16th Patras Workshop on Axions, WIMPs and WISPs



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Catching the axion via new CP-violating forces

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While the axion was originally introduced to "wash out" CP violation from strong interactions, new sources of CP violation beyond QCD (needed e.g. for the matter-antimatter asymmetry) might manifest themselves via a tiny scalar axion-nucleon component. The latter can be experimentally probed in axion-mediated force experiments, as suggested long ago by J.E. Moody and F. Wilczek. In the present contribution, I will review this story and report on a recent calculation of the scalar axion-nucleon coupling based on chiral Lagrangian techniques, correcting and expanding on previous works.

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