

Solar B-8 neutrino and light dark matter search in the PandaX-4T experiment

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The PandaX-4T experiment, employing a two-phase xenon time projection chamber, aims at exploring various physics phenomena, including detecting astrophysical neutrinos and searching for dark matter. It has set a significant constraint on solar B-8 neutrino flux using commissioning data, with an effective exposure of 0.48 tonne-year through neutrino-nucleus coherent scattering. Additionally, it places stringent limits on sub-GeV light dark matter interactions with shell electrons scatterings, with a 0.63 tonne-year exposure. This poster presents an overview of PandaX-4T, analysis methods, and findings on solar B-8 neutrino flux and light dark matter.

Poster prize

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Collaboration (if any)

PandaX-4T collaboration

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