

Measuring the radiative width of the $\rho(770)$ and testing the chiral anomaly at COMPASS

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The COMPASS experiment at CERN has collected an extensive data set during the years 2009 and 2012 with a pion beam impinging on nuclear targets. In this data set, a lot of Primakoff events are recorded, which are characterized by a single-photon interaction with the beam pion. The Primakoff events allow us to measure the radiative width of the $\rho(770)$ meson via the reaction $\pi^- + \gamma^{(*)} \rightarrow \rho^- \rightarrow \pi^- + \pi^0$. When the two pions of the final state couple directly to the photon, we can also test the chiral anomaly by determining the cross section for the $\gamma 3\pi$ -vertex. In the talk, we will present recent progress in the analysis of the $\pi^- \pi^0$ final state of Primakoff reactions at COMPASS.

Category

talk

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