



PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 27.04.2016, 16 Uhr c.t.
Großer Hörsaal, Raum _0.111,
Max-von-Laue-Str. 1



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*"Magnetized quarks
and gluons on the lattice"*

In the extreme environment produced in heavy-ion collisions, strongly interacting matter undergoes a transition, where protons and neutrons melt and the so-called quark-gluon plasma phase is formed. Such collisions also witness the strongest magnetic fields ever produced on the face of the Earth. Besides heavy-ion experiments, strong magnetic fields also play a relevant role in the evolution of the early universe and for a class of neutron stars.

In this talk, I will introduce the basic concepts of lattice field theory and explain how this approach can be used to determine the properties of strongly interacting matter. In particular I will concentrate on how background magnetic fields affect the thermodynamics of quarks and gluons.

Die Dozenten der Physik

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