
Quantum Mechanics

Physics 237

Frank L. H. Wolfs
Department of Physics and Astronomy
University of Rochester

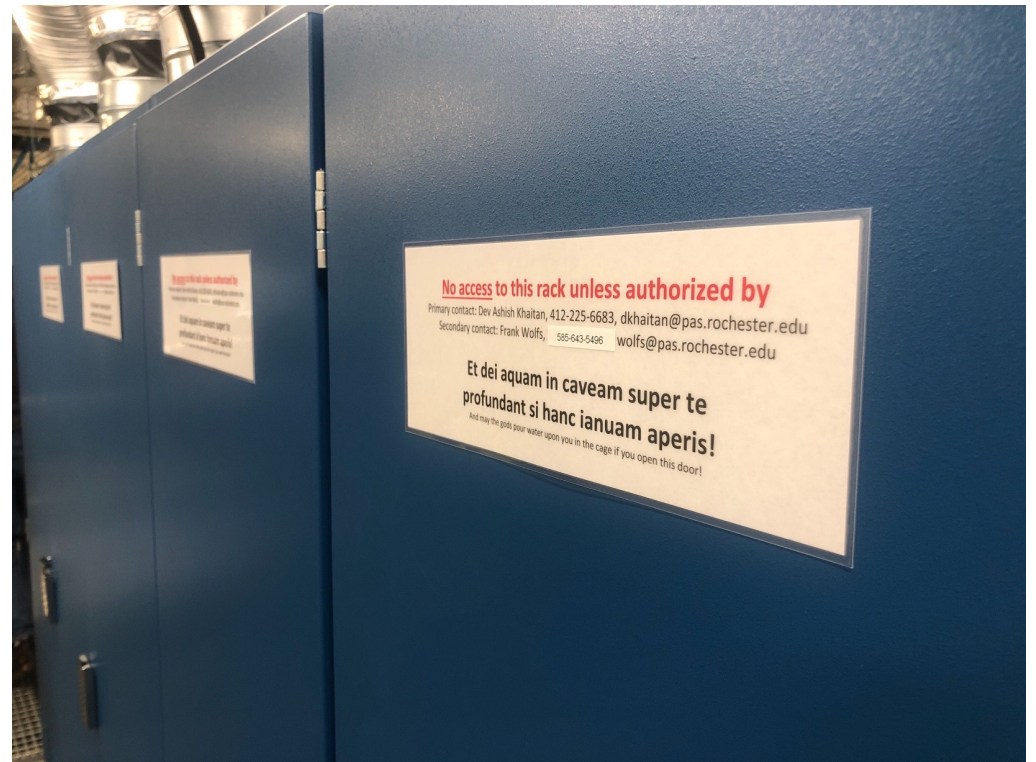
Announcements.

- Homework 1 is due on tomorrow, Friday.
- Office hours started on Wednesday. Two of the TAs will have office hours today (Thursday).
- Workshops will start next week.

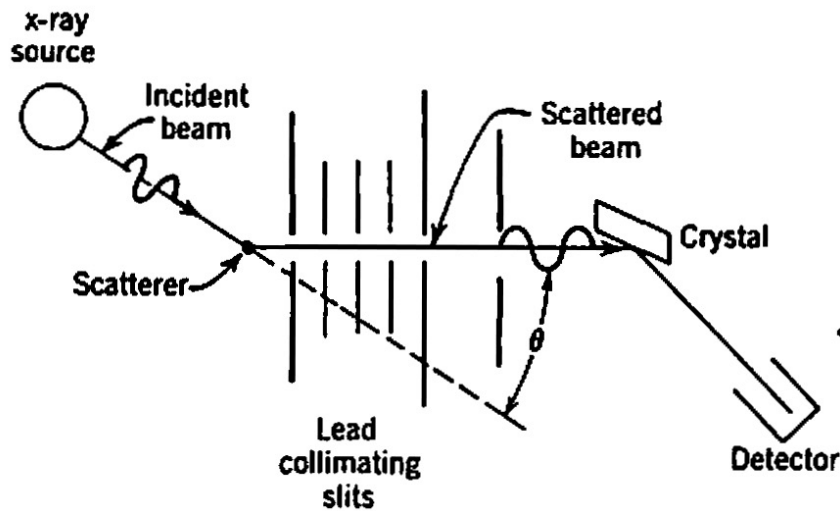
Important facts. You never know when you will be asked about them.



