Contribution ID: **291** Type: **Talk**

Three-cluster model of ${}^{9}_{\Lambda}$Be hypernucleus

Wednesday, 1 September 2021 17:00 (30 minutes)

We investigate properties of bound and resonance states in the ${}^{9}_{\Lambda}$Be nucleus. To reveal the nature of these states, we use a three-cluster $2\alpha + \Lambda$ microscopic model. The model treats correctly the Pauli principle and accounts for polarization of two-cluster subsystems of the hypernucleus when the third cluster is close. The model incorporates Gaussian and oscillator basis functions and reduces a three-cluster Schr\"{o}dinger equation to a two-body like many-channel problem with the two-cluster subsystems (${}^{5}_{\Lambda}$He and ^{8}Be) being in a bound or a pseudo-bound state. Influence of the cluster polarization on the energy and widths of resonance states in ${}^{9}_{\Lambda}$Be and on elastic and inelastic ${}^{5}_{\Lambda}$He+α scattering is analysed.

Is this abstract from experiment?

No

Name of experiment and experimental site

N/A

Is the speaker for that presentation defined?

Yes

Details

Dr. Yuliia Lashko, Bogolyubov Institute for Theoretical Physics, Kyiv, Ukraine. http://www.bitp.kiev.ua/

Internet talk

Yes

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