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Neutral kaon interferometry at KLOE and KLOE-2

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Neutral kaons produced in correlated pairs at a phi-factory offer unique possibilities to perform fundamental tests of CPT invariance, as well as of the basic principles of quantum mechanics. The analysis of the data collected by the KLOE experiment at DAFNE is still ongoing with the aim of improving previous results and limits on several parameters describing CPT violation and/or decoherence.

Ancillary measurements like the regeneration cross section on the beam pipe materials are also in progress and will be very useful to reduce the systematic uncertainties.

Prospects on improvements at the KLOE-2 experiment, aiming at an increase of the integrated luminosity of about a factor ten with an upgraded detector, will be also discussed.

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