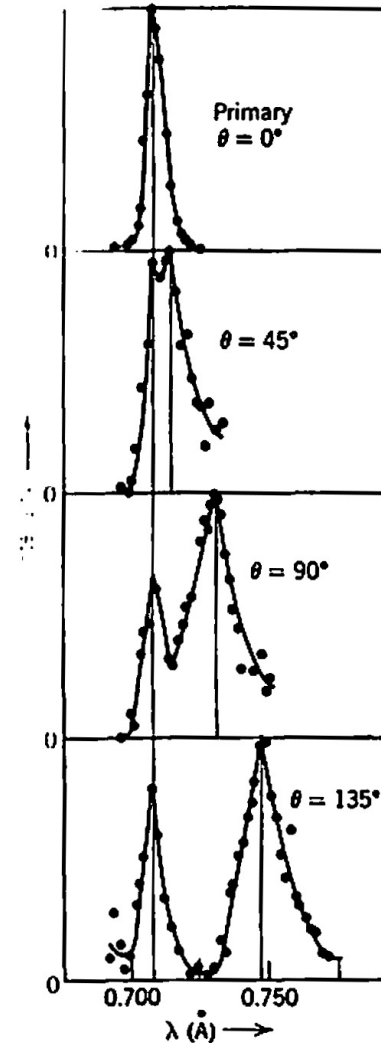
Since I pay the bill,
I pick the color.



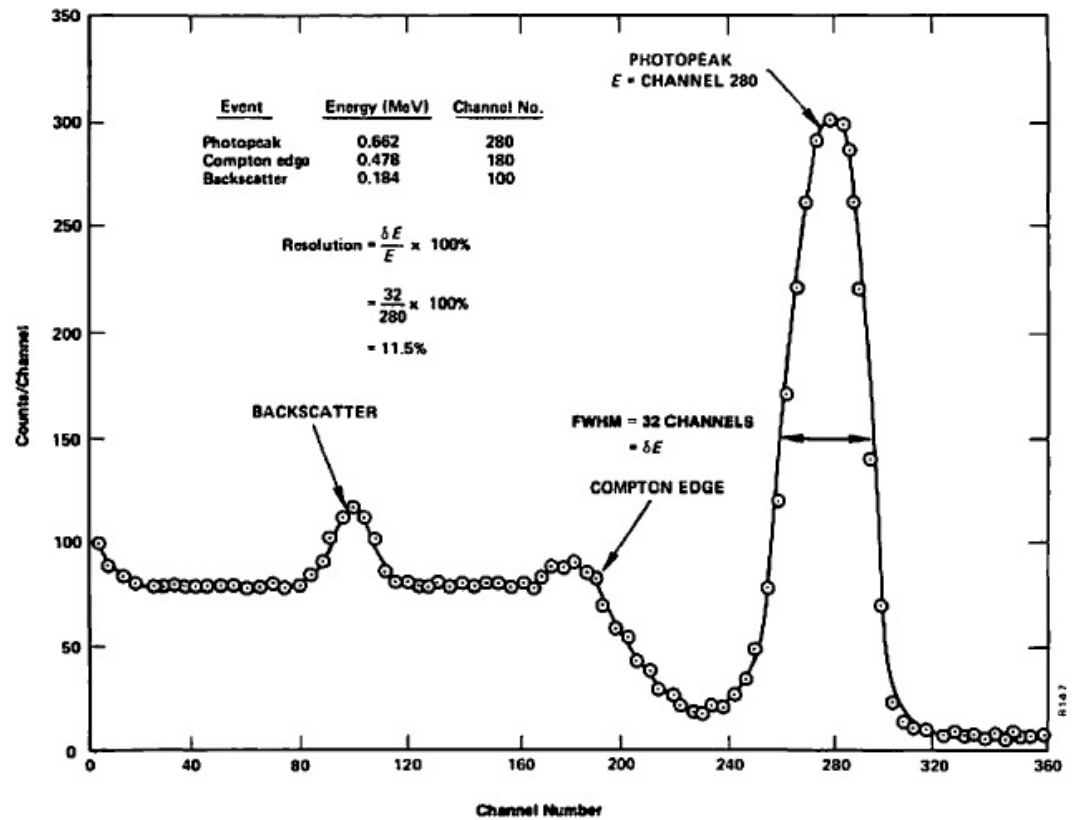
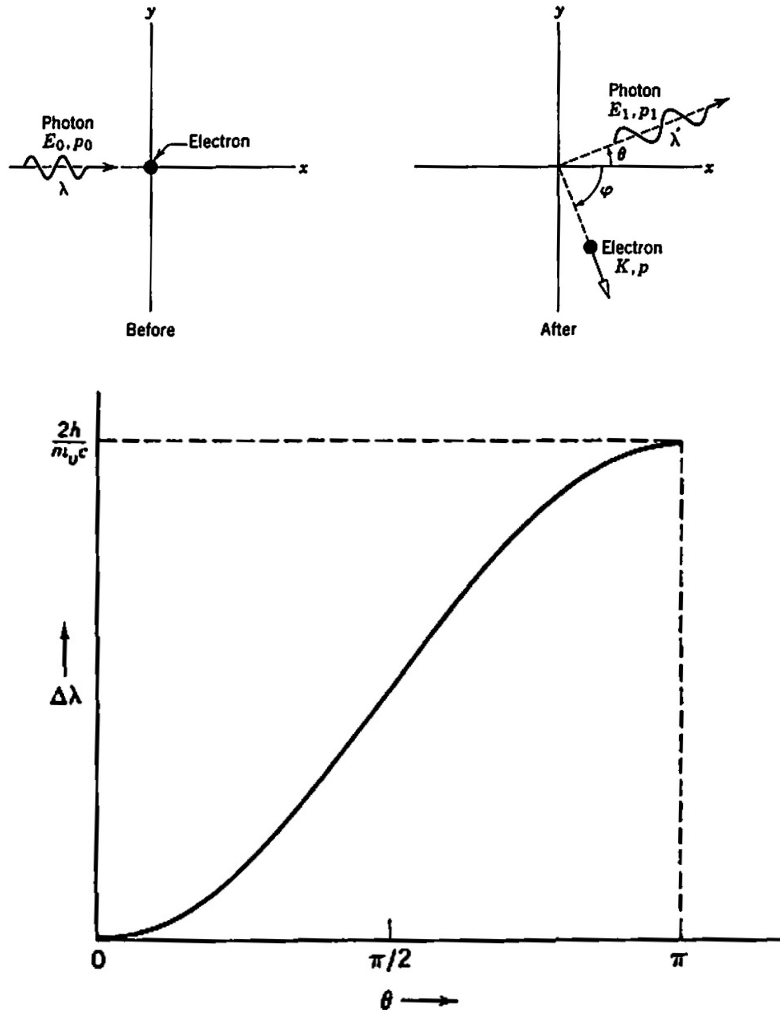
More about the Compton effect.



