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**The role of pions on nuclei and observable characters
based on the relativistic chiral mean field model**

Abstract

We construct a relativistic framework which takes into the pionic correlation (iterated one-pion exchange) account seriously on the basis of chiral mean field model. The tensor part is very strong at medium interaction range (around 1 fm), and produces large attractive force for the triplet-even state. The central part produces the large repulsive force for the triplet-odd state.

The pseudoscalar nature of pions introduces the high momentum correlations in the interaction between nucleons. For explicit introduction of pions, the framework has to possess a thorough model space in order to describe this important nature.

Although our framework is already far beyond mean field theory, we will show ideas to make our framework (relativistic chiral mean field with projection) easy to use for serious description of pionic correlation and its essential points.

We will also discuss the role of pions on finite nuclei and its observable characters.