

Physics 002B            In Search of Quantum Reality 1st-Year Seminar  
 Assignment #8            Tuesday October 27, 2009

**Seminar Topic: Extend the Formalism; First Look at Reality**

**Seminar Break:** \_\_\_\_\_

**Readings: Boccio** ---- 12\_More\_Formalism(URL in email)  
 Herbert --- Chapter 09 Four Quantum Realities

**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**

**12\_More\_Formalism**

Pages 01-09 Free Particles and Waves	_____	& Professor	_____
Pages 09-16 Amplitude Meaning and Identity	_____	& Professor	_____
Pages 16-23 Weirdness and Multiparticles	_____		_____
Pages 23-35 Final Thoughts and Spin	_____		_____
Pages 35-43 Fermions, Bosons and Rotations	_____		_____
Pages 43-48 Coffee Mugs and Exchange	_____		_____
Pages 48-59 Time, Spin and Bosons	_____	& Professor	_____
Pages 59-65 Bosons and Time	_____	& Professor	_____
Pages 65-71 Momentum Operator	_____	& Professor	_____
Pages 71-77 Schrodinger Equations	_____		_____

**Herbert --- Chapter 09**

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