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Flavour Physics and CP Violation at KLOE-2

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The KLOE-2 experiment at the upgraded e+e- DAPHNE collider of the INFN Laboratori Nazionali di Frascati completed its data taking campaign at the end of March 2018, collecting more than 5 fb^{-1} at the center of mass energy of the phi-meson. Together with the data set of its predecessor KLOE, the acquired data sample of 8 fb^{-1} corresponds to 2.4×10^{10} ϕ -meson produced: the largest sample ever collected at the $\phi(1020)$ at e^+e^- colliders.

KLOE-2 Collaboration activities are now focused on data reconstruction and analysis, continuing the KLOE long-standing tradition of flavour physics precision measurements in the kaon sector, to probe CKM unitarity and lepton universality, and search for Physics Beyond the Standard Model. Latest results on K_S rare decays will be presented and discussed in the framework of Flavour Physics and CP Violation tests, among these the measurement of K_S semileptonic branching ratios, using 1.7 fb^{-1} KLOE data, and the search for the pure CP-violating $K_S \rightarrow 3\pi^0$ decay with the newly acquired KLOE-2 data set.

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Session Classification: CPT conservation, CP and T violations