

Seminário, Quinta 13/06/2024 14:30 h (extraordinário)

Local: Auditório Pi - DRCC

Alejandro Ayala, UNAM (Mexico)

Title: “Relaxation time for quark spin polarization in a rotating medium: implications for Lambda/anti-Lambda polarization”

Abstract: If immersed in a rotating medium, quarks can become polarized. The polarization is driven by interactions with the medium and depends on temperature and baryon chemical potential as well as on the medium angular velocity. Here I discuss how to compute the time it takes for the quark spin to become polarized. This is obtained as the inverse of the quark interaction rate whose computation in turn employs a recently developed expression for the propagator of spin-1/2 particles in a rotating environment. Possible consequences to explain recent Lambda/anti-Lambda polarization measurements are also discussed.