

ID de Contribution: 86

Type: Talk

## Shedding light on strong interactions in three-baryon systems with ALICE Run 3 data

*mardi 4 juin 2024 17:30 (20 minutes)*

The interactions of  $\Lambda$  hyperons with nucleons are of high interest for the studies of the composition of the inner core of neutron stars. Their equation of state requires a precise knowledge of the two- and three-body interactions at small distances which are not yet well constrained by the existing experimental data. ALICE has introduced a novel approach to investigate such interactions by measuring femtoscopic correlation functions of particles emitted with distances of around 1 fm in high-energy pp collisions. This method allows the study of various hadron-nucleus pairs and, for the first time, direct access to the 3 $\rightarrow$ 3 free scattering process.

In this talk, ALICE measurements of p-d, p-p-p and p-p- $\Lambda$  correlation functions are presented in pp collisions at  $\sqrt{s} = 13.6$  TeV, with a sevenfold increase in the statistical sample compared to Run 2. Moreover, the first-ever measurement of  $\Lambda$ -d pairs in pp collisions will be presented. The measured correlation functions will be compared to theoretical predictions showing sensitivity to the three-body dynamics.

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**Classification de Session:** Track7-OthTop

**Classification de thématique:** Strangeness in Astrophysics, Other topics