



Contribution ID: 31

Type: **Non-Invited Talk**

Measurement of the charge asymmetry for the $KS \rightarrow \pi e \nu$ decay and test of CPT symmetry with the KLOE detector

Tuesday 27 November 2018 15:10 (25 minutes)

Using 1.63 fb^{-1} of integrated luminosity collected by the KLOE experiment about 7×10^4 $KS \rightarrow \pi^\pm e^\mp \nu$ decays have been reconstructed. The measured value of the charge asymmetry for this decay is $AS = (-4.9 \pm 5.7_{\text{stat}} \pm 2.6_{\text{syst}}) \times 10^{-3}$, which is almost twice more precise than the previous KLOE result. The combination of these two measurements gives $AS = (-3.8 \pm 5.0_{\text{stat}} \pm 2.6_{\text{syst}}) \times 10^{-3}$ and, together with the asymmetry of the KL semileptonic decay, provides significant tests of the CPT symmetry. The obtained results are in agreement with CPT invariance.

Content of the contribution

Experiment

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Session Classification: Emergence of symmetries from entanglement

Track Classification: [1] T, C, P, CP and CPT symmetries