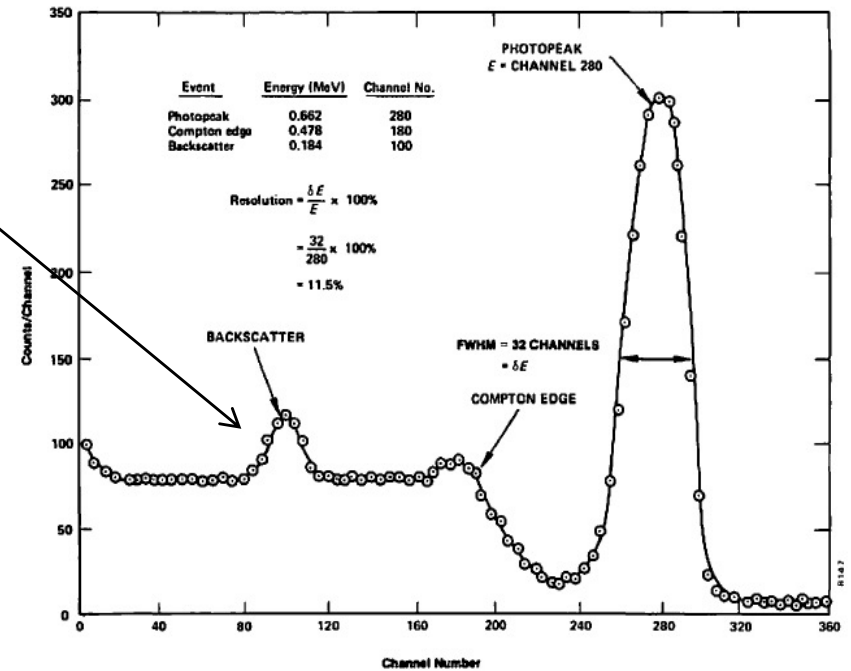
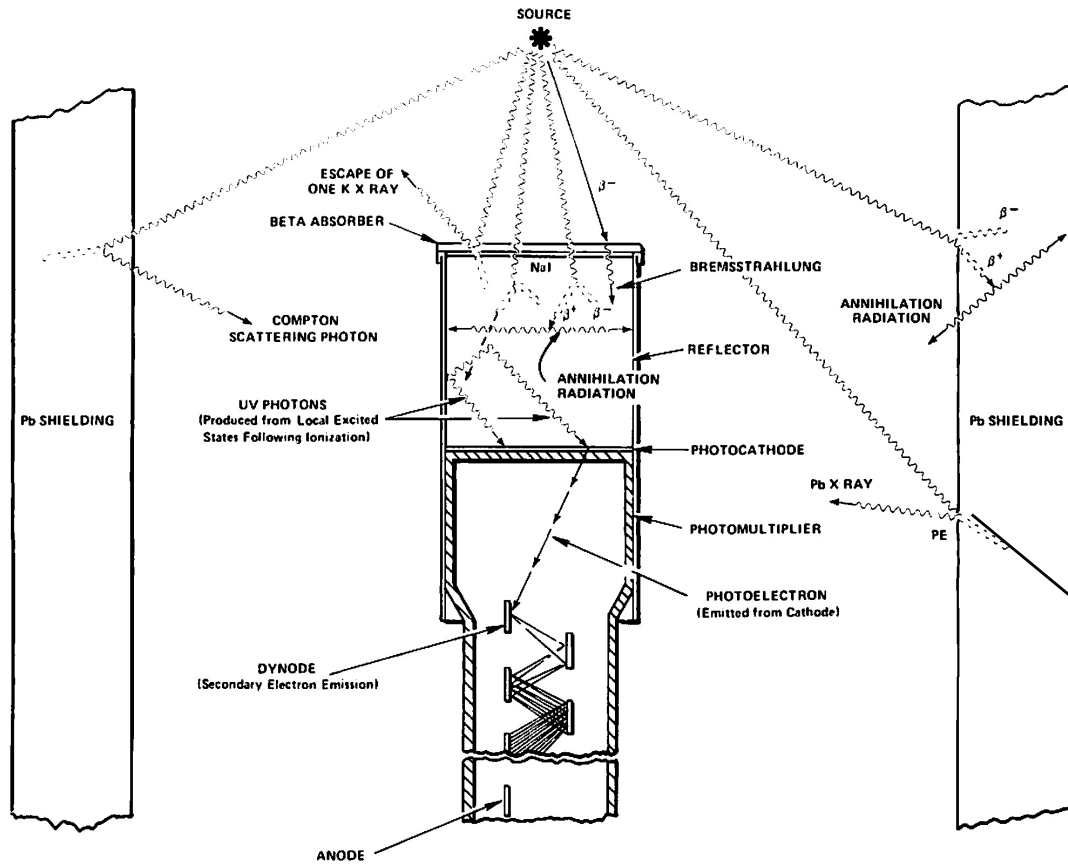
X-rays behave like particles.



