

Abstract Submitted
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High-resolution ultracold-molecule spectroscopy with possible sensitivity to QED CHRISTOPHER B. OSBORN, BART H. MCGUYER, GAEL REINAUDI, MICHAEL MCDONALD, TANYA ZELEVINSKY, Columbia University — We describe an optimized route for producing microkelvin ground-state $^{88}\text{Sr}_2$ molecules in an optical lattice, and an efficient imaging approach based on ultracold fragmentation. This imaging technique yields high-Q molecular spectra. The high-resolution Zeeman spectra uncover very weakly bound rovibrational states with possible sensitivity to QED effects, and challenge the theoretical description of this seemingly simple system.

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