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New constraints on SM-anomalous gauge symmetries

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In this talk I discuss unappreciated phenomenological consequences of classes of models with new light vector bosons coupled to anomalous currents of Standard Model fermions. Such couplings result in certain process rates growing quadratically with energy. Focusing on this class of constraints I derive new limits that are significantly stronger than in the previous literature for a wide variety of models, and rule out a number of phenomenologically-motivated proposals. As popular examples I focus on the new constraints on the gauging baryon number and on gauging axial number.

Summary

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