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Semileptonic Form Factors for $B \rightarrow D^* \ell \nu$ Decays using the Oktay-Kronfeld Action

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We present recent progress on the lattice calculation of semileptonic form factors for $B \rightarrow D^* \ell \nu$ decay using linear fit method. We use the Oktay-Kronfeld (OK) action for the charm and bottom valence quarks. We use results of 2pt correlator fit of B and D^* meson as input parameters to the data analysis on the 3pt correlation functions. Here, the masses of charm and bottom quark are tuned non-perturbatively. For the light spectator quarks (up, down and strange), we use HISQ action. Lattice calculation is done on a MILC HISQ ensemble ($a = 0.12$ fm, $m_\pi = 220$ MeV, and $N_f = 2 + 1 + 1$ flavors).

Topical area

Standard Model Parameters

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