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B \rightarrow π form factors from Alpha collaboration

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We present the current status of the ongoing work of the ALPHA collaboration on the computation of the form factor $f_+(q^2)$ for the semi-leptonic decay

$B \rightarrow K \ell \nu$. We simulate on lattices generated as part of the Coordinated Lattice Simulations (CLS) effort which have $N_f=2$ non-perturbatively $O(a)$ improved Wilson fermions that satisfy $m_\pi L \geq 4$ and have sea pion masses down to ≈ 250

MeV. The heavy quark is treated in non-perturbative Heavy Quark Effective Theory (HQET).

We discuss how to extract physical information from our raw measurement data and present first results in the form of a data point for the form factor at $q^2 = 21.23$

GeV^2 extrapolated to the continuum. We also address the inclusion of next-to-leading order terms in HQET and chiral extrapolation, which have yet to be performed.

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