

Search for axions and other new physics signals with PandaX-4T

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PandaX-4T, a large-scale liquid xenon detector operating at the China Jinping Underground Laboratory, features ultra-low background, high sensitivity, and excellent energy resolution, making it a powerful platform for probing physics beyond the Standard Model. In this talk, I will present our latest results on the search for axions and axion-like particles (ALPs), including solar axions, axions with electron couplings, and ALP dark matter, based on data from PandaX-4T. In addition, we investigate other potential signatures of low mass dark matter even to sub-MeV level through solar boosted mechanism. The resulting constraints are competitive with leading global results and highlight the broad potential of PandaX-4T in the search for new fundamental physics.

Collaboration you are representing

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