ID de Contribution: **34** Type: **Non spécifié**

How viable is a 10MeV QCD axion?

vendredi 9 août 2024 15:30 (20 minutes)

It is well-known that a heavy QCD axion is readily excluded by experiments. However, recent studies have suggested that the visible QCD axion at the 10 MeV scale remains viable on the assumption that it exclusively couples to the first-generation quarks and the electron. In this talk, we deal with the cosmological domain wall problem, the quality issue, and constraints arising from the electron electric dipole moment in the 10MeV QCD axion model. It is also pointed out that the gluon loop-generated axion-top coupling can provide a large contribution to rare B-meson decays, such that the present LHCb data for $B^0 \to K^{*0} e^+ e^-$ rule out the model for the axion mass larger than 30 MeV.

Orateur: NAKAGAWA, Shota (TD Lee Institute Shanghai Jiao Tong University)