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SU(2) ChPT analysis of the scalar and vector form factors of the kaon semileptonic decay obtained from twisted-mass fermions with Nf = 2

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We investigate the form factors relevant in the K -> pion semileptonic decays using maximally twisted-mass fermions with two flavors of dynamical quarks.

The simulations cover pion masses as light as 260 MeV and four values of the lattice spacing, from ~ 0.05 up to ~ 0.1 fm, which allow to compute accurately the continuum limit.

SU(2) Chiral Perturbation Theory is applied to the extrapolation of the form factors to the physical point with their full momentum dependence. Our results are compared with the experimental data for the extraction of the Cabibbo angle $|V_{us}|$.

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talk

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