PARTICLE PHYSICS SEMINAR SERIES

Flavor constrains the flavorless SMEFT

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4:00 pm - Rm 415 NSH

I present calculations of the effects of SMEFT operators in a flavor-blind and a linear MFV assumption on down-type FCNC processes, and investigate the impact of including those effects in an illustrative global fit. We find that in the fully flavor-blind assumption for new physics three new directions in parameter space are constrained beyond the TeV^-1 scale, and in the MFV case four new constraints arise due to flavor constraints. This gives the lie to the common story we tell ourselves that any new physics which is flavor blind or MFV can appear at any scale, and is a valuable input to global explorations of the SMEFT at LHC scales, where flavor symmetry is important to the viability of the model in the first place.

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