Phenomenology 2018 Symposium



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Type: parallel talk

Parameter Reconstruction and Estimation of Widths in Coherent Elastic Neutrino-Nucleus Scattering Experiments.

Monday 7 May 2018 17:15 (15 minutes)

This talk will comment on the underlying statistics, model evaluation, application and usage of MultiNest for the optimization of coherent scattering neutrino detection experiments. We will discuss an approach which incorporates signal and background uncertainties leading to parameter estimations and distributions for a given likelihood.

We discuss the future possible uses of this approach within the realm of short baseline coherent neutrinonucleus scattering searches for sterile neutrinos. It is of interest to optimize a variety of experimental factors such as exposure, and detector distance from the source, with respect to projected sensitivity and resolution.

Summary

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