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## **Influence of cluster structure to the mechanism of nuclear reactions**

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In the interaction reactions of weakly bound cluster nuclei, the structure of these nuclei can manifest itself with a high probability. It is expressed in cross sections for these processes, in particular, in the multinucleon transfer reaction and the transfer reaction of individual clusters. In order to study the influence of the cluster structure on the mechanism of nuclear reactions, we studied the interaction reactions  $6\text{Li}+9\text{Be}, 12\text{C}$  at an energy of 68 MeV. The experiment has been performed at the U-400M cyclotron, FLNR, JINR. The angular distributions of the products formed in these reactions were measured in the range of  $10\text{-}120^\circ$  in the c.m system. The following reaction channels were studied:  $9\text{Be}(6\text{Li}, 6\text{Li})9\text{Be}$ ,  $9\text{Be}(6\text{Li}, 7\text{Li})8\text{Be}$ ,  $9\text{Be}(6\text{Li}, 6\text{He})9\text{B}$ ,  $9\text{Be}(6\text{Li}, 4\text{He})11\text{B}$ ,  $12\text{C}(6\text{Li}, 6\text{Li})12\text{C}$ ,  $12\text{C}(6\text{Li}, 7\text{Be})11\text{B}$  in ground and excited states. The obtained experimental data were analyzed within the framework of the optical model and the DWBA method.

### **Summary**

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