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Search for low-energy nuclear recoil in XENON1T

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The XENON collaboration has recently published results lowering the energy threshold to search for nuclear recoils produced by solar ^{8}B neutrinos using a 0.6 tonne-year exposure with the XENON1T detector. Due to the low energy threshold, a number of novel techniques are required to reduce the consequent increase in backgrounds. No significant ^{8}B neutrino-like excess is found after unblinding. New upper limits are placed on the dark matter-nucleus cross section for dark matter masses as low as 3 GeV/c^2, as well as on a model of non-standard neutrino interactions. This talk will present the techniques used to lower backgrounds and to validate signal and background models.

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