## The XXVII International Scientific Conference of Young Scientists and Specialists (AYSS-2023)

Contribution ID: 1442 Type: Poster

## The Overlay Monte-Carlo method for estimating the pile-up background in diboson production in pp collider experiment

Monday 30 October 2023 21:25 (15 minutes)

The longitudinal coordinate of origin of the photon produced in collider experiment is usualy relatively poorly measured. Therefore in case of diboson production in pp collisions there is the distinct possibility that some events of interest passing the final selection in data are actually from two overlapping hard scatter processes, else pile-up background.

In this study a Monte-Carlo-based estimate of this background source is performed. Pile-up events are built by overlaying the separate simulations of single photon production and single Z boson production at particle-level. Finally, the number of such background events in the region of interest can be obtained by applying detector efficiencies.

Primary authors: Ms ZHAROVA, Valeria (NRNU MEPhI); Mr SOLDATOV, Evgeny (NRNU MEPhI); Ms

KAZAKOVA, Katerina (NRNU MEPhI, JINR)

Presenter: Ms ZHAROVA, Valeria (NRNU MEPhI)

Session Classification: In-person poster session & welcome drinks

Track Classification: High Energy Physics