Workshop for young scientists with research interests focused on physics at FAIR



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Nonequilibrium dynamics and transport near the chiral phase transition of a quark-meson model

Monday, 16 September 2013 11:00 (30 minutes)

Based on the 2PI quantum effective action of the linear sigma model with constituent quarks, we develop a transport approach to study systems out of equilibrium. In particular, we focus on the chiral phase transition as well as the critical point in QCD, where nonequilibrium effects near the phase transition give rise to critical behavior of the ordering parameter. Predictions for long-range correlations and fluctuations of observables in our model could be used to indicate a phase transition.

Primary author: Mr MEISTRENKO, Alex (University of Frankfurt)

Co-authors: Prof. GREINER, Carsten (University of Frankfurt); Mr WESP, Christian (University of Frankfurt); Dr VAN HEES, Hendrik (University of Frankfurt)

Presenter: Mr MEISTRENKO, Alex (University of Frankfurt)

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