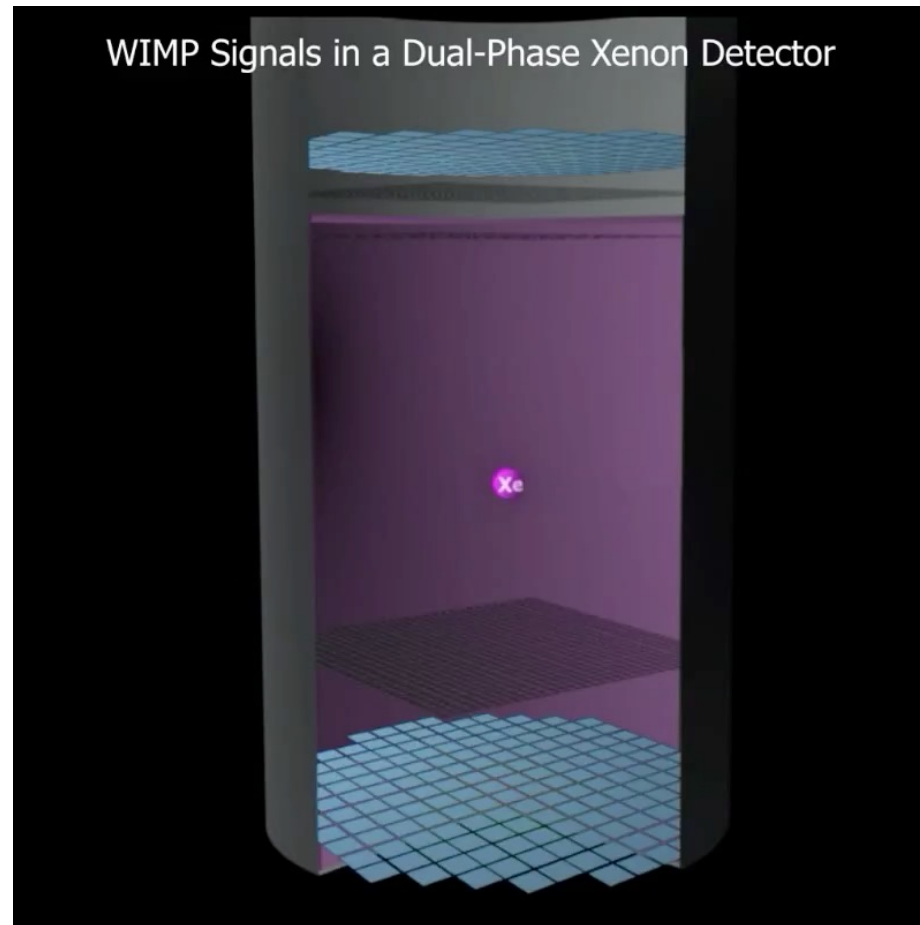
The Compton Effect.



