

Search for alpha condensed state in ^{24}Mg

Recently we performed a high-resolution measurement of alpha; inelastic scattering from ^{24}Mg to search for the alpha; condensed states with the configuration of 6α ; or $2\alpha; +^{16}\text{O}$. The alpha; inelastic scattering had been demonstrated as a useful probe to search for alpha; cluster states in the previous work. We also measured decaying particles from the excited states in coincidence with the inelastically scattered alpha; particles to clarify the alpha; cluster structure in ^{24}Mg . It is naturally expected that alpha; cluster states should prefer to decaying into alpha; emission channels while single-particle states should prefer to decaying into proton or neutron decay channels. In the present talk, we will present the experimental details and preliminary results on the alpha; condensed states in ^{24}Mg .

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