

UC DAVIS

DEPARTMENT OF PHYSICS

Nuclear Seminar

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Studying the Quark Gluon Plasma with heavy-flavor particles at the LHC

The study of the production of particles which contain heavy quarks, such as charm and beauty quarks, provides an exceptional tool to investigate the characteristics of the hot and dense QCD medium, the Quark Gluon Plasma, created in ultra-relativistic heavy-ion collisions. In particular, heavy flavor measurements allow one to study the basic properties of this medium, like its energy density, and to investigate the mechanisms in which quarks interact with the QGP. In this seminar, I will present an overview of heavy-flavour physics in heavy-ion collisions at the Large Hadron Collider, with a focus on the recent measurements performed by the CMS collaboration in lead-lead collisions. The current open questions of the field and the prospects for future measurements will also be discussed. No previous knowledge of heavy-ion physics is required.

Thursday, February 1, 2018

3:00pm Room 395 Physics