The Compton Effect.

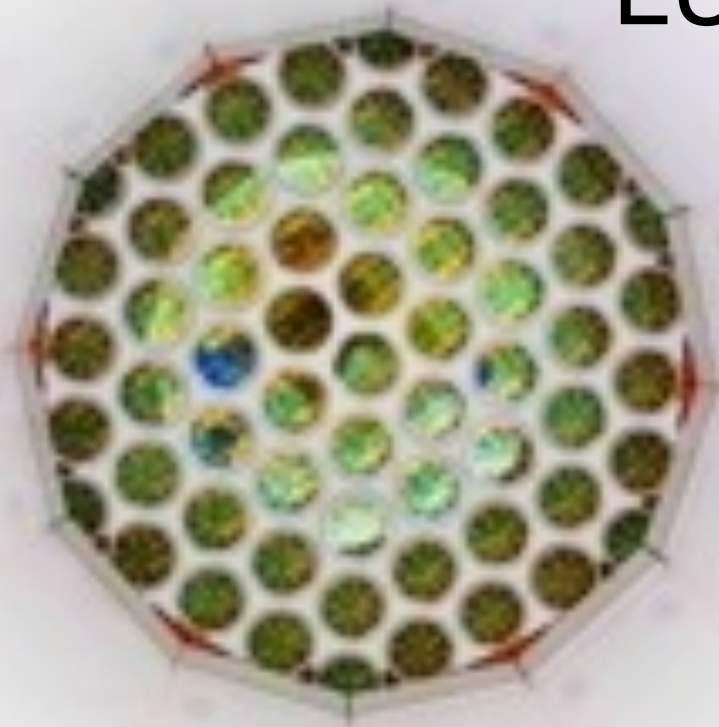


Using the photoelectric effect to search for dark matter.

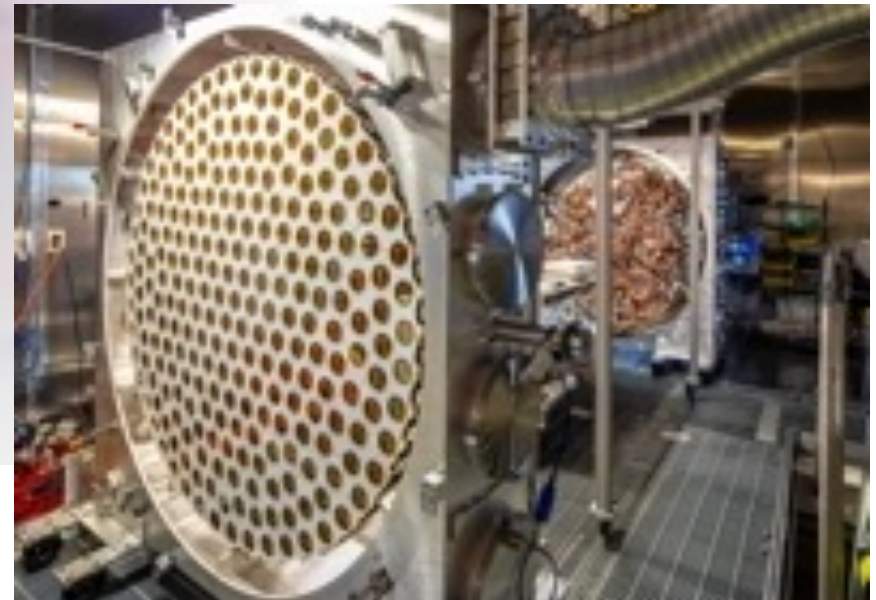


The photoelectric effect at work. Searching for dark matter.

