

# The Compton Effect

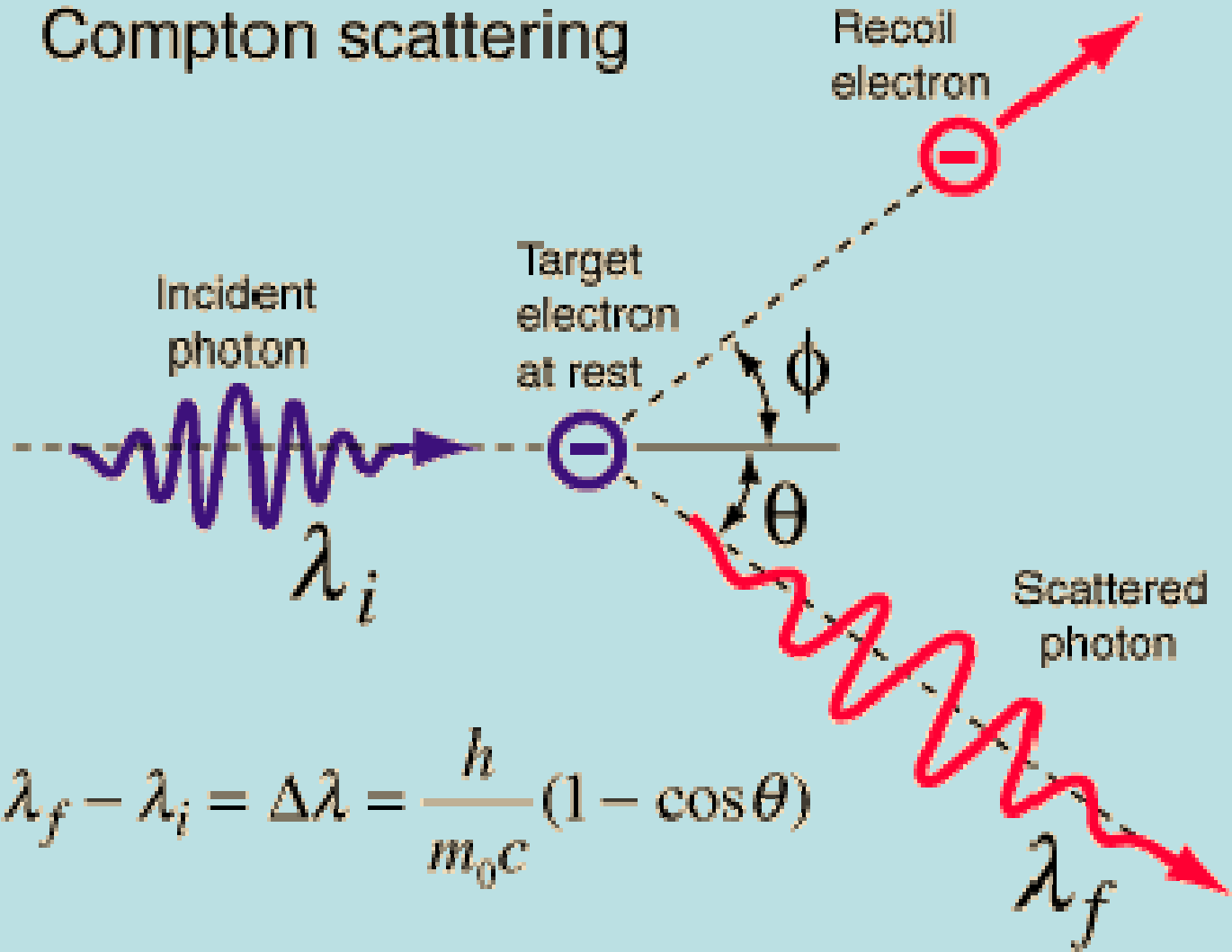


By: The Anti-neutrinos

# THEORY

- It was thought that light had a wave nature.
- The theory behind the Compton Effect was to prove that light has a particle nature, also.

