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## Novel constraints for the multi-strange meson-baryon interaction using correlation measurements with ALICE

*Monday, 8 July 2024 16:50 (20 minutes)*

This talk presents unprecedented correlation measurements involving  $\Lambda$ ,  $\Xi$ , kaons and pions obtained by ALICE in pp collisions at  $\sqrt{s} = 13$  TeV. Several measurements are presented for the first time, constituting new experimental constraints on the  $S = -1, -2$  meson-baryon interactions and the nature of exotic states. The strong interactions involving mesons and baryons with strangeness content deliver a rather broad spectrum of interesting states, arising from the rich interplay between the elastic and inelastic QCD dynamics. The  $\Lambda(1405)$  in the  $S = -1$  sector is an example of such molecular state, but in order to build a solid description of its inner structure more data are needed, particularly below the  $K^- N$  energy threshold. Much less experimental data are currently available on another potential molecular state, the  $\Xi(1620)$ , predicted and observed in the  $S = -2$  meson-baryon sector. The presented correlation data put new constraints on these sectors and deliver a better understanding on such states.

### session

E. Hadron and Nuclear Interactions

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