



SPEAKER: Yu-Chen Tung  
TITLE: **Search for  $KL \rightarrow \pi^0 \nu \bar{\nu}$  at KOTO experiment**  
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## ABSTRACT

J-PARC KOTO is a dedicated experiment for the search of the rare  $KL \rightarrow \pi^0 \nu \bar{\nu}$  decay. This decay is known as the “golden mode” because of its direct CP violating process and theoretical cleanliness, which provide a clean base to explore new physics through finding deviations from the standard model. Recently, the KOTO experiment released the results based on the data collected in 2015, which improves the upper limit of branching ratio by almost an order of magnitude over the previous result. In this talk, I will recap the results of 2015 data and talk about the plan on our way to the sensitivity of  $O(10^{-11})$ .