



Contribution ID: 145

Type: poster

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

*Tuesday, 25 June 2019 13:30 (1h 30m)*

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

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**Session Classification:** Poster session