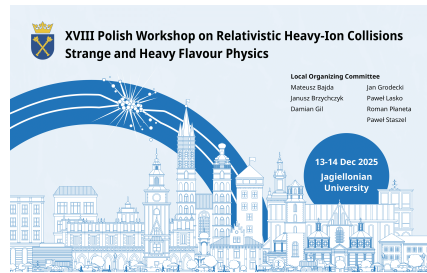


XVIII Polish Workshop on Relativistic Heavy-Ion Collisions: Strange and Heavy Flavour Physics



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The Wróblewski factor revisited for proton-proton at $\sqrt{s} \simeq 10$ GeV

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The Wróblewski factor, proposed 40 years ago [1] and still widely used, is a measure of strangeness production compared to the light quark production. The method is based on the direct comparison of the number of quarks in produced particles. Several assumptions were needed as not all particles have been measured.

Numerous multiplicities of particles (charged and several neutrals) produced in inelastic proton-proton interactions have been precisely measured at $\sqrt{s} \simeq 10$ GeV available at the CERN SPS. The experimental multiplicities are reasonably well (<20%) described [2] within hadron-resonance gas model, which estimates multiplicities of several unmeasured particles, in particular π^0 mesons and η mesons (containing hidden strangeness). Calculations of the Wróblewski factor will be presented.

[1] A. Wróblewski, Acta. Phys. Pol. B16, 379 (1985).

[2] T. Matulewicz, K. Piasecki, Acta Phys. Pol. B54, 12-A1 (2023).

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