

Abstract Submitted
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Population transfer in heteronuclear molecules MICHAELA TSCHERNECK, NICHOLAS BIGELOW, University of Rochester — Heteronuclear molecules are an interesting field of research due to their large electric dipole moment, which can be used in a variety of experiments (e.g. test of fundamental symmetries, dipolar BECs, quantum information processing,..). All of these experiments require control over the molecular states. In this talk we will discuss ways of transferring population between various molecular levels. By solving the time-dependent Schroedinger equation using a split-operator approach, we calculate transfer efficiencies for a STIRAP type process. We will consider the examples of KRb (transfer between triplet and singlet ground state) and NaCs (transfer from higher excited vibrational levels of the singlet ground state to lower vibrational levels).

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