

Abstract Submitted
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Measuring the Temperature of the Ithaca College MOT Cloud using a CMOS Camera JONATHAN SMUCKER, BRUCE THOMPSON, Ithaca College — We present our work on measuring the temperature of Rubidium atoms cooled using a magneto-optical trap (MOT). The MOT uses laser trapping methods and Doppler cooling to trap and cool Rubidium atoms to form a cloud that is visible to a CMOS Camera. The Rubidium atoms are cooled further using optical molasses cooling after they are released from the trap (by removing the magnetic field). In order to measure the temperature of the MOT we take pictures of the cloud using a CMOS camera as it expands and calculate the temperature based on the free expansion of the cloud. Results from the experiment will be presented along with a summary of the method used.

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