

Gemeinsame Veranstaltung von
Humboldt-Universität zu Berlin, Institut für Physik
(Theorie der Elementarteilchen / Computerorientierte Theoretische Physik)
DESY, Zeuthen

SEMINAR
Feldtheorie auf dem Gitter und
Phänomenologie der Elementarteilchen

Am Dienstag, dem **30 Januar**, um **15:30 Uhr s.t.** spricht

Prof. Owe Philipsen

Westfälische Wilhelms-Universität – Münster

zum Thema

**The QCD phase diagram at zero and small
baryon density**

Abstract

With the running of heavy ion collision experiments, theoretical predictions concerning the quark hadron phase transition have become an urgent task. Since this is a strong coupling problem, non-perturbative methods are necessary. Unfortunately, due to the so called 'sign-problem' standard lattice Monte Carlo simulations are inapplicable to situations with finite baryon number. In recent years several approximate methods have been invented to side step this problem. I report results obtained from simulations at imaginary chemical potential, where there is no sign problem, followed by analytic continuation, and compare with other approaches.

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