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Calculations of reaction and interaction cross sections for ^{11}Li scattering on carbon target IVAN NOVIKOV, Western Kentucky University, YULI SHABELSKI, Petersburg Nuclear Physics Institute — In the high energy light ion scattering experiments interaction (not reaction) cross-sections are measured. The difference between interaction and reaction cross-sections is that the reaction cross-sections include the cross-sections of all processes except of the elastic scattering, whereas the interaction cross-sections do not include the elastic scattering as well as the processes with a target nuclei excitation or disintegration. Usually this difference is neglected in the analyses of experimental data. We present the results of calculation of the difference between interaction and reaction cross sections for scattering stable isotopes with atomic weight $A < 40$ and unstable ^{11}Li isotope on carbon target. Calculations were done in optical approximation and in the Glauber Theory framework, in which all processes were included. We show that this difference is significant and cannot be neglected in further analysis.

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