



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

LIP Seminar

Thursday, 11 of November 2021, 11h30

Charmonium production in nuclear collisions at the LHC

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In ultra-relativistic nucleus-nucleus collisions, the quark-gluon plasma, a phase of strongly interacting matter of deconfined quarks and gluons, is investigated. The production of charm-anticharm quark bound states, charmonia, is one of the key observables for deconfinement in these collisions. At the LHC, charmonium production from the large number of charm and anticharm quarks roaming within the QGP has been predicted as dominant production mechanism and as a direct signature of deconfinement. In this seminar, I will present the experimental status of charmonium measurements in nucleus-nucleus collisions at the LHC and related measurements that support indeed this basic picture. The current limitations to go further in the interpretation based on experimental inputs and prospects for improvements will be discussed.

Location: Videoconference - Zoom

<https://indico.lip.pt/event/1060/>

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