Abstract Submitted
for the DAMOP11 Meeting of
The American Physical Society

Efimov and non-Efimov physics of 2+1 particles SHIMPEI ENDO, University of Tokyo, PASCAL NAIDON, JST ERATO, MASAHITO UEDA, University of Tokyo — Three-body bound states called Efimov states are associated with remarkable features such as discrete scale invariance of their spectrum, and have attracted a lot of interest since their recent experimental realizations with ultracold atoms [1]. These states are characterized by the scattering length between particles and a short-range parameter. Recently, however, universal trimers [2] which depend only on the scattering length have been theoretically predicted for systems of two heavy and one light particles. Although the origin of these trimers is closely related to the Efimov effect, they have a distinct nature. We will discuss on the relationship between these universal trimers and Efimov trimers.

[1] F. Ferlaino, and R. Grimm, Physics, **3**, 9 (2010)
[2] O. I. Kartavtsev, and A. V. Malykh, J. Phys. B, **40**, 1429 (2007).

Shimpei Endo
University of Tokyo

Date submitted: 04 Feb 2011 Electronic form version 1.4