

SEARCH FOR CP-VIOLATION IN $K_S \rightarrow \pi^0\pi^0\pi^0$
DECAYS

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S u m m a r y

A search for CP-violation in $K_S \rightarrow \pi^0\pi^0\pi^0$ decays is performed using the data collected with a short neutral beam at the CERN SPS during the year 2000. New limits on the CP-violating parameter η_{000} and $\text{BR}(K_S \rightarrow \pi^0\pi^0\pi^0)$ are reported. Using the Bell-Steinberger unitarity relation, the error on the CP-violating and CPT-violating parameter $\text{Im } \delta$ is reduced leading to an improved test of CPT conservation: the difference between the K^0 and the \bar{K}^0 mass is found to be: $\Delta M = (-1.7 \pm 4.2)^{-19}$ GeV.