

Abstract Submitted
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New density regimes for cold hydroxyl radicals. ALEX AEPPLI¹, HAO WU, University of Colorado, Boulder, PIOTR WCISLO, Nicolaus Copernicus University Toru, Poland, DAVID REENS, ANNA MCAULIFFE, JUN YE, University of Colorado, Boulder — Quantum degenerate polar molecules promise an exciting new twist to the key successes of ultracold atomic physics, as we have already begun to see with ultracold magnetic atoms. We aim to extend these successes to hydroxyl radicals, slowing and trapping them via Stark deceleration, and cooling further by evaporation. This last step requires significantly higher densities than ever achieved previously, for which purpose we are pleased to report several significant gains.

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