

PHOTON 2019 - International Conference on the Structure and the Interactions of the Photon. Satellite Workshop: Photon Physics and Simulation at Hadron Colliders.



Contribution ID: 17

Type: **Talk**

## Isolated Photon Production in pp and p–Pb Collisions at the LHC measured with the ALICE experiment

Thursday, 6 June 2019 11:35 (20 minutes)

In high-energy hadron collisions, *direct photons* can be produced at different stages and are of particular interest to study the hot QCD medium since they escape it without being affected.

At high transverse momentum ( $p_T$ ), their production is dominated by high- $p_T$  parton fragmentation and hard-scattering processes between partons. The latter can be accessed experimentally using an isolation procedure leading to reduce both the fragmentation contribution and the large decay photon background. Their measurement in proton-proton collisions allows to test pQCD calculations and put constraints on parton distribution functions (PDFs). In addition, in proton-ion collisions (e.g., proton-lead) cold nuclear matter effects can be studied and especially nuclear PDFs can be tested. Their knowledge is crucial to understand the global picture of direct photon production in the context of hot nuclear matter where other mechanisms can occur in addition.

In this talk, recent results from the ALICE experiment on the isolated photon production in proton-proton and proton-lead collisions at the LHC will be presented.

### Summary

**Primary author:** MASSON, Erwann (Subatech, IN2P3-CNRS (FR))

**Presenter:** MASSON, Erwann (Subatech, IN2P3-CNRS (FR))

**Session Classification:** Gamma Final States

**Track Classification:** Gamma Final States