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Nuclear recoil calibration for PICO bubble chambers

Due to lack of event-by-event energy resolution, the nuclear recoil calibration for PICO bubble chambers is much harder than other direct detection methods. In order to overcome this innate problem of threshold detector, PICO collaboration has taken multiple set of neutron calibration data with different energy spectrum in order to unfold the true nuclear recoil efficiency. In this talk I'll show the new analysis of neutron calibration from Montreal test beam, AmBe and SbBe neutron sources. I'll also discuss our new Markov Chain based algorithm to constrain C3F8 nuclear recoil efficiency for PICO bubble chambers and present our latest results.

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