

INTRODUCTION TO RELATIVISTIC HEAVY-ION COLLISIONS

A course on theoretical and experimental aspects of relativistic heavy-ion collisions will be given in the winter semester 2010-2011 at GSI by

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The lectures are aimed at members of HGS-HIRE located at GSI or at neighboring universities. Topics to be covered include

- Kinematics, cross sections, many-body phase space
- Collision geometry, centrality selection
- Relativistic quantum mechanics, Dirac equation
- Thermodynamics of strongly interacting matter
- Symmetries of QCD
- The phase diagram of strongly interacting matter
- Observables, particle yields
- Hydrodynamics, ideal and viscous
- Observables, flow and spectra
- Optional: heavy quarks, dileptons, jets ...

A schedule for the lectures will be discussed with interested students at a meeting in the middle of September.

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