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An Application of Functional Renormalization Group Method for Superdenese Nuclear Matter

Thursday 30 June 2016 09:20 (20 minutes)

In this talk we propose a method, based on harmonic base polynomial expansion, to study the Functional Renormalization Group (FRG) method at finite chemical potential [1]. Within this theoretical framework we determine the phase diagram of simple Yukawa-type model. As it turns out, the bosonic fluctuations decrease the strength of the transition as compared to the analysis containing only the fermionic fluctuations. Using FRG method we may calculate the Equation of States of the superdense nuclear matter exists e.g. in compact astrophysical objects [2].

References
[1] G.G. Barnaföldi, P. Pósfay, A. Jakovác, arXiv:1604.01717 [hep-th]
[2] P. Pósfay,G.G. Barnaföldi,A Jakovác APoS EPS-HEP2015 (2015) 369

On behalf of collaboration:

None

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