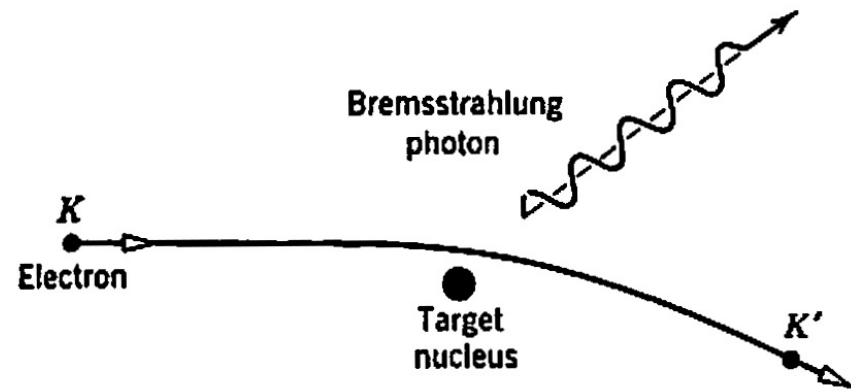
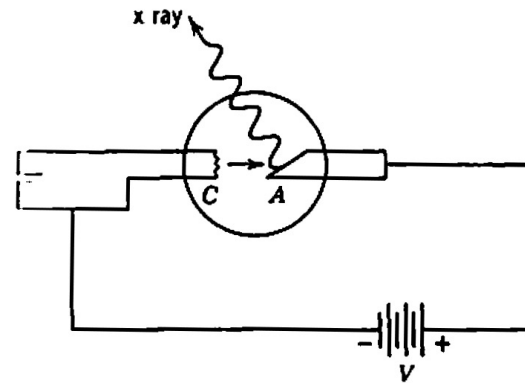
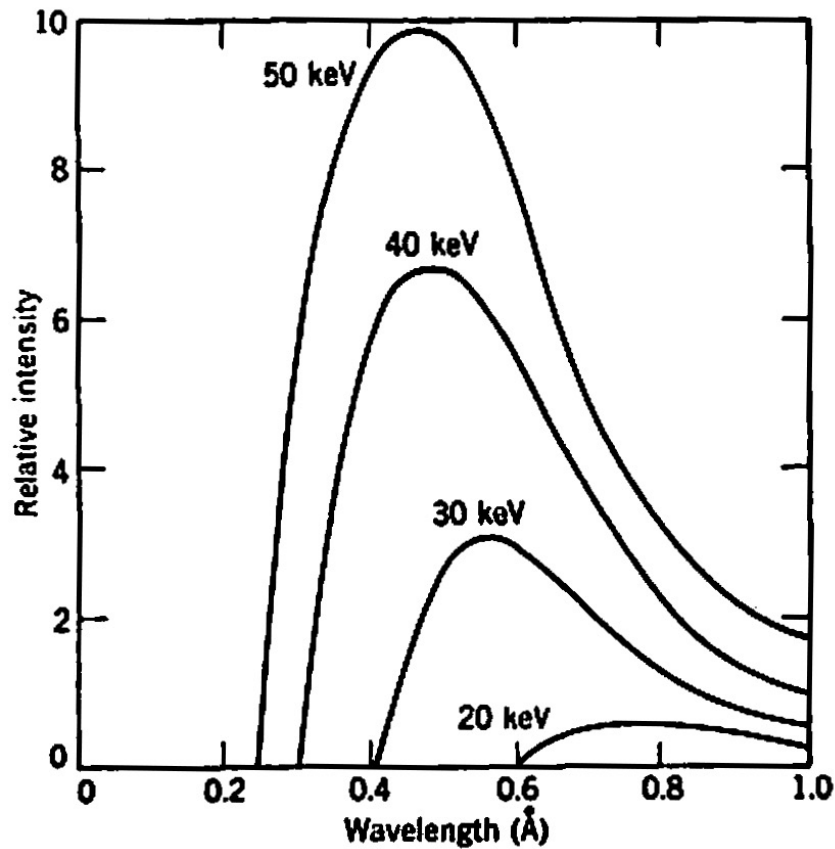
LUX



LZ



X-Ray Production.



