Abstract Submitted
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Progress Towards Laser Cooling and Trapping Gadolinium UPENDRA ADHIKARI, CLAYTON SIMIEN , Univ of Alabama - Birmingham — Lanthanide elements are of interest because of their potential for investigating next generation optical clock transitions, novel non-S ground state ultracold collisions, and the physics of quantum degenerate dipolar gases. We present our progress towards laser cooling and trapping atomic Gadolinium (Gd). A magneto-optical trap is the first step towards precision measurements, ultracold collision studies, and for probing dipolar physics of Gd. The design, construction, and performance of the apparatus will be presented.

Upendra Adhikari
Univ of Alabama - Birmingham

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