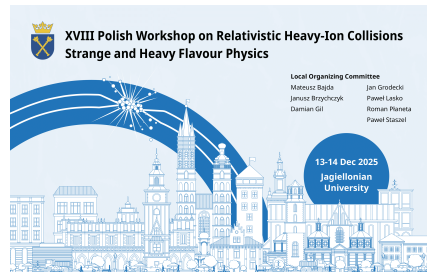


XVIII Polish Workshop on Relativistic Heavy-Ion Collisions: Strange and Heavy Flavour Physics



Contribution ID: 16

Type: not specified

Highlights in heavy-ion physics including strangeness and heavy-flavour production from ATLAS

This talk presents an overview of recent findings from the ATLAS experiment using heavy-ion collisions. These include measurements of how energetic jets are produced and modified as they travel through the hot, dense medium known as the Quark-Gluon Plasma (QGP), which is created in collisions between atomic nuclei at near light speed. The results also include studies of softer particles emerging from the collisions, which help reveal the collective behaviour and properties of the QGP. In particular, results from the recent oxygen-oxygen run at the LHC are discussed. In addition, the talk will cover the latest results from ultra-peripheral collisions (UPC), where the nuclei pass close to each other without directly colliding but still interact via their intense electromagnetic fields. These rare events allow the study of photo-nuclear and photon-photon processes. Photo-nuclear interactions provide insights into the structure of atomic nuclei, similar to deep inelastic scattering, while photon-photon interactions are used to probe the electromagnetic properties of the tau lepton, search for exotic particles like magnetic monopoles, and explore possible physics beyond the Standard Model.

Primary author: GRABOWSKA-BOLD, Iwona (AGH University of Krakow (PL))

Presenter: GRABOWSKA-BOLD, Iwona (AGH University of Krakow (PL))