Contribution ID: 42

Present and projected sensitivities of Dark Matter direct detection experiments to effective WIMP-nucleus couplings

Monday, 2 July 2018 14:00 (30 minutes)

Assuming for WIMPs a Maxwellian velocity distribution in the Galaxy we explore in a systematic way the relative sensitivity of present and projected Dark Matter direct detection experiments to each of the 14 couplings that parameterize the most general non-relativistic effective Hamiltonian allowed by Galilean invariance for the elastic scattering off nuclei of WIMPs up to spin 1/2. We perform our analysis in terms of two free parameters: the WIMP mass and the ratio between the WIMP-neutron and the WIMP-proton couplings.

Primary author: Prof. SCOPEL, Stefano (Sogang University)

Co-authors: Dr TOMAR, Gaurav (Sogang University); Mr YOON, Jonghyun (Sogang University); Mr KANG, Sunghyun (Sogang University)

Presenter: Prof. SCOPEL, Stefano (Sogang University)

Session Classification: Parallel Session 2-5