

# 10th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



Contribution ID: 103

Type: Oral Presentation

## Open heavy flavor production in pA collisions

*Monday, June 1, 2020 12:00 PM (20 minutes)*

Within the two p-Pb data samples collected by the LHCb detector at  $\sqrt{s_{NN}} = 5$  and 8.16 TeV, a rich set of open charm hadrons is observed with abundant statistics. Thanks to the LHCb forward acceptance that is complementary to general purpose detectors, with excellent performances in particle reconstruction and identification, these charm states are studied down to zero pT with overwhelming precision. In this talk, we present measurements of charm mesons and baryons productions, reconstructed in exclusive hadronic final states. Beauty hadrons, with signal counts up to a few thousands in the fully reconstructed decays in the pPb data samples, are also shown. Comparisons between theory predictions and data regarding the nuclear modification factors, forward-to-backward production ratios and baryon-to-meson ratios are made. The impact of the results, in particular on the improvement of nuclear PDF and parton saturation, are discussed. The open charm production in fixed-target collisions of LHCb is also presented, which provides crucial constraints on intrinsic charm and nuclear parton distribution functions at moderate and large Bjorken x.

### Collaboration (if applicable)

LHCb

### Track

Heavy Flavor and Quarkonia

### Contribution type

Contributed Talk

**Primary authors:** RICCIARDI, Stefania (Science and Technology Facilities Council STFC (GB)); LHCb COLLABORATION

**Presenter:** WANG, Jianqiao (Tsinghua University (CN))

**Session Classification:** Parallel

**Track Classification:** Heavy Flavor and Quarkonia