11. ^{7}LI + ^{10}B ELASTIC AND INELASTIC SCATTERING

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Angular distributions of the ^{7}Li + ^{10}B elastic and inelastic scattering were measured at the energy $E_{lab}(^{10}$B) = 51 MeV (21 MeV c.m.). These and previously measured ^{7}Li + ^{10}B elastic scattering data known at the ^{7}Li-beam energies 24 MeV (14.1 MeV c.m.) and 39 MeV (22.94 MeV c.m.), were analyzed within the optical model and coupled-reaction-channels method. Elastic and inelastic scattering of ^{7}Li + ^{10}B, reorientation of ^{7}Li and ^{10}B in ground and excited states as well as more important transfers were included in the coupling-channels scheme. The ^{7}Li + ^{10}B potential parameters for the interaction of these nuclei in ground and excited states, parameter energy dependence as well as deformation parameters of ^{7}Li and ^{10}B were deduced. Mechanism of the ^{7}Li + ^{10}B scattering was obtained. Difference between scattering of ^{7}Li + ^{10}B and ^{7}Li + ^{11}B (scattering isotopic effects) was found.