



# *EINLADUNG*

im Rahmen des Teilchenphysikseminars

zum Vortrag

von

**David Dobrigkeit Chinellato**

(Stefan Meyer Institute)

über

**High-density QCD matter studies:**

**a summary of recent measurements and their implications**

**Abstract:**

A long-standing topic in high-energy physics is how matter behaves in regimes of very high energy density. While ordinarily quarks and gluons are confined to hadrons, it is expected that, given sufficiently large energy densities, a deconfined state of matter called the Quark-Gluon Plasma (QGP) is formed. Conditions for the QGP to be formed can be achieved in the laboratory when heavy nuclei collide at ultra-relativistic speeds in accelerators such as the Relativistic Heavy Ion Collider (RHIC) and the Large Hadron Collider (LHC), and signatures of QGP formation have been measured systematically over the past decades. A natural question in that context is: under which conditions of colliding nuclei and particles can these QGP signatures be found? Perhaps surprisingly, recent measurements performed in high-multiplicity proton-proton collisions have indicated that phenomena traditionally associated to the QGP, such as strangeness enhancement and the collective emission of particles, are already present. In this talk, I will discuss these novel measurements and their implications towards the modeling of QGP and our understanding of high-density QCD phenomenology.

**Zeit:** Dienstag, 21.11.2023, 16:15 h

**Ort:** Erwin-Schrödinger-Hörsaal, Boltzmannngasse 5, 5. Stock

Join Zoom Meeting - Meeting ID: 933 4269 3866 Passcode: 185096

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gez.: A. Hoang, M. Procura