

Abstract Submitted
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Spectroscopy of excited triplet states of ultracold $^{39}\text{K}^{85}\text{Rb}$ molecules relevant to populating $a^3\Sigma^+, v'' = 0^1$ EDWARD EYLER, JAYITA BANERJEE, RYAN CAROLLO, MICHAEL BELLOS, PHILLIP GOULD, WILLIAM STWALLEY, Dept. of Physics, University of Connecticut — We report the observation and analysis of the $3^3\Pi$ and $3^3\Sigma^+$ states of ultracold $^{39}\text{K}^{85}\text{Rb}$ molecules. The observations are based on resonance-enhanced multiphoton ionization (REMPI) of ultracold KRb molecules. These ultracold molecules are formed by photoassociation of ultracold ^{39}K and ^{85}Rb atoms in a magneto-optical trap, followed by spontaneous emission. We also propose schemes for utilizing these excited triplet states for the formation of ultracold KRb molecules in the $v'' = 0$ level of the metastable $a^3\Sigma^+$ state.

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