# Compton scattering

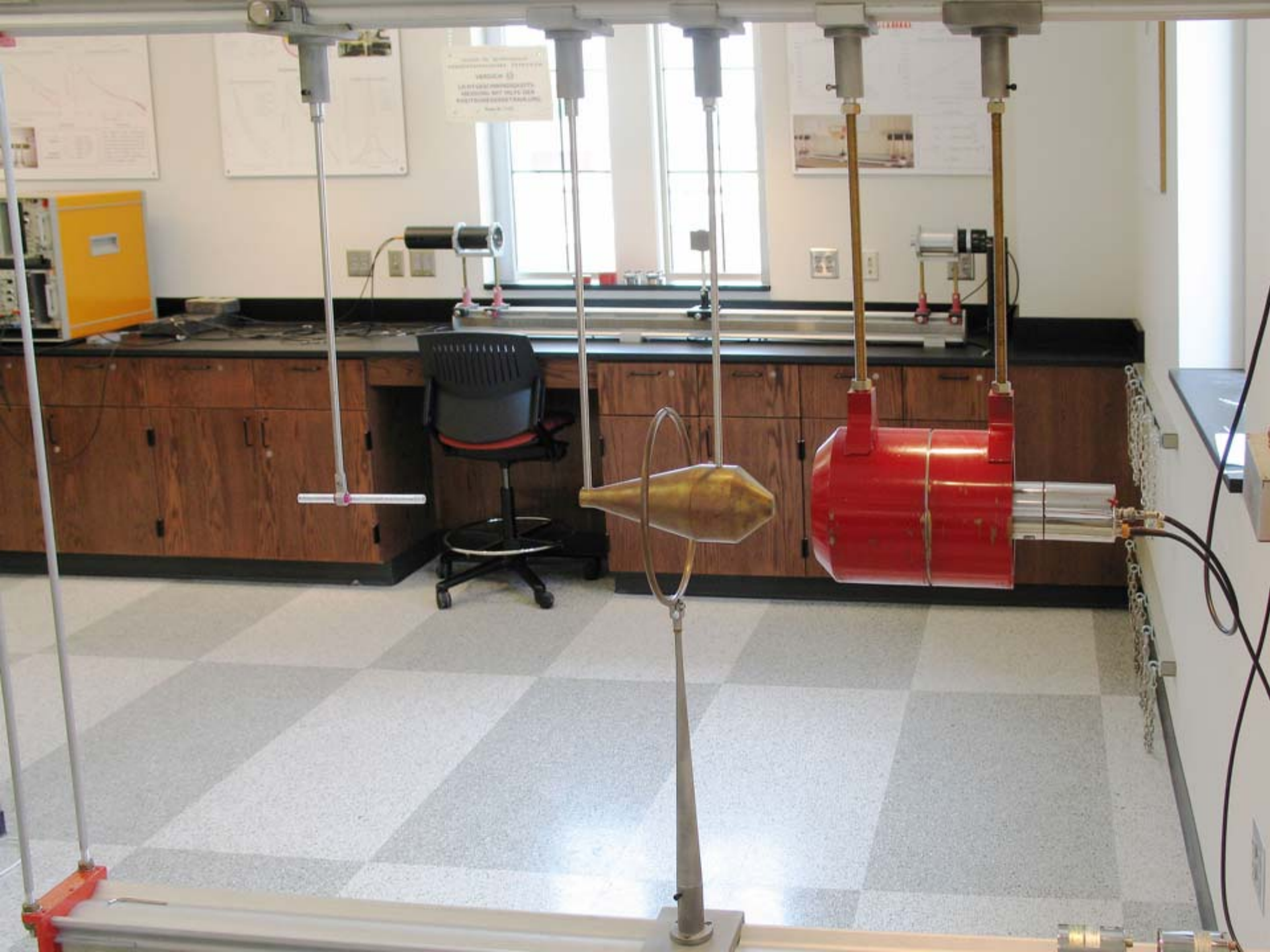


# Einstein's Equation

- $\Delta E = \Delta mc^2 = hf = hc/\lambda$ 
  - E=Energy
  - M=mass
  - C=speed of light
  - H=plank's constant
  - $\lambda$  = wavelength
- Loss of Energy = Increase in Wavelength

