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Elliptic flow from the photon polarization in a magnetized hot medium

Summary

In this talk, I will introduce how we evaluate the photon elliptic flow by computing the photon one-loop polarization tensor in a magnetic field with finite temperature. Different with the polarization tensor in zero temperature, and Lowest Landau level approximation in finite temperature, the transition of particle to particle and antiparticle to antiparticle processes will be presence, these two transition processes are very sensitive with temperature compare with the antiparticle to particle process. I will show how this effect the photon elliptic flow in the heavy ion collision especially in the small transverse momentum region.

Primary author: Prof. WANG, Xinyang (Jiangsu University)

Co-authors: Prof. SHOVKOVY, Igor (Arizona State University); Prof. YU, Lang (Jilin University); Prof. HUANG MEI, Mei (UCAS)

Presenter: Prof. WANG, Xinyang (Jiangsu University)