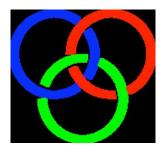
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Recent progress in ab-initio four-body scattering calculations

jeudi 13 octobre 2011 11:20 (40 minutes)

In this contribution, we discuss some recent developments in the study of four-nucleon scattering. In the first part of the talk, we will focus on n-3H and p-3He elastic scattering below the trinucleon disintegration thresholds, where a detailed comparison between the phase-shifts calculated using three different theoretical approaches (the Alt, Grassberger-Sandhas, Hyperspherical-Harmonics, and Faddeev-Yakubovsky methods) has been recently completed. Moreover, we will report on the study of the charge exchange reaction 3He(n,p)3H reaction. In the second part of the talk, we will discuss the calculation of the longitudinal asymmetry induced by parity-violating (PV) components in the nucleon-nucleon interaction in the 3He(n,p)3H reaction.

Author: Dr VIVIANI, Michele (INFN, Sezione di Pisa)Orateur: Dr VIVIANI, Michele (INFN, Sezione di Pisa)