

Dilepton interferometry: a tool to characterize different phases of matter produced in heavyion collisions

The Hanbury-Brown-Twiss (HBT) radii from the correlation functions of the two virtual photons produced in the collisions of two nuclei at ultra-relativistic energies have been evaluated. We show that a study of the mass dependence of various interferometry radii extracted from the correlation functions of virtual photons can be a powerful tool to characterize and distinguish the hadronic and the partonic phases.

It is shown that the non-monotonic variation of the HBT radii with invariant mass provides an access to the development of collective flow in the system.

The sensitivity of the results on the initial thermalization time is also examined.

Primary author: MOHNATY, payal (Variable Energy Cyclotron Centre)

Co-authors: Dr MOHANTY, Bedangadas (Variable Energy Cyclotron centre); Prof. ALAM, Jane (Variable Energy Cyclotron Centre)

Presenter: MOHNATY, payal (Variable Energy Cyclotron Centre)

Track Classification: Electromagnetic probes