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Asymptotic Safety in the Conformal Hidden Sector

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The notion of asymptotic safety is combined with conformal invariance in an extension of the Standard Model. Renormalization group equations are used as a bridge to connect asymptotic safety UV boundary conditions and EW/TeV scale physics in the context of a leptophobic U(1)' model. A broad selection of UV boundary conditions are formulated corresponding to differing AS scenarios. An asymptotically-safe scenario is found with very strong predictive power, allowing unique determination of most of the parameters in the model. Interrelationships among the couplings, the UV transition scale of the fixed point, and other phenomenological features of the model will be discussed.

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