Figure 9: Cs+170Yb BECs.

Figure 9a: 2D optical depth images (Yb - top row and Cs - middle row):

Fig9a\_Yb\_leftmost.csv contains the 2D optical depth data for the leftmost (top row) Yb BEC image.

Fig9a\_Yb\_center.csv contains the 2D optical depth data for the center (top row) Yb BEC image.

Fig9a\_Yb\_rightmost.csv contains the 2D optical depth data for the rightmost (top row) Yb BEC image.

Fig9a\_Cs\_leftmost.csv contains the 2D optical depth data for the leftmost (middle row) Cs BEC image.

Fig9a\_Cs\_center.csv contains the 2D optical depth data for the center (middle row) Cs BEC image.

Fig9a\_Cs\_rightmost.csv contains the 2D optical depth data for the rightmost (middle row) Cs BEC image.

Effective pixel size for the Yb images (including system magnification) is 6.97 um.

Effective pixel size for the Cs images (including system magnification) is 5.6 um.

Figure 9a (bottom row): Horizontal crosscuts through the optical depth images. All crosscuts are the average of the 6 central rows of the 2D optical depth images.

Fig9a\_Yb\_leftmost\_crosscut.csv contains the horizontal optical depth crosscut for the leftmost Yb BEC image.

Fig9a\_Yb\_center\_crosscut.csv contains the horizontal optical depth crosscut for the center Yb BEC image.

Fig9a\_Yb\_rightmost\_crosscut.csv contains the horizontal optical depth crosscut for the rightmost Yb BEC image.

Fig9a\_Cs\_leftmost\_crosscut.csv contains the horizontal optical depth crosscut for the leftmost Cs BEC image.

Fig9a\_Cs\_center\_crosscut.csv contains the horizontal optical depth crosscut for the center Cs BEC image.

Fig9a\_Cs\_rightmost\_crosscut.csv contains the horizontal optical depth crosscut for the rightmost Cs BEC image.

x is the horizontal position in units of um.

Optical Depth is the optical depth.

Figure 9b: Groundstate density profiles for Cs and 170Yb calculated using imaginary time propagation.

Fig9b\_Yb\_Groundstate\_Density.csv contains the normalized 3D Yb density profile used for Fig9b.

Fig9b\_Cs\_Groundstate\_Density.csv contains the normalized 3D Cs density profile used for Fig9b.

Gridsize is: Nx = 256, Ny = Nz = 128.

X range is -30 um to 30 um, y range is -15 um to 15 um, z range is -15 um to 15 um.

Isosurface plotted in Fig 9b is 0.1 x max density for each species [Cs,Yb].