

WPCF 2023 - XVI Workshop on Particle Correlations and Femtoscopy & IV Resonance Workshop 2023



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Femtoscopy in heavy-ion collision experiments at various μ_B

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Geometry and dynamics of the particle-emitting source in heavy-ion collisions can be inferred via the femtoscopy method. Two-particle correlations at small relative momentum exploit Quantum Statistics (QS) and the Final State Interactions (FSI), which allow one to study the space-time characteristics of the source of the order of 10^{-15} m and 10^{-23} s. Femtosopic measurements allow one to study FSI, especially the Strong one, which is unknown for many two-particle systems. Various experiments at LHC, RHIC, and SIS-18 facilities cover a significant part of the QCD Phase Diagram using collisions of heavy-ions for several beam energies, in which regions with different μ_B are studied via femtoscopy. Strange hadron measurements and non-strange ones provide complementary information about source characteristics. This talk will exhibit the femtosopic measurements of various particle combinations at different collision energies.

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