

Enhancement of flow anisotropies due to magnetic field in relativistic heavy-ion collisions

It is known that the presence of background magnetic field in cosmic plasma distorts the acoustic peaks in CMBR. This primarily results from different types of waves in the plasma with velocities depending on the angle between the magnetic field and the wave vector. We consider the consequences of these effects in relativistic heavy-ion collisions where very strong magnetic fields arise during early stages of the plasma evolution. We show that flow coefficients can be significantly affected by these effects when the magnetic field remains strong during early stages due to strong induced fields in the conducting plasma. In particular, the presence of magnetic field can lead to enhancement in the elliptic flow coefficient v_2 .

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