

Plenary talk

Baryon structure from Lattice QCD

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摘要

We present recent lattice results on the baryon spectrum, nucleon electromagnetic and axial form factors, nucleon to Δ transition form factors as well as the Δ electromagnetic form factors. The masses of the low lying baryons and the nucleon form factors are calculated using two degenerate flavors of twisted mass fermions down to pion mass of about 270 MeV. We compare to the results of other collaborations. The nucleon to Δ transition and Δ form factors are calculated in a hybrid scheme, which uses staggered sea quarks and domain wall valence quarks. The dominant magnetic dipole nucleon to Δ transition form factor is also evaluated using dynamical domain wall fermions. The transverse density distributions of the Δ in the infinite momentum frame are extracted using the form factors determined from lattice QCD.

关键词 [lattice QCD, hadron spectrum, nucleon form factors, \$\Delta\$ form factors and density distributions](#)

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