



Contribution ID: 577

Type: **Oral**

Correlation between $\Upsilon(nS)$ meson and underlying event in pp collision

Tuesday 5 September 2023 16:10 (20 minutes)

We will present the final measurement studying the relationship between the production of hard and soft particles through the correlation of Upsilon meson states (including $\Upsilon(1S)$, $\Upsilon(2S)$, and $\Upsilon(3S)$) with the inclusive-charged particle yields. The analysis is performed using the full-luminosity ATLAS Run-2 13 TeV pp collision data. A description of the technical challenges and solutions associated with a heavy-ion style analysis in high-pileup pp data will be shown. Per-event charged particle multiplicity is found to be smaller in association with excited Υ states compared to that with a ground state at low Υ transverse momentum. The physics implications will be discussed.

Category

Experiment

Collaboration (if applicable)

ATLAS Collaboration

Primary author: CITRON, Zvi (Ben-Gurion University of the Negev (IL))

Presenter: CITRON, Zvi (Ben-Gurion University of the Negev (IL))

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