



**Laboratório de Instrumentação e
Física Experimental de Partículas**

Seminário LIP*

Quinta Feira, 10 de Maio 2018

11:30 to 12:30

Multiplicity fluctuations near the QCD critical point

Prof. Maurício Hippert (UFRJ)

Statistical moments of particle multiplicities in heavy-ion collision experiments are an important probe in the exploration of the phase diagram of strongly-interacting matter and, particularly, in the search for the QCD critical endpoint. In order to appropriately interpret experimental measures of these moments, however, it is necessary to understand the role of experimental limitations, as well as background contributions, providing expectations on how critical behavior should be affected by them. We here present a framework for calculating moments of particle multiplicities in the presence of correlations of both critical and spurious origins. We also include effects from resonance decay and a limited acceptance window, as well as detector efficiency. Although we focus on second-order moments, for simplicity, an extension to higher-order moments is straightforward.

* Lugar: Sala de seminários (311)

LIP (Laboratório de Instrumentação e Física Experimental de Partículas)

Instituto Interdisciplinar de Investigação da Universidade de Lisboa

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Café e bolinhos às 11:00 na sala 312