

6. ANGULAR CORRELLATIONS AND DECAY BRANCHING RATIO FOR EXCITED STATE OF ${}^7\text{Li}^*(7,45\text{ MeV})$ IN REACTIONS ${}^7\text{Li}(\alpha, \alpha){}^7\text{Li}^*$

O. F. Nemets, Yu. N. Pavlenko, V. L. Shablov, F. I. Karmanov, V. O. Kyva, V. N. Dobrikov, O. K. Gorpinich, I. N. Kolomiets, B. A. Rudenko, Yu. Y. Karlyshev, A. P. Voiter, I. A. Mazny, S. E. Omelchuk, Yu. S. Roznuk

Measurements of differential cross-sections of α -particle inelastic scattering by ${}^7\text{Li}$ nuclei and ${}^7\text{Li}(\alpha, \alpha){}^6\text{Li}n$, ${}^7\text{Li}(\alpha, \alpha\alpha)t$ reactions have been performed at the energy $E_\alpha = 27,2$ MeV. Probability of ${}^7\text{Li}^*(7,45\text{ MeV})$ decay into ${}^6\text{Li} + n$ channel has been determined from the ratio of cross-sections measured in kinematically complete and incomplete experiments. The large discrepancy of this value ($P = 0,49 \pm 0,06$) and of those obtained at the study of ${}^7\text{Li}^*(7,45\text{ MeV})$ decay in binary reactions can be explained by the influence of Coulomb field of accompanied α -particle on the decay of near-threshold resonances in three-particle reactions.