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From 321 to 4321: a Cabibbo mechanism for leptoquarks

Wednesday, 27 June 2018 11:00 (1 hour)

After reviewing the status of the recent experimental discrepancies in B-physics data, I show how these phenomena can be coherently explained by an extended gauge dynamics which closely mimics the structure of the standard model. A key role is played by a generalisation of the Cabibbo mixing which allows for sizeable effects in charged current quark-lepton transitions, while sufficiently suppressing quark-quark and lepton-lepton FCNC. The model is also consistent with direct searches at high-pT and provides a fully calculable framework to guide the early phase of the B-anomalies and predict correlations with new observables.

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