Contribution ID: **320** Type: **not specified**

Searching for Dark Matter

Tuesday, 5 September 2017 10:45 (30 minutes)

Dark matter is among the most important mysteries in science today. There are compelling arguments that dark matter particles are a class of weakly-interacting massive particles, or WIMPs, that arise naturally in physics beyond the standard model. WIMP searches using various low-energy detectors have been conducted around the globe for nearly thirty years, with dramatic improvements in scale and sensitivity. After a brief overview of the field, I will focus on a Chinese dark matter experiment, PandaX-II, running in the Jinping Underground Lab, in Sichuan Province. The PandaX-II detector uses 580kg ultrapure liquid xenon as the detection target, and has a record sensitivity about ~0.1 events/tonday. The most recent results with an exposure of 54 tonday data will be shown and discussed. The future running and upgrading plan of the PandaX experiment will be presented, along with the prospect of building the world "ultimate WIMP dark matter detector" in the next decade.

Presenter: Prof. JI, Xiangdong (SJTU)

Session Classification: Plenary