

Trimer-Tetramer interwoven states in the scaling limit

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Following recent studies on four-body scaling and the corresponding relation with Efimov trimers [1,2], which we revise in this presentation, we report some new results we have obtained. The scale dependence of tetramer bound-state energies is explored at the unitary limit, considering the number of tetramer energy levels appearing between the ground and the excited Efimov trimers. In order to obtain more than two tetramers between two Efimov trimers, the corresponding ratio between three- and four-body scales is verified. By considering this scaling relation, we have also confirmed the number of tetramer energy levels obtained below the ground-state trimer.

[1] M.R. Hadizadeh, et al. Phys. Rev. A 87, 013620 (2013)

[2] M.R. Hadizadeh, et al., Phys. Rev. Lett. 107, 135304 (2011)

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