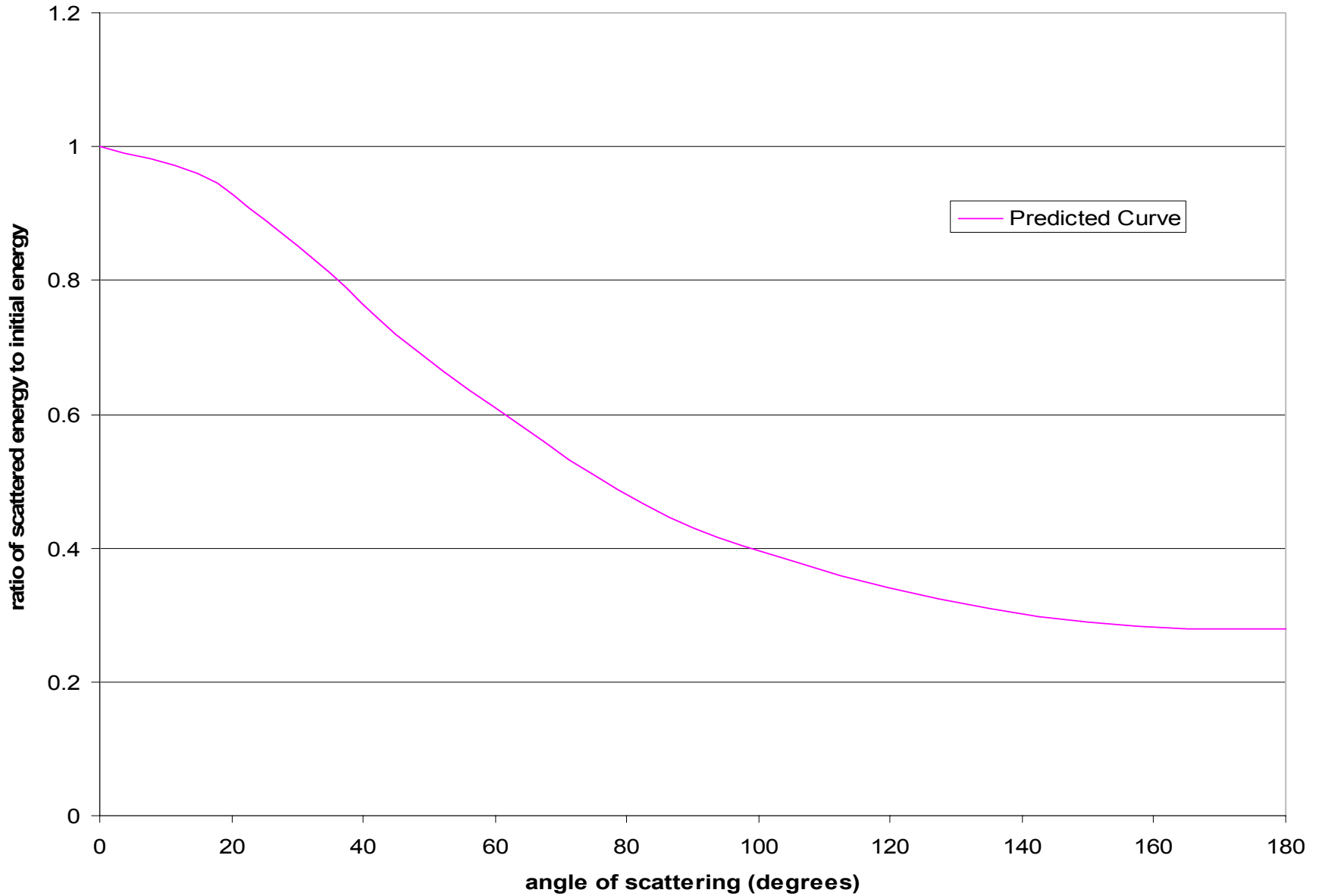
The greater the  
angle of scatter;  
the more energy  
is lost by the photon



