MECHANISM OF ^{7}Li(^{10}B, ^{9}Be)^{8}Be, ^{10}B(^{7}Li, ^{9}Be)^{8}Be REACTIONS AND ^{8}Be + ^{9}Be-POTENTIAL

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Angular distributions of the ^{7}Li(^{10}B, ^{9}Be)^{8}Be were measured at the energy E_{lab}(^{10}B) = 51 MeV (21 MeV c.m.) for the ground and excited states of ^{8}Be. The experimental data were analyzed within the coupled-reaction-channels (CRC) method for one- and two-step transfers of nucleons and clusters. The ^{10}B(^{7}Li, ^{9}Be)^{8}Be reaction data at the energy E_{lab}(^{7}Li) = 24 MeV (14,12 MeV c.m.) known from the literature, were included in the CRC-analysis also. Mechanism of the reactions was determined, the parameters of the ^{8}Be + ^{9}Be-potential were deduced and energy dependence of the parameter was studied.