NWS08-2008-000118

Abstract for an Invited Paper for the NWS08 Meeting of the American Physical Society

Frontiers in understanding matter at the extremes¹ ACHIM SCHWENK, TRIUMF

I will discuss current frontiers in understanding and predicting the structure of strongly-interacting matter in laboratory nuclei and in the cosmos. These include the development of effective field theory and renormalization group methods in nuclear physics, the advances of ab-initio approaches for nuclear structure, and the effort to develop a universal nuclear energy density functional based on microscopic interactions. Three-nucleon forces play a central role in these developments.

¹Work supported by NSERC and the National Research Council of Canada.