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Elastic breakup of 6Li on different targets

We study the 6Li breakup on different target masses in order to investigate the dependence of continuum-continuum couplings and Coulomb-nuclear interference on the target mass. We show that excluding the continuum-continuum couplings, the integrated total and nuclear breakup cross sections decrease linearly as function of A_T^{1/3}, while the integrated Coulomb breakup decrease linearly as function of the target charge. The Coulomb-nuclear interference scales linearly as function of the target charge when all the different couplings are included in the potential matrix element.

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