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Exploring light hadrons in UPCs with ALICE

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The investigation of light hadrons in UPCs is of great interest for QCD studies. ALICE is a superb detector for studying these processes because of its excellent particle identification and tracking capabilities. The measured cross section of coherent ρ^0 mesons in photon-lead interactions has been found to be about 40% smaller than what is predicted by the Glauber model, and expectations from photon-proton interactions, indicating the importance of high-mass intermediate states in the process of ρ^0 scattering off nuclei. In this talk, we will review the status of the coherent ρ^0 meson analysis, and present the first study of the photoproduction of the two-kaon final state channel in UPCs, which could originate from the decay of the ϕ meson or from direct production. ALICE can also study four-prong states which are interesting for spectroscopy and excited resonance searches. In this talk, we will discuss new results on exclusive four-pion states.

Category

Experiment

Collaboration (if applicable)

ALICE

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