

Recent PandaX-II results on dark matter search and PandaX-4T upgrade plan

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PandaX experiment, located at China JinPing underground Laboratory (CJPL), is a 500kg scale liquid xenon dark matter direct detection experiment. With the first 98.7-day data, PandaX-II experiment obtained stringent upper limits on the spin-independent (SI) and spin-dependent (SD) WIMP-nucleon elastic scattering cross sections. Alternative models of dark matter are also explored using this data. Meanwhile, PandaX collaboration has launched an upgrade plan to build PandaX-4T detector with 4-ton liquid xenon in the active volume. The PandaX-4T experiment will be relocated to CJPL-II and is expected to run after 2020. Detailed simulation indicates that the sensitivity on SI WIMP-nucleon scattering cross section could reach $6 \times 10^{-48} \text{ cm}^2$ after two-year's running.

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