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Lattice QCD advances in baryon physics

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Abstract content

Recent years have seen significant advances in numerical studies of QCD. Particularly in the heavy-quark sector, lattice QCD has matured into a precision tool for confronting experimental measurements of nonperturbative QCD. In the light-quark sector, and especially in the case of baryon properties, the field has not yet reached this level of precision. Upon a brief introduction to the methods of lattice QCD, we highlight some recent advances in the determination of baryon properties. In particular, we focus on studies of baryon spectroscopy, baryon axial charges and the spin and angular momentum decomposition of the nucleon. Further, in combination with modern methods in effective field theory, we highlight the latest progress towards precision physics in the baryon sector.

Summary

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