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Hadron spectroscopy and exotics (experiment and theory)

Experiment: KLOE

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Analysis of phi to eta: gamma, phi to eta gamma in pi+pi-gamma gamma gamma final state

The KLOE Collaboration

Abstract

From 53 millions ϕ mesons produced at DAΦNE, the Frascati ϕ -factory, in KLOE, we have measured the ratio of the branching ratios of the two ϕ radiative decays to be $(4.97 \pm 0.50 \pm 0.33) \times 10^{-3}$. This leads to a very accurate determination of the mixing angle in the flavour basis $\phi_P = (41.0 + 1.8 - 1.6)$ degrees, and to the most accurate determination of $\text{BR}(\phi \rightarrow \eta : \gamma) = (6.45 \pm 0.65 \pm 0.46) \times 10^{-5}$ to date.

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