Contribution ID: **115** Type: **Poster**

^{214}Pb branching ratios measurement with XENONnT detector

Tuesday, 18 June 2024 17:30 (2 hours)

^{214}Pb represents one of the most common irreducible contaminant in rare-events physics experiments.
In the XENONnT experiment, a LXe dual-phase TPC for direct dark matter searches, ^{214}Pb represents the dominant contribution in the electron recoil background below 40 keV.
This isotope undergoes beta decay into several ^{214}Bi excited states, generating electron/gamma events in the detector.
For several precision physics searches in XENONnT, such as solar-pp neutrino flux measurement, the accuracy demanded on this isotope branching ratios are still not currently available in the literature.
In this study, by exploiting ^{222}Rn calibration campaign, we report updated measurements of ^{214}Pb branching ratios.

Poster prize

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