

CDEX dark matter experiment at CJPL : status and plans

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Germanium detectors with sub-keV sensitivities [1] offer a unique opportunity to search for light WIMP Dark Matter and axion-like particles. We will highlight our results and status of CDEX dark matter experiment [2] at the China Jinping Underground Laboratory (CJPL) [3] in China. The detector R&D programs which allow us to experimentally probe this new energy window will be discussed, especially the new bulk/surface events separation scheme. Recent results from axion searches, as well as results from non-modulated and modulated dark matter searches [2] will be described. Status of the construction of CJPL-II will be presented.

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[2] Q. Yue et al., Phys. Rev. D 90, 091701(R) (2014); S. K. Liu et al., Phys. Rev. D 90, 032003 (2014); W. Zhao et al., Phys. Rev. D93, 092003 (2016); S. K. Liu et al., Phys. Rev. D 95 052006 (2017); L.T. Yang et al., Chin. Phys. C 42, 23002 (2018); H. Jiang et al., arXiv:1802.09327 (2018).

[3] J. P. Cheng et al., Ann. Rev. Nucl. Part. Sci., Vol. 67, 231 (2017).

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