

RESULTS ON ϵ' AND CPV EFFECTS
IN $K_L \rightarrow \pi^+\pi^-e^+e^-$ FROM NA48

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Results are presented on direct CP violation determined from the data collected in the year 2001 and from all the data of the NA48 experiment: $\text{Re}(\epsilon'/\epsilon) = (14.7 \pm 2.2) \times 10^{-4}$. Also shown are results on $K_{L(S)} \rightarrow \pi^+\pi^-e^+e^-$ decays: branching fractions and the asymmetry in the distribution of the angle ϕ between the $\pi^+\pi^-$ and e^+e^- planes in the kaon rest system. This asymmetry is due to indirect CP violation and is expected to be large for K_L decays and negligible for K_S . Our results confirm these expectations: $A_\phi = (14.2 \pm 3.6)\%$ and $(-1.1 \pm 4.1)\%$ respectively.