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General Solutions for minimal non-universal Z' gauge bosons

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By allowing gauge anomaly cancellation between fermions in different families we find nonuniversal solutions for Z'

models with the same content of fermions of the standard

model plus three right-handed neutrinos. We also impose constraints from the Yukawa interaction terms reducing the number of free paraméters. Our solutions

contain as particular cases well-known models in the literature. As an application, we report a model which evades LHC constraints, flavor changing neutral currents and low energy constraints. Simultaneously, the model is able to explain the flavor anomalies in the Wilson coefficients C9(μ) and C10(μ) without modifying the corresponding Wilson coefficients for the first family. In our approach, this procedure is always possible for Z' masses smaller than ~ 2.5 TeV.

Author: Dr ROJAS, Eduardo (Universidad de Antioquia)

Presenter: Dr ROJAS, Eduardo (Universidad de Antioquia)