

**Physics 002B-1 In Search of Quantum Reality 1st-Year Seminar
Assignment #1**

Seminar Topic: Classical Breakdown

Seminar Break: Boccio

Readings: Boccio ---- 00_Classical_Breakdown(URL in email)

Herbert --- Quantum Reality

Chapter 01 - The Quest for Reality

Chapter 03 pages 31-41 - Quantum Theory Takes Charge

Chapter 04 - Facing the Quantum Facts

Chapter 05 - Wave Motion - The Sound of Music

Rosenblum - Quantum Enigma

Chapter 04 - Our Newtonian Worldview

Chapter 05 - All the Rest of Classical Physics

Chapter 06 - How the Quantum Was Forced on Physics

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 ---- 00_Classical_Breakdown

Pages 01-31 _____ and _____

Pages 31-47 (algebra) _____

(Professor will do Wien derivation)

Pages 48-65 (algebra) _____ and _____

and _____

Herbert --- Quantum Reality

Chapter 01 _____

Chapter 03(pp 31-41) _____

Chapter 04 _____

Chapter 05 _____

Rosenblum - Quantum Enigma

Chapter 04 _____

Chapter 05 _____

Chapter 06 _____