Physics 162a, Fall 2008 – Problem Set 9  
Due Monday, Dec. 1 in class

1. Complete Merzbacher problem 7.4 from last week.

2. Merzbacher, problem 7.3.

3. For a finite rotation by an angle $\alpha$ about the $z$ axis, use the corresponding rotation operator $U$ to transform the operator $\hat{f} = a\hat{x} + b\hat{y}$, and show that this rotates as expected.