

Abstract Submitted
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Cooling polar NaCs molecules in an electrostatic trap MAREK HARUZA, University of Rochester, MAITREYI JAYASEELAN, Univ of Rochester, NICHOLAS P. BIGELOW, University of Rochester — We present our scheme for creating an ultracold and dense sample of polar NaCs molecules. The molecules are photoassociated from laser cooled atoms and held in an electrostatic trap in their vibrational ground state and the lowest trappable rotational states. The trap depth dependence on the rotational quantum numbers can be exploited to cool the motion of the molecules by optical pumping between rotational levels.¹

¹Zeppenfeld, M. et al., Nature 491, 570-573 (2012)

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