



Nuclear Theory

Three triton states in 9Li

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We focus on a characteristic non-alpha cluster structure in light neutron-rich nuclei; three triton structure in 9Li. This is an analogy to the case of three alpha state in 12C (Hoyle state). The alpha clusters behave as bosons. however tritons have Fermionic nature, and how the three cluster structure is different from 12C is an intriguing problem. For this purpose, we introduce three triton wave functions. In addition, alpha+t+n+n wave functions are prepared to describe other low-lying states of 9Li, and the coupling effect between them is taken into account. The states with dominantly the three triton components appear below the three triton threshold energy, where three triton correlation is important, however the root mean square radius is not enhanced contrary to the alpha gas states in 12C and 16O.

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