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## A Systematic Study of Discriminators between New Physics and Standard Model in $b \rightarrow s$ transitions

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Measurements of  $b \rightarrow s$  transitions in semi-leptonic, leptonic and radiative decays of the  $B$  meson has come of age with several collider and flavour-factory experiments focusing on these over the past years. While the inclusive and leptonic channels have been computed to relatively high precision, the exclusive decays are fraught with uncertainties stemming from both non-factorizable and factorizable parts of the matrix element. Since all these modes test overlapping components of a common short distance structure and are hence correlated, the uncertainties in the matrix element make it difficult to rightfully claim the presence or absence of new physics contributions through a global analysis of these observables. Following our previous work (arXiv:1512:07157), we expand our analysis to include all measured decay modes and try to establish discriminators between possible contributions from new physics and those from the matrix elements which have a richer helicity structure and should follow a signature kinematic distribution.

### Experimental Collaboration

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