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Electromagnetic fields in heavy ion collisions at MPD-NICA energies

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Content

The electromagnetic fields at energies of the MPD-NICA experiment are intense on the order of one Pion mass squared, in units of the international system it is approximately 10^{13} T. In this talk, we present the characterization of electromagnetic fields at the initial moment of the collision at NICA energies, their temporal evolution and considering the electromagnetic fields in UrQMD native dynamic model. We show that the electromagnetic fields have the same behavior at the initial time and evolving in time as in previous studies at RHIC and LHC energies, with a difference of 1 and 2 orders of magnitude and time duration. By adding the Lienard-Wiechert electromagnetic field equations in the UrQMD dynamics, the results showed that at energies of the MPD-NICA experiment, electromagnetic fields do not influence the evolution of moment fluxes.

Area of contribution

Simulations

Primary author(s) : Mr. GUIRADO GARCIA, Alejandro (Universidad de Sonora)

Presenter(s) : Mr. GUIRADO GARCÍA, Alejandro (Universidad de Sonora)

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