

The effective hadron-hadron interaction in medium

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We describe an approach to the nuclear many-body problem that begins with the quark and gluon structure of the hadrons. In contrast with the traditional

approach that first tackles NN scattering, then NNN and so on, we show that one can instead make impressive progress by starting with the modification of the structure of a hadron immersed in a nuclear medium. With just a few parameters this approach has produced remarkable results for finite nuclei as well as hypernuclei. The density dependent Skyrme force derived from the energy functional of the model is in remarkable agreement with the very best phenomenological Skyrme forces in the literature.