

# Nucleon axial, scalar, and tensor charges from lattice QCD simulations at the physical point

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We present results for the axial, tensor, and scalar charges of the nucleon using lattice QCD simulations of twisted mass fermions with two degenerate light, a strange, and a charm quark, with masses tuned to their physical values (physical point simulations). The axial charge is well known experimentally and therefore provides for an important benchmark of our methodology, while the scalar and tensor charges are less well known and their determination from first principles can provide input for precision measurements probing the existence of novel scalar and tensor interactions. Our results are obtained at three values of the lattice spacing, allowing for a first extrapolation to the continuum limit directly at the physical point.

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