RCNP
NUCLEAR PHYSICS
THEORY SEMINAR

Title	Stability and metastability of all-heavy tetraquarks
Speaker	Jean-Marc Richard (IPN Lyon, France)
Date and Time	Friday, June 16, 2017, at 13:00
Place	Lecture room 2, 6th floor, RCNP

Abstract:

The stability of the all-heavy tetraquarks such as $(\mathrm{c},\mathrm{c},\bar{c},\bar{c})$ or $(\mathrm{b},\mathrm{c},\bar{b},\bar{c})$ systems is discussed in the framework of simple potential models with pairwise forces, or more elaborate interactions inspired by string dynamics. At variance with some results in the literature, the equal-mass systems $(\mathrm{c},\mathrm{c},\bar{c},\bar{c})$ and $(\mathrm{b},\mathrm{b},\bar{b},\bar{b})$ are found unstable, while the asymmetric system is stable at least with respect to its highest threshold. A discussion is also presented about the analogies and differences with respect to the case of the positronium-like molecules bound by Coulomb forces.

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