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Particle Theory Seminar of LPT Orsay

Jeudi 20 Fevrier 2020, 11 :15
IJCLAB, ! Building 100 Salle A015 !
Domaines : hep-ph

Titre : *Hadronic matter under strong magnetic fields : matching effective models to lattice QCD*

Orateur : **Varese Timóteo (Campinas)**

Résumé : *We try to modify the NJL model in a way it matches lattice QCD calculations for the quark condensates and the neutral pion mass. The idea is to make the NJL coupling constant to depend on the temperature and the magnetic field since a fixed coupling does not give the same description of the phase transition as lattice QCD simulations. By making a fit, we determine a thermo-magnetic coupling constant and compute thermodynamic quantities. Our results show a good agreement with the lattice results for the condensates and the pion mass under strong magnetic fields. We also show some results at zero temperature and finite densities and magnetic fields for zero-strangeness isospin-symmetric and charge neutral beta-equilibrated neutron-star matter.*