

Flavor Physics and Discrete Symmetries at KLOE-2

Thursday 30 July 2020 12:29 (15 minutes)

Present data sample of 8 fb^{-1} collected by KLOE and KLOE-2 experiments at the upgraded DAΦNE collider of the INFN Laboratori Nazionali di Frascati corresponds to the largest sample ever collected at the $\phi(1020)$ meson peak at an e^+e^- collider - 2.4×10^{10} ϕ -mesons produced.

The lepton charge asymmetry measured in K_S semileptonic decays with 1.7 fb^{-1} of KLOE data, improving the statistical uncertainty of the present result by about a factor two, will be presented together with the test of CPT in transitions in $\phi \rightarrow K_S K_L \rightarrow \pi e \nu, 3\pi^0$ and $\pi e \nu, 2\pi$ decays. Latest results on K_S rare decays will be discussed in the framework of Flavour Physics and CP Violation tests. Among these the first measurement ever on the $K_S \rightarrow \pi \mu \nu$ branching ratio at a 4.4% total accuracy, using 1.7 fb^{-1} KLOE data allowing a new determination of the V_{us} CKM matrix element and the test of lepton-flavour universality using K_S mesons, and the search for the pure CP-violating $K_S \rightarrow 3\pi^0$ decay with the newly acquired KLOE-2 data set.

I read the instructions

Secondary track (number)

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