University of California, Santa Barbara
Department of Physics

Physics 217B  The Many-Body Problem in CMP   Spring 2004

Prof: D.J. Scalapino   WF 8:30–9:40am, Br 3340
Off. Hrs: M 2:00–3:30pm, Broida 6238   em: djs@vulcan2.physics.ucsb.edu
TA: R. Melko   em: rgmelko@physics.ucsb.edu
URL: www.physics.ucsb.edu/~phys217B

Homework Assignment #3
Due Wednesday, May 5, 2004

What can one learn about Jellium from neutron scattering experiments?

(a) Write an expression for the rate of neutron scattering with momentum transfer $q$ and energy transfer $\omega$.

(b) Evaluate this expression for Jellium.

(c) Discuss what one can determine from such a neutron scattering experiment.