Contribution ID: **17** Type: **Invited talk**

# The status of PandaX-20T time projection chamber development

*Thursday, 21 May 2026 14:00 (30 minutes)*

PandaX-4T is one of the most sensitive liquid xenon detectors, achieving world leading results in dark matter and neutrino physics. The construction of its successor, the next-generation detector PandaX-20T, will start in the beginning of 2026. Over 22 tonnes of xenon will be utilized, resulting in a diameter of ~2m and a height of ~2.5m for the time projection chamber (TPC). The TPC will be equipped with 1.85m-diameter mesh electrodes, wire electrodes, and flexible printed circuit board shaping rings to generate electric field required for signal production. The new R12699 photomultiplier tubes will be employed for photon detection. This talk will give an overview of the status of TPC development, performance of prototypes, and the simulated background composition of the detector.

**Primary author:** ZHANG, Minzhen (SJTU)

**Presenter:** ZHANG, Minzhen (SJTU)

**Session Classification:** DM - 0vBB

**Track Classification:** Dark Matter