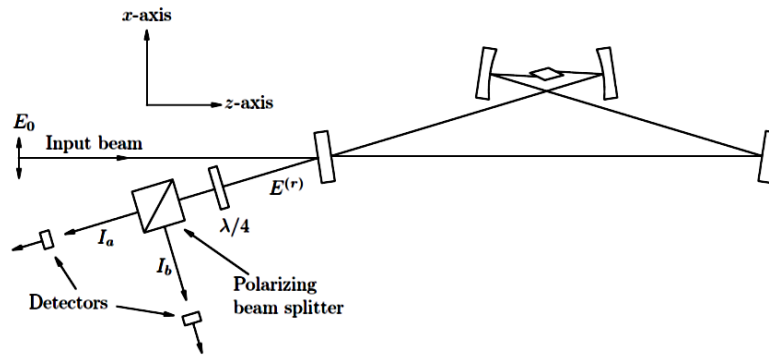


Homework #8 (Due date Nov. 30.)

1. Can we obtain a discriminant signal with half wave plate instead of quarter wave plate in the Fig. 4.5 of the text book? If we can get the signal, find the angle of half wave plate from the horizontal axis. And derive the expression similar to eq. (4.36) and draw it similar to Fig. 4.6 for the same input beam of linear polarization with θ . From the horizontal axis.



2. You have a laser system and you do not know the polarization of the output beam. Can you find a procedure to experimentally find the polarization of the laser beam? Here we assume that you have perfect optics including PBS (Polarizing beam splitter), half wave plates and quarter wave plates. What is the minimum optical components to conclude the polarization?
3. Problem 4.3 in the main textbook.