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## Measurement of direct photons at forward rapidities in p-A collisions at LHC with ALICE

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on the behalf of the ALICE-FoCal Collaboration

Direct photon production at forward rapidity is a promising probe for the gluon content of protons and nuclei at small *x*.

In particular, the measurement of the nuclear modification factor for direct photons in

p–A collisions at the LHC is a crucial test for gluon saturation.

A new forward calorimeter (FoCal) is proposed as an upgrade to the ALICE experiment.

The detector will cover the range 3.5 <  $\eta$  < 5 which probes the gluon distributions at  $x \ 10 < sup > -5 < /sup >$  and  $Q \ p < sub > T < /sub > > 4$  GeV. Performance studies show that an extremely high-granularity calorimeter is required. Results from R&D for this project will be discussed.

## Collaboration

ALICE

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