TinyTPC - A test stand for photosensitive dopants

Tuesday, 7 November 2023 18:40 (20 minutes)

LArTPCs are designed to explore signals with energies as low as 10s of MeV. To improve the LArTPC’s energy resolution at the MeV range, photosensitive dopants may be used. These dopants convert light to charge and have the potential to increase ionization yields. We built a LArPix test stand, TinyTPC, to demonstrate this technology and study potential enhancements for next generation LArTPCs. We plan to compare TinyTPC’s energy resolution with and without dopants for radioactive sources and determine optimal doping strategies. This presentation will describe the status and progress of the TinyTPC test stand and analysis.

Early Career
Yes

Primary author: LEMOINE, Hannah
Co-author: PSIHAS, Fernanda
Presenter: LEMOINE, Hannah
Session Classification: Poster Session

Track Classification: RDC Parallel Sessions: RDC1: Noble Element Detectors