

Physics 002B In Search of Quantum Reality 1st-Year Seminar
Assignment #3 Tuesday September 15, 2009

Seminar Topic: Experiments

Seminar Break: _____

Readings: Boccio ---- 02_Experiments(URL in email)
03_Mathematics_1(pp 01-20)(URL in email)

Scarani --- Quantum Physics - A First Encounter
Chapter 01 - At the heart of the Problem
Chapter 03 - Dimensions and Boundaries

Seminar will consist of:

- (1) Presentations by students**
- (2) Mini-Lectures by instructor to help with understanding of more difficult ideas as they arise during the seminar**

Each student should become an **expert** in their own part of the readings so that their presentation(10 minutes using a Document camera) can be both **informative and interesting**. **Everyone** should do **ALL** the readings so everyone can **assume** that other seminar participants have at least read the material they will be presenting, even though they may not have fully understood it and/or put it into a general context. The **goal** of each seminar is that everyone **fully understand** all then readings for each week, including all of the **implications and ramifications**.

Presentations:

Boccio

02_Experiments

Pages 01-17 Color/Hardness _____ and _____
Pages 17-27 Photon Interference _____ and _____
Pages 27-30 Delayed Choice _____
Pages 30-33 Down-Shifters _____

03_Mathematics_1

Pages 01-11 Probability 1 _____ and _____
Pages 11-16 Probability 2 _____ and Professor_____
Pages 16-20 Complex numbers 1 _____

Scarani --- Quantum Physics - A First Encounter

Chapter 01 _____
Chapter 03 _____