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Form factors for semi-leptonic $B_{(s)} \to D^*_{(s)}\ell\nu_\ell$ decays

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Semileptonic $B_{(s)}$ decays are of great phenomenological interest because they allow to extract CKM matrix elements or test lepton flavor universality. Taking advantage of existing data, we explore extracting form factors for vector final states using the narrow width approximation. Based on RBC-UKQCD's set of 2+1 flavor gauge field ensembles with Shamir domain-wall fermion and Iwasaki gauge field action, we study semileptonic $B_{(s)}$ decays using domain-wall fermions for light, strange and charm quarks, whereas bottom quarks are simulated with the relativistic heavy quark (RHQ) action. Exploratory results for $B_s \to D^*_s\ell\nu_\ell$ are presented.

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