Assignment #10: In-class debate over the significance of the measurement problems. (scheduled for 5/4/05)

Part way through his article (pp. 8-9), Maudlin makes the following bold claims:

"A solution of this first measurement problem, then, must of necessity be either an additional variables theory, a non-linear theory, or a multiverse theory (or some combination of those). Each of these options carries with it an obligation, the discharging of which demands the postulation of *new physics*. The measurement problem is sometimes portrayed as merely philosophical, or of no interest to physics proper. This is quite untrue."

We will conduct an in-class debate focusing on these claims, and more generally on what sort of significance the measurement problems should be taken to have. The class will split into two teams. One team will defend the position that the measurement problems are significant problems <u>for physics</u>, that they should be taken just as seriously as any other problem in physics. The other team will defend the position that they are, contrary to Maudlin's claim, merely philosophical in some sense, and that there is no scientifically legitimate project of trying to answer them.

The procedure for splitting into teams will be explained elsewhere. But once your team is chosen, you have an obligation to

• meet, as a group, to work out your case;
• prepare, as a group, a 1-2 page summary of your case, <u>to be delivered to the other team</u> by Monday, May 2;
• meet <u>again</u>, as a group, to work out your response to the opposing team's position.

During the debate itself, Teaching Assistant and I will keep score, with prizes to be awarded to the team that most effectively argues its position. Finally, note that we will <u>require</u> that everyone speak during the debate—you can't assign to one of your teammates the role of "spokesperson".