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Form factors for semileptonic Bs to K and Bs to Ds decays

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Semileptonic Bs to K and Bs to Ds decays provide additional channels to determine the CKM matrix elements |Vub| and |Vcb| or to investigate lepton flavour universality violation in R-ratios comparing decays with heavy or light final state leptons. We calculate the decay form factors using domain-wall light, strange and charm quarks, with the Columbia formulation of the RHQ action for the b-quark. Form factors f+ and f0 are obtained with full error budgets at q-squared values spanning the range accessible in our simulations. Fits to z-parametrisations extend our results to the entire allowed kinematic range. We compute differential branching fractions and two forms of R-ratios.

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