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Type: **Invited Talk**

Nuclear structure studies relevant for new physics searches with xenon detectors

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Xenon detector experiments have provided some of the most sensitive searches of physics beyond the standard model (BSM). These campaigns have placed emphasis on observing dark matter interactions and/or neutrinoless double beta decays ($0\nu 2\beta$). Several next-generation experiments aim to build on this work and probe for BSM physics with significantly improved sensitivity. In relation to the above, this talk will present results from recent two-nucleon transfer studies in the $A = 136$ region. The measurements are used to robustly test predictions made with Hamiltonians that are also used to evaluate the nuclear matrix element for $^{136}\text{Xe } 0\nu 2\beta$. Further implications concerning the detection of solar neutrinos and fermionic dark matter candidates in large xenon-based detectors will also be briefly presented.

Attendance Type

In-person

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