SIMULATION OF FREE→FREE ABSORPTION SPECTRA AND THE CALCULATION OF INTERACTION POTENTIALS FOR ALKALI-RARE GAS ATOM PAIRS

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We have simulated free→free ($X^2\Sigma^+_{1/2} \rightarrow B^2\Sigma^+_{1/2}$) absorption spectra for alkali-rare gas pairs. By comparing simulation results with experimental data, we have been able to iteratively determine the form for the $B^2\Sigma^+_{1/2}$ interaction potential for the system for a range in internuclear separation of 1.5–20 Å. Simulation methods will be presented, as will our results pertaining to Cs-Ar.