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ALICE results on long- and short-range correlations in high multiplicity pp collisions (15+3)

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In this talk, we present the latest results on two-particle correlations in high-multiplicity pp events from the ALICE Collaboration. In addition to the traditional long-range ridge studies, we present a new differential study in high-multiplicity pp collisions which contain a high-momentum charged particle or reconstructed jet, in order to determine whether long-range correlations are correlated with hard processes [1]. Furthermore, we perform a flow-extraction method using a low-multiplicity template, and present the non-flow free flow harmonics. The results are compared to the Pythia and EPOS Monte Carlo models which employ different mechanisms to generate ridge-like features, and to the results obtained in other LHC experiments.

[1] JHEP 05 (2021) 290, arXiv:2101.03110

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