

Thermal properties and evolution of the axial anomaly for 2+1 flavors

Thermal evolution of the axial anomaly of QCD is investigated in terms of effective theories with 2+1 flavors. Using the Functional Renormalization Group method, it will be shown that mesonic fluctuations are of great importance from the point of view of the thermal behavior of the 't Hooft determinant term. Results indicate that fluctuations strengthen the axial anomaly at finite temperature and it does not vanish at the critical point. The phenomenon has been found to have significance in the thermal properties of the mesonic spectrum, especially concerning the eta - eta' system. Analysis of the spectrum and the anomaly in nuclear medium will also be discussed.

Preferred Track

Correlations and Fluctuations

Collaboration

Not applicable

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