

# Measurement of the Solar pp Neutrino Flux in PandaX-4T

*Thursday 18 July 2024 10:45 (15 minutes)*

The precise measurement of solar neutrino flux is essential for the Standard Solar Model (SSM) and neutrino physics. The proton-proton (pp) fusion chain dominates the neutrino production in the Sun, and pp neutrinos contribute roughly 91% of the solar neutrino flux. PandaX-4T, an experiment located in China Jinping underground Laboratory, aims to detect dark matter and astrophysical neutrinos using a large-scale dual-phase xenon TPC. In this talk, using the 0.63 tonne $\times$ year exposure of PandaX-4T, the first measurement of solar pp neutrinos below 165 keV electron recoil energy with a natural xenon detector will be presented.

## Alternate track

### I read the instructions above

Yes

**Primary author:** LU, Xiaoying

**Presenter:** LU, Xiaoying

**Session Classification:** Neutrino Physics

**Track Classification:** 02. Neutrino Physics