# Contribution of CPLEAR to the physics of the neutral kaon system

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**Abstract**

CPLEAR has experimentally determined, for the first time, the violation of T invariance and disentangled all the CP– and CPT–violating quantities in the neutral kaon system from each other. This allows each of the CPT violation parameters to be determined with a precision of a few $10^{-4}$ and, in particular, the mass and width equality between the $K^0$ and $\overline{K}^0$ to be tested down to the level of $10^{-18}$ GeV. Moreover, the precision of the CPLEAR measurements allows us to probe for the first time physics on a scale approaching the Planck mass and to provide the most precise test of the equivalent principle.