

Abstract Submitted  
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**Design of a Permanent-Magnet Zeeman Slower** CHARLES ADLER, St. Mary's College of Maryland, FRANK NARDUCCI, Naval Air Station, CHARLES SUKENIK, Old Dominion University, JONATHAN MULHOLLAND, University of Virginia, SARAH GOODALE, St. Mary's College of Maryland — During the past decade, low cost, flexible, and highly-polarized magnetic field sheet material has become available with field strengths useful for applications in modern atomic physics experiments. One advantage of using such material is that it can easily be cut to almost any desired shape without appreciable loss of field strength making it more versatile than ceramic magnets. We present the design of a Zeeman slower, made from such material, for cooling an atomic beam of neutral rubidium atoms and discuss results from an atomic beam trajectory simulation which indicates that the slower should perform well. We will also report on progress of a prototype permanent magnet Zeeman slower presently under construction in the laboratory.

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