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Deflection of an Asymmetric Top Molecule in an Inhomogeneous Electric Field JOSE ALMAGUER, ERIC HELLER, Harvard Univ — Classically an asymmetric top molecule with an electric dipole moment will be deflected for almost all initial conditions. However, there is experimental evidence suggesting that this deflection may not occur quantum mechanically when the molecule is excited to a single rotational eigenstate in a high density of states region. It has been suggested that this is due to the center of mass of the molecule moving adiabatically on a single Born-Oppenheimer potential energy surface. We perform the deflection calculation quantum mechanically, semi-classically, and classically to investigate this claim.

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