

Abstract Submitted  
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**YO laser cooling and trapping with an improved repumping scheme**<sup>1</sup> YEWEI WU, ALEJANDRA COLLOPY, SHIQIAN DING, IAN FINNERAN, JILA, University of Colorado Boulder, LOIC ANDEREGG, BENJAMIN AUGENBRAUN, JOHN DOYLE, Harvard University, JUN YE, JILA, University of Colorado Boulder — Using a new repumping scheme for laser cooling of yttrium II oxide (YO), we have increased the photon scattering rate by 60% on the cooling transition. With this improved cycling scheme, we have improved the number of slowed molecules (with velocity <10 m/s) by 20 fold from a beam of YO from a single-stage cryogenic buffer gas cell. These molecules can be readily loaded into a radio frequency (5 MHz) magneto-optical trap. We will report the characterization of the MOT.

<sup>1</sup>NIST, NSF, Gordon and Betty Moore foundation, United states department of energy, United states air force

Yewei Wu  
JILA, University of Colorado Boulder

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