Abstract Submitted
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Convergent Atomic and Molecular Asymptotics MICHAEL CAVAGNERO, University of Kentucky — A technique is described for calculating the asymptotic phases and amplitudes of coupled channel wavefunctions through analytic continuation in the complex plane of a reaction coordinate. A non-perturbative analysis incorporates interactions associated with high-order multipole moments of fragment charge distributions, without the necessity of integrating Schrodinger's equation to asymptotic distances. The method should be particularly useful for the description of near-threshold and/or ultracold processes. Initial applications to two-channel model problems demonstrate the utility of the method.

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