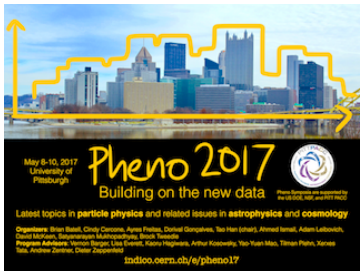

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Studying the Pc(4450) resonance in J/psi photoproduction off protons

Tuesday 9 May 2017 15:45 (15 minutes)

The LHCb has reported the observation of a resonancelike structure, the $P_c(4450)$, in the $J/\psi\, p$ spectrum.

In our work, we discuss the feasibility of detecting this structure in J/ψ photoproduction, e.g., in the measurement that has recently been approved for the CLAS12 experiment at JLab.

We take into account the experimental resolution effects, and perform a global fit to world J/ψ photoproduction data, predicting that it will be possible to observe a sizable cross section close to the J/ψ production threshold. We present a first estimate of the upper limit for the branching ratio of the $P_c(4450)$ into the $J/\psi\, p$ channel, and we study the angular distributions of the differential cross sections. This will shed light on the nature and couplings of the $P_c(4450)$ structure in the future photoproduction experiments.

Summary

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