

Abstract Submitted
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Slow atom scattering from magnetic media TIMOTHY ROACH, KATELYN CANDEE, KEVIN MORAN, CRAIG RICHARDSON, College of the Holy Cross — The use of magnetic field gradients to manipulate atomic motion has a long history, using a variety of field sources: permanent- and electro-magnet, time- and space-dependent, on macro- and micro-scopic scales. We use a curved sub-micron patterned permanent magnet made from recording media to scatter slow atoms arriving at near normal incidence. The atomic waves are expected to be both diffracted and focused. A cloud of Rb atoms from a MOT is released to fall ~ 10 cm to the magnetic surface and the atoms are probed with laser light after the interaction. Preliminary measurements of the scattered atoms will be presented.

Timothy Roach
College of the Holy Cross

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