We show that the simultaneous presence of all portal connections between a neutral dark sector and the SM lead to unique phenomenological signatures at experiment. We further discuss these signatures and the ongoing effort to search for these classes of models, in particular, as a solution to the MiniBooNE low energy excess.

Asli Abdullahi
Durham University

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