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# ALICE studies of proton-hyperon and hyperon-hyperon interaction via the femtoscopy method in pp collisions

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The initial conditions and particle emission in proton-proton collisions is much better constrained than in heavy-ion collisions. This allows for a precise investigation of the interaction between pairs of produced baryons such as proton-$\Lambda$ and $\Lambda$-$\Lambda$ in this system.

In this analysis femtoscopic correlations of proton-proton, proton-$\Lambda$ and $\Lambda$-$\Lambda$ pairs have been studied for the first time in pp collisions at $\sqrt{s}$=7 TeV and 13 TeV recorded with the ALICE detector.

A new formalism to separate the background contributions from the genuine correlation arising from the baryon-baryon interaction was developed. The measured correlations were fit with the parametrization obtained by the "Correlation Analysis Tool using the Schrödinger Equation (CATS)" .

The sensitivity to different interaction potentials of the proton-$\Lambda$ and $\Lambda$-$\Lambda$ correlation function is investigated and a comparison to previous measurements by the STAR collaboration is presented.

## Content type

Experiment

## Collaboration

ALICE

## Centralised submission by Collaboration

Presenter name already specified

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