Contribution ID: **31** Type: **not specified**

Radiative two-pion tau decay and its impact on muon g-2

Monday, 12 May 2025 16:15 (20 minutes)

In this talk I will focus on the tau -> pi pi gamma nu process. Special attention will be paid to the triple-product asymmetry arising from this decay channel. Anomalous rho-omega-pi type of interacting vertices, together with the ones with even parity, are simultaneously included in our calculation. The branching fraction of the radiative two-pion tau decay is predicted to be around 10ˆ-4 even with the photon energy cutoff at 300 MeV. Invariant-mass spectra of the pi-pi and pi-gamma systems are predicted as well, which can probe different light hadron resonance dynamics. An interesting triple-product asymmetry, constructed with the momenta of the final-state particles, is revealed in our study. I also plan to discuss the impact of the isospin-breaking corrections from this radiative two-pion tau decay to the muon g-2.

Primary author: GUO, Zhi-Hui (Hebei Normal University)

Presenter: GUO, Zhi-Hui (Hebei Normal University)

Session Classification: Parallel I: A