Contribution ID: **217** Type: **Poster**

Multiplicity dependent study of $\Lambda(1520)$ production in pp collisions at $\sqrt{s}$ = 5.02 and 13 TeV with ALICE

Wednesday, 6 April 2022 17:38 (4 minutes)

Hadronic resonances are effective tools for studying the hadronic phase in ultra-relativistic heavy-ion collisions. In fact, their lifetime is comparable to the hadronic phase and resonances are sensitive to the hadronic phase effects such as re-scattering and regeneration processes which might affect the resonance yields and shape of the transverse momentum spectra. $\Lambda(1520)$ has a lifetime of around 13 fm/c, which lies in between the lifetimes of K^* and Φ resonance. The resonance to stable particle yield ratios can be used to study the properties of the hadronic phase. Recently, ALICE observed the suppression of the $\Lambda(1520)/\Lambda$ ratio in Pb-Pb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV as a function of centrality. It is therefore interesting to investigate the multiplicity dependent study of $\Lambda(1520)/\Lambda$ ratio for pp collisions, since this can serve as a baseline for heavy-ion collisions.

In this contribution, we present new results on the measurement of the baryonic resonance $\Lambda(1520)$ as a function of charged-particle multiplicity in pp collisions at $\sqrt{s}$ = 5.02 and 13 TeV. The transverse momentum spectrum, the integrated yield $< dN/dy >$, the average $p_{\mathrm{T}} < p_{\mathrm{T}} >$ and the $\Lambda(1520)/\Lambda$ yield ratio will be presented as a function of charged-particle multiplicity.

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Session Classification: Poster Session 1 T05_1

Track Classification: QGP in small and medium systems