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Production of π, K, p in inclusive UPC events in ALICE

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High-multiplicity proton–proton and proton–lead collisions at LHC energies feature signatures similar to those observed in Pb–Pb collisions, such as e.g. strangeness enhancement and collective expansion effects, which are traditionally attributed to the formation of the quark–gluon plasma. One way to study them is through the measurement of p_T-spectra for identified hadrons such as charged π, K and p, and the ratios of these spectra.

To date, analyses in ultra-peripheral collisions have mostly focused on exclusive photonuclear vector meson production and on two-photon interactions. However, photonuclear interactions, in which the target nucleus breaks up, also occur, and provide novel tests of collective phenomena in small systems. The p_T-spectra of identified pions, kaons and protons in these events have been measured by the ALICE experiment and compared to those obtained in other collision systems.

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