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gamma-gamma physics at KLOE-2

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The KLOE-2 experiment completed its data-taking at the e^+e^- DAPHNE collider in Frascati, achieving the integrated luminosity goal of more than 5 fb^{-1} at the ϕ peak. KLOE-2 represents the continuation of KLOE with an upgraded detector and an extended physics program. The new four stations installed to tag electrons and positrons from the reaction $e^+e^- \rightarrow e^+e^- \text{gammagamma} \rightarrow e^+e^-X$, give the opportunity to investigate gamma-gamma physics at the ϕ resonance. Single pseudoscalar production will improve the determination of the two-photon decay widths of these mesons. An accuracy of $O(1\%)$ for the π^0 is reachable with 5 fb^{-1} , matching the current theory precision. With the same amount of data, the measurement of the $\pi^0 \rightarrow \text{gamma gamma}^* \text{TFF}$ in the space-like region with 5-6% accuracy could be reached in a region not yet exploited of the low momentum transfer. Preliminary results and perspectives on gamma-gamma physics will be presented.

Summary

Primary author: GIOVANNELLA, Simona (LNF)

Presenter: MORICCIANI, Dario (LNF)

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