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Two Dimensional Grating Magneto-Optical Trap in ^{87}Rb ERIC IMHOF, Space Dynamics Laboratory-Utah State University, BETHANY KROESE, MATTHEW SQUIRES, US Air Force Research Laboratory — We present the realization of a two dimensional grating magneto-optical trap (2D GMOT) in ^{87}Rb. On-going efforts to characterize the output beam are detailed. We describe our recent work to load a 3D grating MOT with a 2D GMOT, and our expectations for performance, loading rates, and efficiency gains. Our system integrates ex-vacuo atom chips to provide precisely tunable magnetic fields for ease of alignment and integration into larger cold atom experiments.

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