

Abstract Submitted  
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**Narrow-line cooling and the optical dipole trapping of dysprosium**  
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versity of Illinois at Urbana-Champaign — Highly magnetic atoms such as dyspro-  
sium offer the ability to create strongly correlated matter in both atomic physics and  
quantum optics settings. In addition, these atoms will form the key ingredient in  
novel devices possessing unsurpassed sensitivity and resolution for the microscopy of  
condensed matter materials. We present results on the narrow-line cooling of Dy to  
sub-10  $\mu\text{K}$  temperatures and the subsequent optical dipole trapping of Dy. Progress  
toward ultracold collisional measurements and evaporative cooling will be discussed.

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