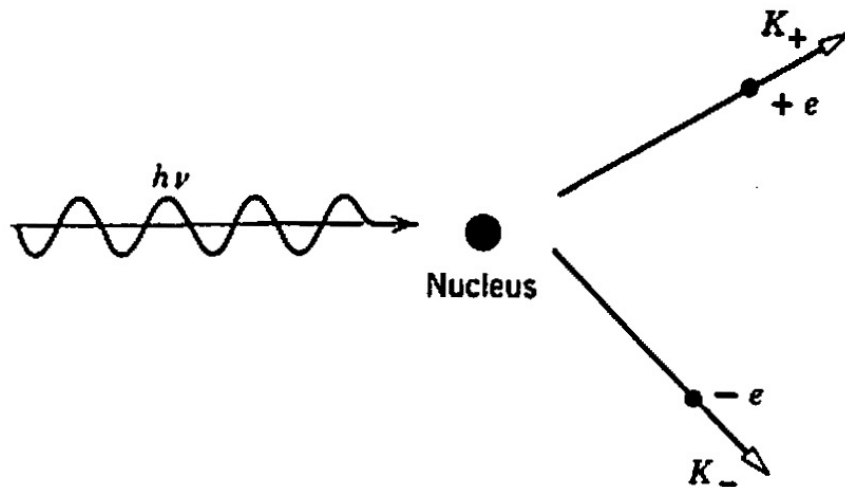


3 Minute 39 Second Intermission.

- Since paying attention for 1 hour and 15 minutes is hard when the topic is physics, let's take a 3 minute 39 second intermission.
- You can:
 - Stretch out.
 - Talk to your neighbors.
 - Ask me a quick question.
 - Enjoy the fantastic music.

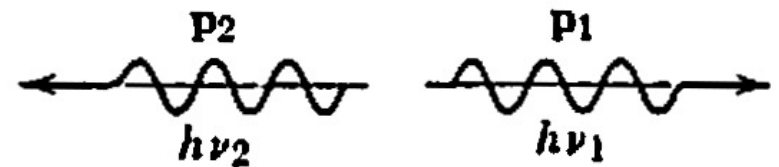


Pair Production and Annihilation.



$+e -e$

Before



After

Pair Creation.



Predicting the Positron - Dirac.

