

Femtoscopic analysis of relativistic heavy-ion collisions in the hydrokinetic approach

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The theoretical description of the femtoscopy scales in ultrarelativistic heavy-ion collisions at different energies and for different colliding ion pairs (Au + Au collisions at the top RHIC energy $\sqrt{s_{NN}} = 200$ GeV, Pb + Pb collisions at the LHC energies $\sqrt{s_{NN}} = 2.76$ and $\sqrt{s_{NN}} = 5.02$ TeV, the LHC Xe + Xe collisions at $\sqrt{s_{NN}} = 5.44$ TeV) is provided within the integrated HydroKinetic model (iHKM). The comparison of the model simulation results, obtained for the considered collision types at the similar values of the mean charged particle multiplicity $\langle dN_{ch}/d \rangle$ shows that the magnitudes of the corresponding interferometry radii depend not only on $\langle dN_{ch}/d \rangle$ but also on the geometric sizes of the colliding nuclei.

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