Contribution ID: **219** Type: **Parallel talk**

Vector meson photoproduction in UPCs with the FoCal detector at ALICE

Thursday 30 March 2023 15:40 (20 minutes)

In this talk, we will discuss the physics prospects of photon-induced measurements using the high granularity FoCal detector to be installed at the ALICE experiment, covering the pseudorapidity interval $3.4 \leq \eta \leq 5.8$. This new detector, scheduled to be in operation from Run 4, will explore the small Bjorken-x physics region in an unprecedented way. In this region the gluon saturation phenomenon is expected to be dominant. Combined with the rest of the ALICE subdetectors, including the zero degree calorimenters, FoCal will serve to reconstruct in a model independent way the measured photoproduction cross sections for vector mesons in a wide range of photon-target energies, down to x values of about 7×10^{-6} and 2×10^{-6} in ultra-peripheral photon-proton and photon–lead collisions, respectively. Physics performance studies of such ultra-peripheral collision measurements with FoCal will also be presented for the first time.

Submitted on behalf of a Collaboration?

Yes

Participate in poster competition?

No

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