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Particle Physics at LPTHE

Mardi 7 Novembre 2017, 14 :00
LPTHE, Library
Domaines : hep-ph

Titre : *(More) exceptions in the calculations of relic abundances*

Orateur : **Andrzej Hryczuk (Oslo University)**

Résumé : *The thermal relic abundance of the dark matter is now determined observationally to a per cent level accuracy. It is also an increasingly useful tool to exclude, constrain or motivate models beyond the Standard Model of particle physics. It comes then with no surprise that in the recent years a considerable effort has been made to revise and improve some of the aspects of thermal relic density calculations. In this talk I will discuss some of the recent advances in such calculations, with special emphasis on the validity of an assumption of local thermal equilibrium. I will describe a refined formalism relying on the inclusion of higher moments of the Boltzmann equation and compare it to an approach based on solving the evolution of the phase space distribution function fully numerically.*