Dipartimento di Fisica e Astronomia Galileo Galilei

Università degli Studi di Padova

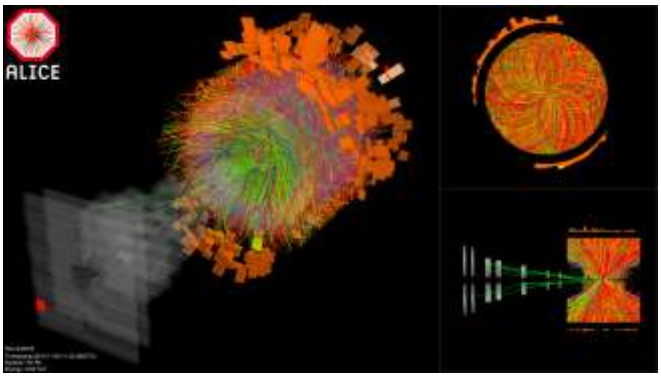
COLLOQUIUM DI FISICA

Giovedì 16 febbraio 2017, ore 15.00
aula "A. Rostagni"

Marco van Leeuwen

Utrecht University

Studying the Quark Gluon Plasma at the LHC



The fundamental particles of the strong interaction, quarks and gluons, are normally confined in protons and neutrons inside nuclei. The goal of high-energy collisions of heavy nuclei is to create a state of matter where quarks and gluons are effectively free to move over larger distance, the Quark-Gluon Plasma (QGP), and to study its properties in the laboratory. After an introduction to the physics of the QGP, recent results from heavy ion collisions at the LHC will be presented and connected with the properties of this state of strongly-interacting matter. The presentation will cover both soft probes, focusing on azimuthal anisotropy of the particle emission which is related to collective motion in the QGP, and hard probes like high-energy particles and jets, which test the QGP by means of interactions.