

Abstract Submitted  
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**Effects of Optical Excitation on the Lifetime of Electrostatically Trapped NaCs** AMY WAKIM, PATRICK ZABAWA, CHRIS HAIMBERGER, JAN KLEINERT, NICHOLAS P. BIGELOW, University of Rochester —  $X^1\Sigma \ v = 0 - 23$  molecules are formed via photoassociation from two overlapped dark-spot MOTs. The ultracold polar molecules are continuously loaded into the TWIST (Thin Wire ElectroStatic Trap) and detected via single color REMPI (Resonance Enhanced Multi-Photon Ionization). During the trapping phase, all light to the chamber is extinguished including all MOT and photoassociation beams to avoid optical pumping effects. Under these conditions, the TWIST has an effective lifetime of 330ms. We will present investigations of the effect of an optical pumping pulse during the trapping phase which can drastically extend the lifetime to 1s.

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