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Double-Weak Decays in the PandaX-4T Experiment

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The possible Majorana nature of Neutrino is crucial for addressing profound questions such as the conservation of lepton number and the origins of the matter-antimatter asymmetry in the universe. Experimentally searching for Majorana neutrinos is one of the most important fields in the forefront of fundamental physics. The PandaX-4T detector, located in the China Jinping Underground Laboratory (CJPL), provides unique opportunities and high-quality data for this type of research through the double-week decays of Xe-136, Xe-134 and Xe-124. We will report the results and the progress of the double-week decay searches.

Paper info

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Primary author: Prof. 王, 少博 (Shanghai Jiao Tong University) **Presenter:** Prof. 王, 少博 (Shanghai Jiao Tong University) **Session Classification:** Neutrino