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Collectivity studies in pp, p-Pb and Pb-Pb collisions with ALICE at the LHC

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Evidence of the presence of collective phenomena has been observed in the final state hadronic observables of the strongly-interacting system created in Pb-Pb collisions. In addition, measurements in pp and p-Pb collisions as a function of event multiplicity at LHC energies have shown some features reminiscent of collectivity. Thanks to its excellent PID capabilities and $p_{\rm T}$ coverage at mid-rapidity, ALICE is an ideal instrument for the measurements of transverse momentum distributions, integrated yield and mean $p_{\rm T}$ of identified light hadrons. These measurements are important tools to investigate the dynamics of the system under study. In the present contribution those measurements are reported for Pb-Pb collisions at the unprecedented centre of mass energy of $\sqrt{s_{NN}}=5.02$ TeV and are compared with results in pp and p-Pb collisions at the same energy. The measured spectral shapes at low and intermediate $p_{\rm T}$ in Pb-Pb collisions at $\sqrt{s_{NN}}=5.02$ TeV are also tested against results from hydrodynamic and recombination models. Boltzmann-Gibbs Blast Wave fits are used to quantify the radial expansion velocity and the kinetic temperature. The dependence of the blast-wave model parameters on the event multiplicity is also discussed.

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