Elastic Scattering of Ultracold ^{133}Cs and ^{85}Rb Atoms in Triplet State

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Abstract: Elastic scattering properties of the ultracold interaction for the triplet state of ^{133}Cs and ^{85}Rb atoms are studied using two kinds of potentials by the same phase Φ. One is the interpolation potential, and another is Lennard-Jones potential ($LJ_{12,6}$). The radial Schrödinger equation is also solved using two computational methods, the semiclassical method (WKB), and the Numerov method. Our results are found to be in an excellent agreement with the more recent theoretical values. It shows that the two potentials and methods are applicable for studying ultracold collisions between the mixing alkali atoms.

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