

Abstract Submitted
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Experimental Studies of the $4^3\Pi$ Electronic State of NaCs¹ ANDREW STEELY, CIARA WHIPP, CARL FAUST, Susquehanna University, ANDREW KORTYNA, JILA, University of Colorado, KARA RICHTER, JOHN HUENNEKENS, Lehigh University — We present results from experimental studies of the $4^3\Pi$ electronic state of the NaCs molecule. This electronic state is interesting in that its potential energy curve likely exhibits a double minimum. As a result, interference effects are observed in the resolved bound-free fluorescence spectra. The optical-optical double resonance method was used to obtain Doppler-free excitation spectra for the $4^3\Pi$ state. This dataset of measured level energies was expanded largely by observing fluorescence from levels populated by collisions. Simulations of resolved bound-free fluorescence spectra were calculated using the BCONT program (R. J. Le Roy, University of Waterloo). Spectroscopic constants are presented as a preliminary step toward an experimental potential energy curve.

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