



Contribution ID: 75

Type: **not specified**

Analysis of Fermi-Dirac correlations for proton pairs at LHCb experiment

The analysis uses the effect of quantum correlations for pairs of identical particles emitted independently from different points on a surface of a source. For identical bosons, the Bose-Einstein correlations can happen, while for identical fermions Fermi-Dirac correlations are possible. Analysis of those effects can allow for better understanding of the hadronisation process, especially determining the size and shape of hadronisation region.

The aim of this work was conducting feasibility studies of analysis of Fermi-Dirac correlations for pairs of identical protons in proton-proton collisions at LHCb experiment. Effects similar to expected have been observed, but for quantitative result (and fitting to theoretical models) much larger statistics is needed.

Primary author: MALECKI, Bartosz

Presenter: MALECKI, Bartosz