Rencontres de Moriond EW 2014



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A bound on the charm chromo-EDM and its implications

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We derive bounds on the electric and chromo-electric dipole moments of the charm quark. The second one turns out to be particularly strong, and we quantify its impact on models that allow for a sizeable flavour violation in the up quark sector, like flavour alignment and Generic U(2)^3. In particular we show how the bounds coming from the charm and up CEDMs constrain the size of new physics contributions to direct flavour violation in D decays. We also specialize our analysis to the cases of Supersymmetry with split families and composite Higgs models. The results exposed in this talk motivate both an increase in experimental sensitivity to fundamental hadronic dipoles, and a further exploration of the SM contribution to flavour violating D decays.

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