

大学院集中講義(物理学系物理学コース)

科目コード: PHY.T536, PHY.T636 単位: 1-0-0

物理学特別講義(発展)第七

(Advanced) Special Lectures in Physics VII

[Phase transitions in dense and hot QCD matter]

講師 北沢 正清 氏(Dr. Masakiyo Kitazawa)

京都大学基礎物理学研究所

(Yukawa Institute for Theoretical Physics, Kyoto Univ.)

日程 (Dates)

10/21(火) Oct.21(Tue.) 13:30-15:10. 15:25-17:05

10/22(水) Oct.22(Wed.) 10:45-12:25, 13:30-15:10, 15:25-17:05

10/23(木) Oct.23(Thu.) 10:45-12:25, 13:30-15:10, 15:25-17:05**

** セミナーとして開催 (held as a seminar)

場所 (Place)

講義室 10/21(火)、10/22(水)の全日と

10/23(木) 10:45-12:25, 13:30-15:10は本館114会議室

10/23(木) 15:25-17:05 は本館M-123講義室

<Abstract>

Quantum Chromodynamics (QCD) is the fundamental theory of strong interactions. The medium described by QCD is known to undergo various phase transitions under extreme conditions of high temperature or high baryon density, such as those realized in the early Universe and in the cores of neutron stars. These transitions, including quark deconfinement and chiral symmetry restoration, have been extensively studied over the past decades using theoretical, experimental, and numerical approaches. In this lecture, I will provide an overview of these topics, with particular emphasis on recent progress in lattice QCD numerical simulations and experimental studies in relativistic heavy-ion collisions. The lecture will range from basic concepts to the latest developments in the field.

連絡教員 (contact): 慈道 大介 (Daisuke JIDO)