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Coupled reaction channels analysis of ^{7}Li + ^{6}Li interactions[1] O.A. MOMOTYUK[2], K.W. KEMPER, B.T. ROEDER, W. CLUFF, N. KEELEY, B.G. SCHMIDT, M. WIEDEKING, Florida State University, F. MAR*É*CHAL, Institut de Recherches Subatomiques, Strasbourg, France, S. MEZHEVYCH, Warsaw University, Warsaw, Poland, J. LIENDO, Simon Bolivar University, Caracas, Venezuela
— Cross sections and the analyzing powers $^{T}T_{10}$, $^{T}T_{20}$, and $^{T}T_{30}$ were measured for the reactions ^{6}Li(^{7}Li,^{7}Li)^{6}Li, ^{6}Li(^{7}Li,^{7}Li$^{*}_{0.48}$)^{6}Li, ^{6}Li(^{7}Li,^{7}Li)^{6}Li$^{*}_{2.186}$ MeV and the one-nucleon transfer reactions ^{6}Li(^{7}Li,^{6}He)^{7}Be and ^{6}Li(^{7}Li,^{6}He)^{7}Be$^{*}_{0.43}$ MeV at 42 MeV using the FSU Polarized Li-ion source and the FSU Tandem/LINAC Accelerator. These reactions were analyzed using Coupled Reaction Channels Calculations that employed optical potentials of Woods-Saxon type, double-folded and cluster-folded potentials in order to understand the origin of the observed analyzing powers. The results of these calculations and their interpretation in terms of virtual and real couplings as well as spin-orbit and tensor forces will be presented.

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