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Towards more accurate $B_{(s)} \to \pi(K)$ and $D_{(s)} \to \pi(K)$ form factors

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I present progress on the calculation of scalar, vector, and tensor form factors for the following meson decays: $B \to \pi$, $B_s \to K$, $D \to \pi$, and $D_s \to K$. The calculation uses the MILC $N_f = 2 + 1 + 1$ HISQ gluon field ensembles and HISQ valence quarks. We generate ensembles of correlator data with varying lattice spacings, as small as 0.044 fm. Some ensembles have a strange-to-light quark mass ratio of 5:1 and others use the physical light quark mass. The fully-relativistic, heavy-HISQ approach is used for the heavy quark, with simulation masses ranging from the charm to near the bottom. The heavy-HISQ approach provides nearly full coverage of the kinematic range. Preliminary correlator fits and next steps are discussed.

Primary author: ROBERTS, Logan (Univeristy of Glasgow - Particle Physics Theory Group)

Co-authors: BOUCHARD, Chris (University of Glasgow); FRANCESCONI, Olmo (University of Glasgow); PARROTT, William (York University)

Presenter: ROBERTS, Logan (Univeristy of Glasgow - Particle Physics Theory Group)

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