

Towards the determination of excited nucleon matrix elements with lattice QCD

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The observation that neutrinos can oscillate from one flavour to another suggests that these elementary particles have a very small but non-zero mass. The weak cross sections that occur in the neutrino oscillation experiments are parametrized among other things by the nucleon axial and vector form factors, which can be computed via lattice QCD simulations. In this talk, I will highlight the need to determine the structure of nucleon excitations from an experimental and a theoretical perspective. In particular, since the relevant excited nucleons decay into a nucleon and pions, I report on a first step towards the determination of nucleon form factors including those associated with nucleon-pion states.

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Classifica Sessioni: Parallel 1

Classificazione della track: QCD calculations of hadrons spectrum and structure