

Physics 221B
Spring 2016
Homework 1
Due Friday, January 29, 2016 at 5pm

Reading Assignment: The lectures this week were taken from the posted lecture notes, and are a review of material from 221A. I want to make sure that we have some of this material down before proceeding with 221B. For Dirac notation, please read Notes 1, Secs. 2-6 or more as needed; for the density operator, please read Notes 3, Secs. 1-8 or more; for translation operators and the momentum as the generator of translations, please read Notes 4, Secs. 3-6 or more; for rotations in three-dimensional space, please read Notes 11, Secs. 1-10 and 12; for the rotation of wave functions in 3d and orbital angular momentum, please read Notes 15, Secs. 1-3.

Note: This homework is due at 5pm on Friday, January 29. Homework is to be turned in to the 221B box in the reading room, 251 LeConte. See the web site for homework policy. In the following, Problem 1.1, for example, refers to Problem 1 at the end of Notes 1.

Please do Problems 1.2, 3.1, 4.1, 11.2 and 11.5.