Critical Stability 2011



ID de Contribution: 28

Type: Non spécifié

Fermionic Efimov States

lundi 10 octobre 2011 10:00 (40 minutes)

Abstract: Recent theoretical and experimental efforts to create and understand the Efimov states in a threecomponent mixture of 6Li are reviewed [1,2]. It is pointed out that the recently observed loss peaks at 602G and 685G [3,4], which are the crossing points of the atom-dimer threshold and the ground and first excited Efimov states, show significant deviations from the universal Efimov theory predictions. The Efimov binding energy, which was observed via radio-frequency association, shows a marked temperature dependence and its temperature-independent part shows significant deviations from nonuniversal theory prediction based on a three-body parameter with a monotonic binding-energy dependence [5,6].

- [1] P. Naidon and M. Ueda, Phys. Rev. Lett. 103, 073203 (2009).
- [2] P. Naidon and M. Ueda, Comp. Rend. Phys. v. 12, iss. 1, p. 13 (2011).
- [3] S. Nakajima, et al., Phys. Rev. Lett. 105, 023201 (2010).
- [4] T. Lompe, et al., Phys. Rev. Lett. 105, 103201 (2010).
- [5] T. Lompe, et al., Science 330, 940 (2010).
- [6] S. Nakajima, et al., Phys. Rev. Lett. 106, 143201 (2011).

Author: Prof. UEDA, Masahito (University of Tokyo)

Orateur: Prof. UEDA, Masahito (University of Tokyo)