

NWS16-2016-000073

Abstract for an Invited Paper
for the NWS16 Meeting of
the American Physical Society

Nuclear physics from lattice QCD

SILAS BEANE, Univ of Washington

Over the last several decades, theoretical nuclear physics has been evolving from a very-successful phenomenology of the properties of nuclei, to a first-principles derivation of the properties of visible matter in the Universe from the known underlying theories of Quantum Chromodynamics (QCD) and Electrodynamics. Many developments are being achieved using lattice QCD, a method for treating QCD numerically with large computers. After a brief motivational introduction, I will present some calculations of the properties of the simplest nuclear and hypernuclear systems using lattice QCD.