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## Non-identical particle femtoscopy in Pb-Pb collisions at 5.02 TeV with ALICE

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Femtoscopy is a tool that can be used to measure the space-time dimensions of the particle-emitting source created in heavy-ion collisions using two-particle correlations. Additionally to the measurement of the system size, one can extract the average pair-emission asymmetry between two particles with different masses. In this context, the measurement of femtoscopic correlations between charged pion and kaon pairs for different charge combinations obtained in Pb-Pb collisions at  $\sqrt{s_{\text{NN}}} = 5.02$  TeV with ALICE at the LHC is presented. The spherical harmonics

representations of the correlation functions ( $C_0^0$  and  $\Re C_1^1$ ) have been studied in different centrality bins. The obtained correlation functions are analysed after taking into account a precise treatment of the non-femtoscopic background. The extracted source size ( $R$ ) and the pair emission asymmetry ( $\mu$ ) show an increase from peripheral to central events. Moreover, it is observed that pions are emitted closer to the centre of the particle-emitting system than kaons and this result is associated to the hydrodynamic evolution of the source. Also, the source radii are found to be decreasing with increasing average momentum ( $k_T$ ) and transverse mass ( $m_T$ ) of the pair which indicates the presence of strong radial flow in the system.

### In-person participation

No

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