$Z_{\mathrm{S}}/Z_{\mathrm{P}}$ from three-flavour lattice QCD

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We report on advances in the non-perturbative determination of the ratio $Z_{\mathrm{S}}/Z_{\mathrm{P}}$ of the scalar to the pseudoscalar renormalization constants in three-flavour lattice QCD with Wilson-clover quarks and tree-level Symanzik improved gluons. The computations are based on the Ward identity approach, using Schrödinger functional boundary conditions. Our results for $Z_{\mathrm{S}}/Z_{\mathrm{P}}$ cover a range of couplings along a line of constant physics with lattice spacings of about $0.09\,\mathrm{fm}$ and below, relevant for phenomenological applications such as the calculation of renormalized quark masses.

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