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Decay constants and spectroscopy of mesons in lattice QCD using domain-wall fermions

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We report results of masses and decay constants of light and charmed psuedo-scalar mesons using lattice QCD with Moebius domain-wall fermions. Using this formulation we are able to compute psuedoscalar decay constants through the pseudo-scalar density operator as well as with the axial-vector current. Results are shown from several lattice spacings and pion masses between 240 MeV and 500 MeV. We present an analysis of these results at different quark masses to show the chiral properties of the light mesons masses and decay constants.

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