

The journey to seek symmetry in Quark-Gluon Plasma (Block 6)

Friday, 9 July 2021 12:00 (1h 15m)

Abstract: Di-leptons and photons are a crucial probe of the strongly interacting matter created in ultra-relativistic heavy-ion collisions. Leptons and photons are produced during the whole evolution of the created matter and can traverse the medium with minimal interactions. Different kinematics of dilepton pairs (mass and transverse momentum ranges) can selectively probe the properties of the formed matter throughout its entire evolution. In the low invariant mass range ($M_{ll} < 1.1 \text{ GeV}/c^2$), vector meson in-medium properties may be studied via dilepton decays and may exhibit modifications related to possible chiral symmetry restoration. The di-lepton spectra in the intermediate mass range ($1.1 < M_{ll} < 3.0 \text{ GeV}/c^2$) are expected to be directly related to the thermal radiation of the Quark-Gluon Plasma. In this lecture, I will talk about my journey to seek symmetry in Quark-Gluon Plasma using di-leptons.

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