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Towards Photoassociation and Ultracold Collisions in Cs/K trap
MARIN PICHLER, JOEL BERGER, DAVID HALL, Departement of Physics and Astronomy, Goucher College, Baltimore, MD — We present our setup and recent results in simultaneous trapping of potassium and cesium atoms in a mixed MOT. Our setup is based on diode lasers and a tapered amplifier for producing all trapping and repumping beam frequencies. The beam geometry allows for optimal overlap of two ultracold atom clouds, necessary for studying ultracold collisions and photoassociation. Fluorescence and trap-loss detection is used for both studies. We outline mechanism for creating and detecting deeply bound $X^1\Sigma^+$ ground state KCs molecules, and discuss particular characteristic of ultracold KCs.

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