

## PandaX-III neutrinoless Double beta decay experiment and its prototype detector

*Saturday, 30 June 2018 16:30 (30 minutes)*

The PandaX-III (Particle And Astrophysical Xenon Experiment III) experiment will search for Neutrinoless Double Beta Decay (NLDBD) of  $^{136}\text{Xe}$  at the China Jin Ping underground Laboratory (CJPL). PandaX-III exploits the tracking capability of gaseous TPC to effectively identify possible signal and suppress background. The first TPC will contain 200 kg of enriched xenon at 10 bar. Fine pitch micro-pattern gas detector (Microbulk Micromegas) will be used for the charge readout to reconstruct tracks of NLDBD events and provide good energy resolution (3% FWHM) and millimeter level spatial resolution. A 20 kg scale prototype TPC with 7 Micromegas modules, the first application of Microbulk Micromegas in TPC of this size, has been built and commissioned. In this talk, I will give an overview of recent progress of PandaX-III, including data taking of the prototype TPC.

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