

Self-consistent resummation for description of the hadron matter properties in critical region

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The effective models of QCD, like NJL or PNJL model describe properties of hadron matter using mean field approximation. At that time at critical region quark-meson correlations can play crushing role. We consider χ -derivable approximation as an instrument for description of matter at finite temperature and density. Such approach treats interactions in terms of fully-dressed propagators. In such approximation it becomes possible to resolve the entropy of relativistic plasma from interacting elementary excitations. Such approximation also lets describe back-reaction of pions on quark dynamics (Pauli-blocking) in critical region.

Author: Dr BLASCHKE, David (BLTP, JINR Dubna)

Co-authors: Dr WERGIELUK, Agnieszka (UCLA, USA); Dr , Aleksandr Dubinin (Jagellonian University Cracow, Poland); FRIESEN, Alexandra (BLTP, JINR Dubna); Dr RADZHABOV, Andrey (Irkutsk, Russia)

Presenter: Dr BLASCHKE, David (BLTP, JINR Dubna)

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