

# Séminaire de physique des particules et de cosmologie

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Vendredi 28/04/2017, 14h00-15h00

Orme des Merisiers Salle Claude Itzykson, Bât. 774

Properties of bound electrons and muons

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Binding of particles in atoms changes their properties such as the magnetic moment. In case of unstable particles like the muon, the decay spectrum is modified. In light atoms these changes should be calculable within quantum electrodynamics with high precision. Such theoretical predictions are needed for the determination of the electron mass and of the fine structure constant, and for searches of lepton-flavor violation. I will review the recent progress and remaining challenges. I will point out some qualitative changes caused even by very weak binding, showing that the binding is a singular perturbation.

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