

Sub-keV energy model for nuclear recoil depositions in liquid noble elements for CE ν NS and dark matter direct searches. Results and perspectives of the Skipper-CCD at ICN detector laboratory

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Liquid noble time proportional chambers (TPCs) are one of the most widely used scintillators in particle detection due to their low cost, high availability, and excellent scintillation properties. Many experiments in the neutrino and dark matter sectors are based on this detection technique. Here, we present a first principles study of the total quanta yield for liquid noble elements and the recombination process. We will provide an explanation and comparison with recent measurements of the box size electric field dependence for LAr, LXe and LNe. In the last part of the presentation, we are going to present the recent results of the Skipper-CCD sensor at the ICN detector laboratory, using a ^{55}Fe source

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