

Teaser Question 5

Basic Training in Condensed-Matter Physics

Erich Mueller; Due Friday, March 6, 2009

Noise Spectroscopy A faked absorption image is on the course web site at: <http://people.ccmr.cornell.edu/~emueller/basictraining2009/image.dat>. This is a 100×100 array of non-negative real numbers, representing the column density of an atomic cloud after time-of-flight expansion. It should look like a noisy Gaussian.

Load this data into your favorite image processing software. Calculate and plot the auto-correlation. You should see that there is structure in the noise. Hand in your plot.