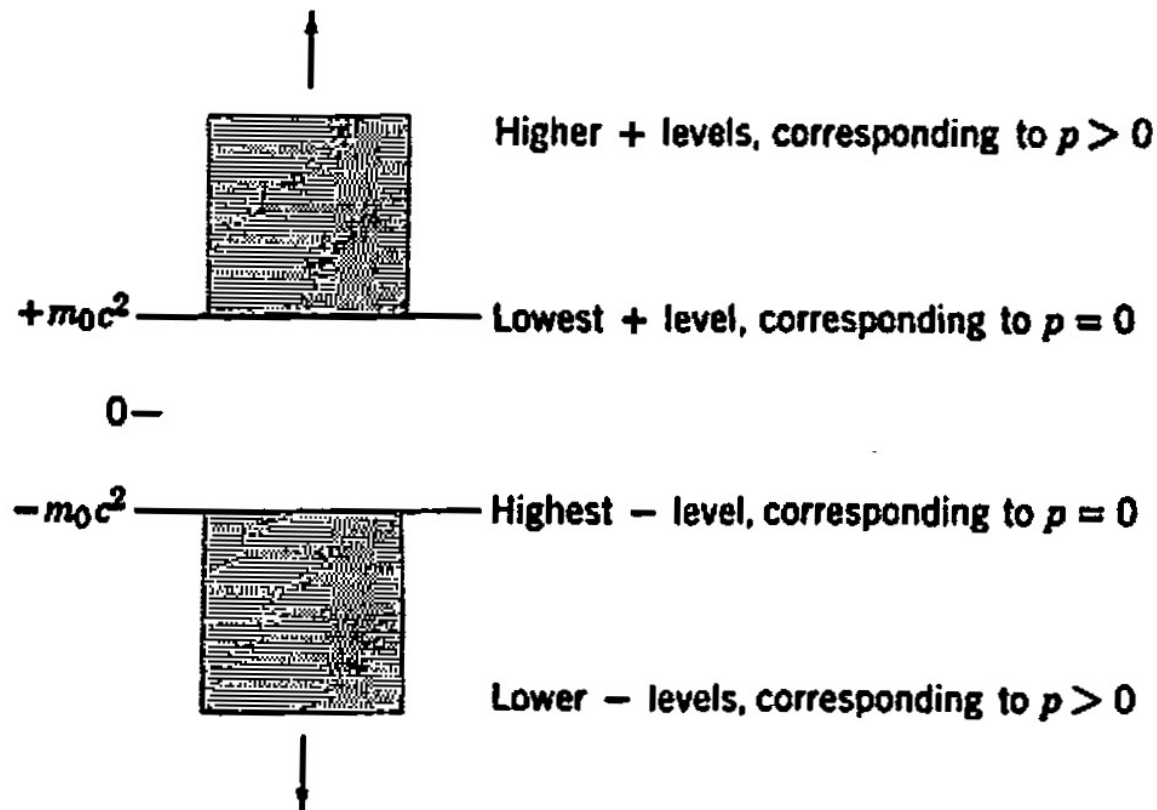
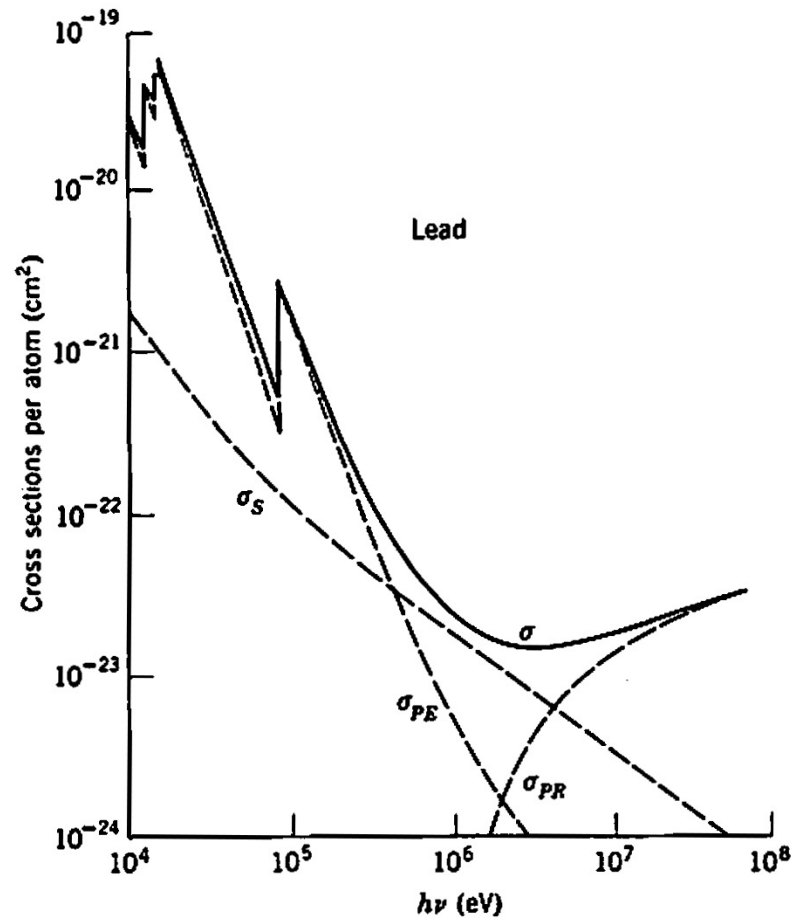
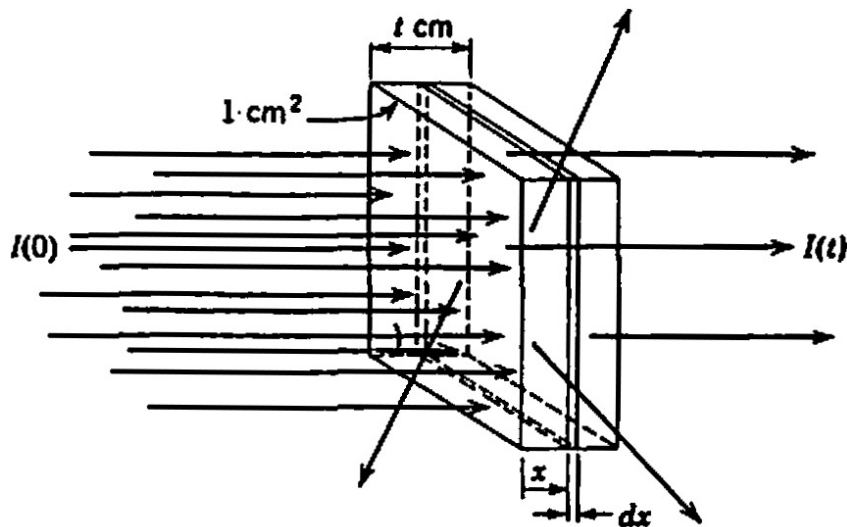


Figure 2-15 The energy levels of a free electron according to Dirac.

Photon Absorption.



ENOUGH FOR TODAY?