

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



Contribution ID: 260

Type: Oral Presentation

Heavy-flavour studies with a high-luminosity fixed-target experiment at the LHC

Tuesday, June 2, 2020 1:55 PM (20 minutes)

Extraction of the multi-TeV proton and lead LHC beams with a bent crystal or by using an internal gas target allows one to perform the most energetic fixed-target experiment ever. pp , pd and pA collisions at $\sqrt{s_{NN}} = 115$ GeV and PbP and PbA collisions at $\sqrt{s_{NN}} = 72$ GeV can be studied with high precision and modern detection techniques over a broad rapidity range.

Using the LHCb and ALICE detectors in a fixed-target mode offers unprecedented possibilities to access heavy-flavour production in a new energy domain, half way between the SPS and nominal RHIC energies.

In this talk, we will review projection studies for quarkonium and open charm and beauty production with both detector set-ups used with various nuclear targets and the LHC lead beams.

We will also discuss prospects of novel observations, e.g. χ_C suppression measurements and new quarkonium-correlation studies.

Collaboration (if applicable)

OTHER (Please specify in comments field)

Track

Heavy Flavor and Quarkonia

Contribution type

Contributed Talk

Primary author: Dr TRZECIAK, Barbara Antonina (Czech Technical University in Prague)

Presenter: Dr TRZECIAK, Barbara Antonina (Czech Technical University in Prague)

Session Classification: Parallel

Track Classification: Heavy Flavor and Quarkonia