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Kaon and D meson semileptonic form factors from lattice QCD

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We present calculations of the $K \to \pi, l\nu$ and $D \to \pi, l\nu$ semileptonic form factors at $q^2 = 0$.
These form factors are important for the determination of the CKM matrix elements
$lvertV_{us}$
$rvert$ and
$lvertV_{cd}$
$rvert$ respectively.
This work uses the HISQ action for both valence quarks and sea quarks on MILC $N_f = 2{+}1{+}1$ configurations.
We employ twisted boundary conditions to calculate the form factors at zero momentum transfer directly.
The $K \to \pi$ results are an update to previously published results with new data at the physical quark mass.
The $D \to \pi$ results are preliminary, working at the physical light quark mass at three different lattice spacings down to 0.06 fm.

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