

Homework 07

Physics II

Due Friday, May 24, 2024

College of the Atlantic. Spring 2024

There are two parts to this assignment.

Part 1: WeBWorK. Do Homework 07A which you will find on your WeBWorK page. I recommend doing the WeBWorK part of the homework first. This will enable you to benefit from WeBWorK's instant, if not necessarily friendly, feedback before you do part two.

Part 2: Not WeBWorK. Here are some non-WeBWorK problems this week.

- If you want, you can do these problems in pairs and hand in only one write-up.
 - “Hand in” the problem on google classroom. You can take a picture of your work, or type up your work, or scan your work.
1. Consider the version of the EPR experiment that we considered in class on Thursday, May 16. Suppose the left-moving atom has the instruction set **GRG**. The left analyzer can have orientation A, B, or C, as can the right analyzer. There are thus nine possible orientations for the left and right analyzers taken together.
 - (a) For each of the nine possible analyzer orientations, state whether the two lights flash opposite or different colors.
 - (b) What is the probability that, regardless of orientation, the lights flash different colors?
 2. Repeat the above question, but for a left-moving atom that has the instruction get **RRR**.