

**Quantum Mechanics**  
**Physics 237**

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

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**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.

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



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Since I pay the bill,  
I pick the color.



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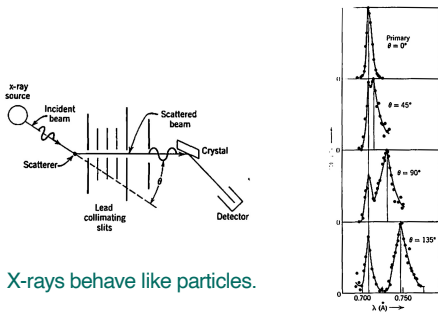
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More about the Compton effect.



X-rays behave like particles.

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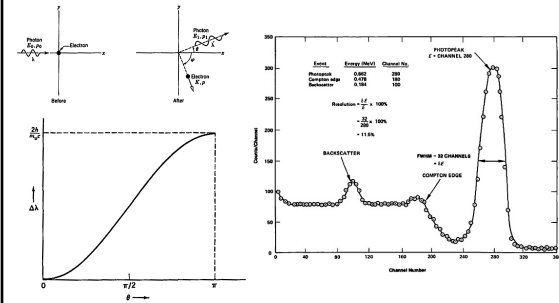
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The Compton Effect.



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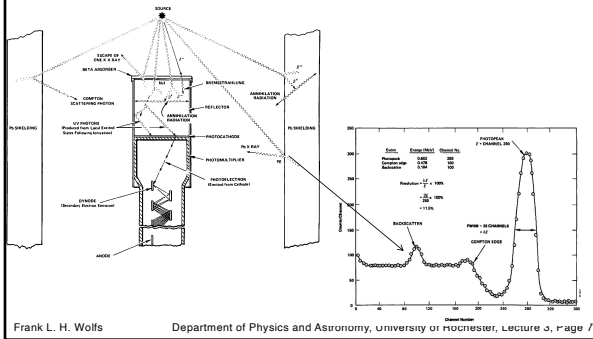
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## The Compton Effect.



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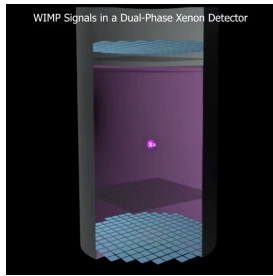
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## Using the photoelectric effect to search for dark matter.



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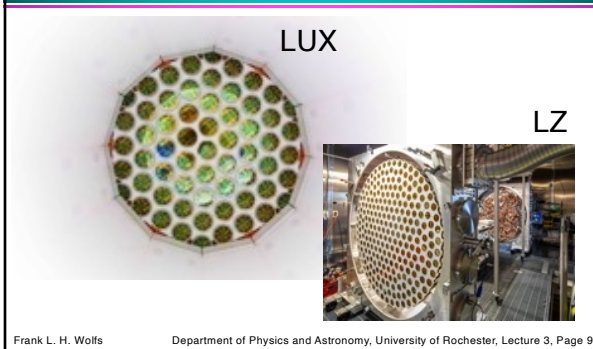
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## The photoelectric effect at work. Searching for dark matter.



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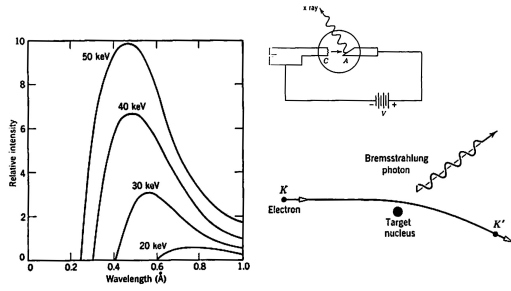
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## X-Ray Production.



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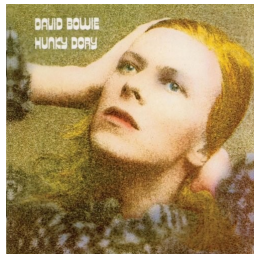
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## 3 Minute 39 Second Intermission.

- 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.



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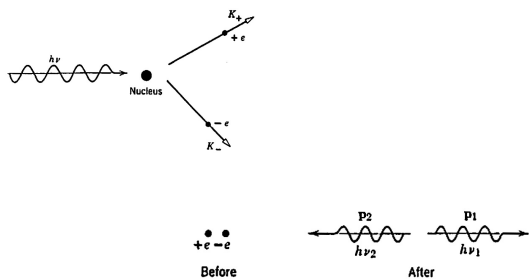
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## Pair Production and Annihilation.



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## Pair Creation.



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## Predicting the Positron - Dirac.

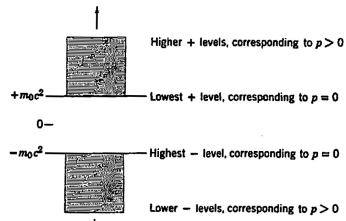


Figure 2-15 The energy levels of a free electron according to Dirac.

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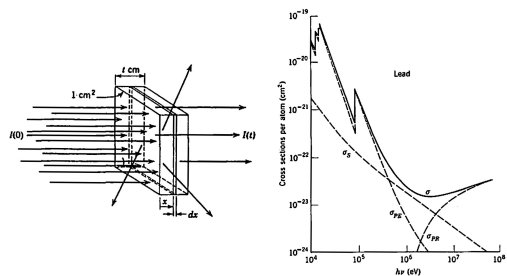
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## Photon Absorption.



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**ENOUGH FOR TODAY?**

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