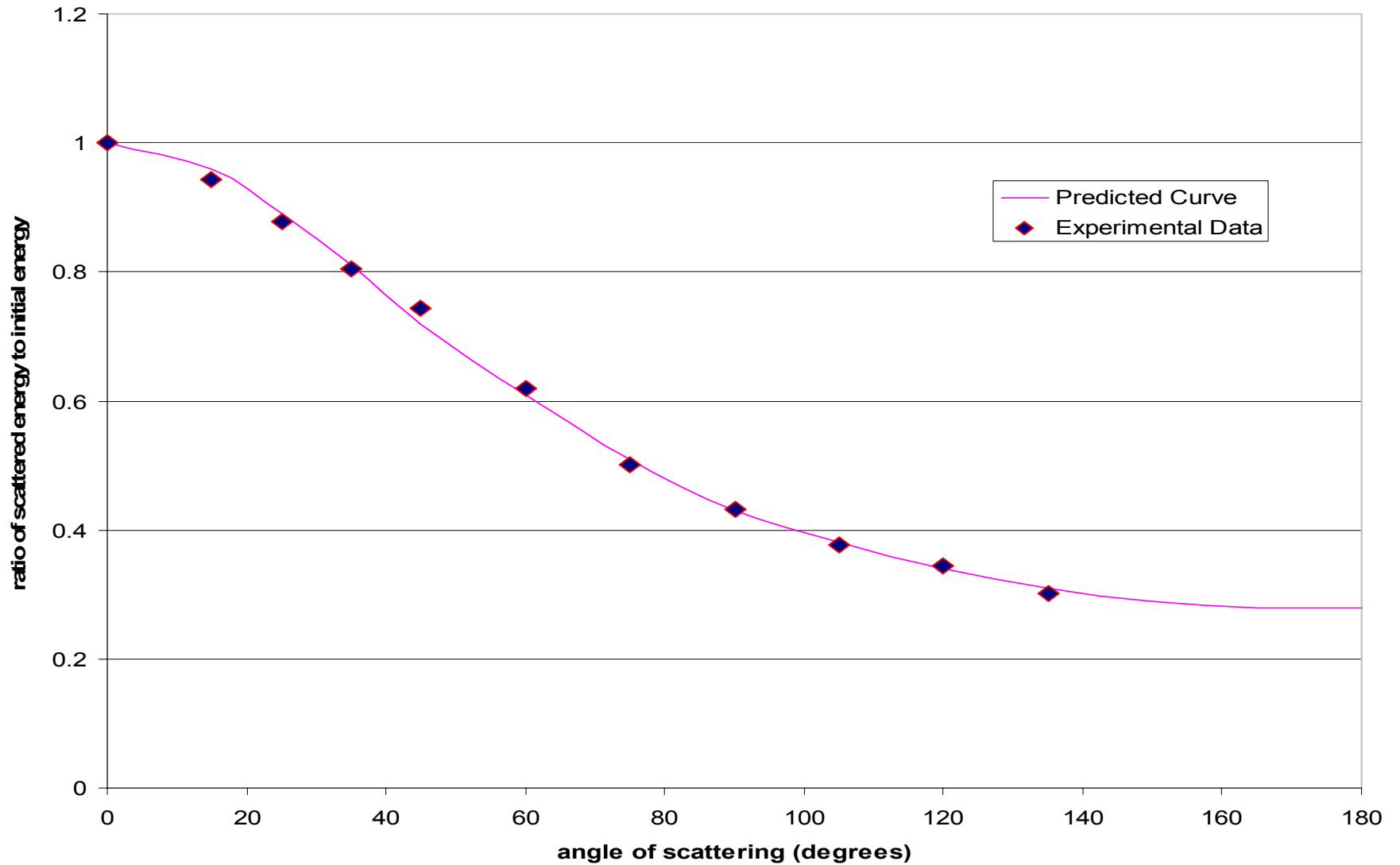


Vorbereitung:  
VORBEREITUNG  
VERSUCH 11  
LEISTUNGSBEWERTUNG  
BEWERTUNG MIT HILFE DER  
BEWERTUNGSTRAJektorik  
Name: \_\_\_\_\_

# Compton Effect



## Compton Effect

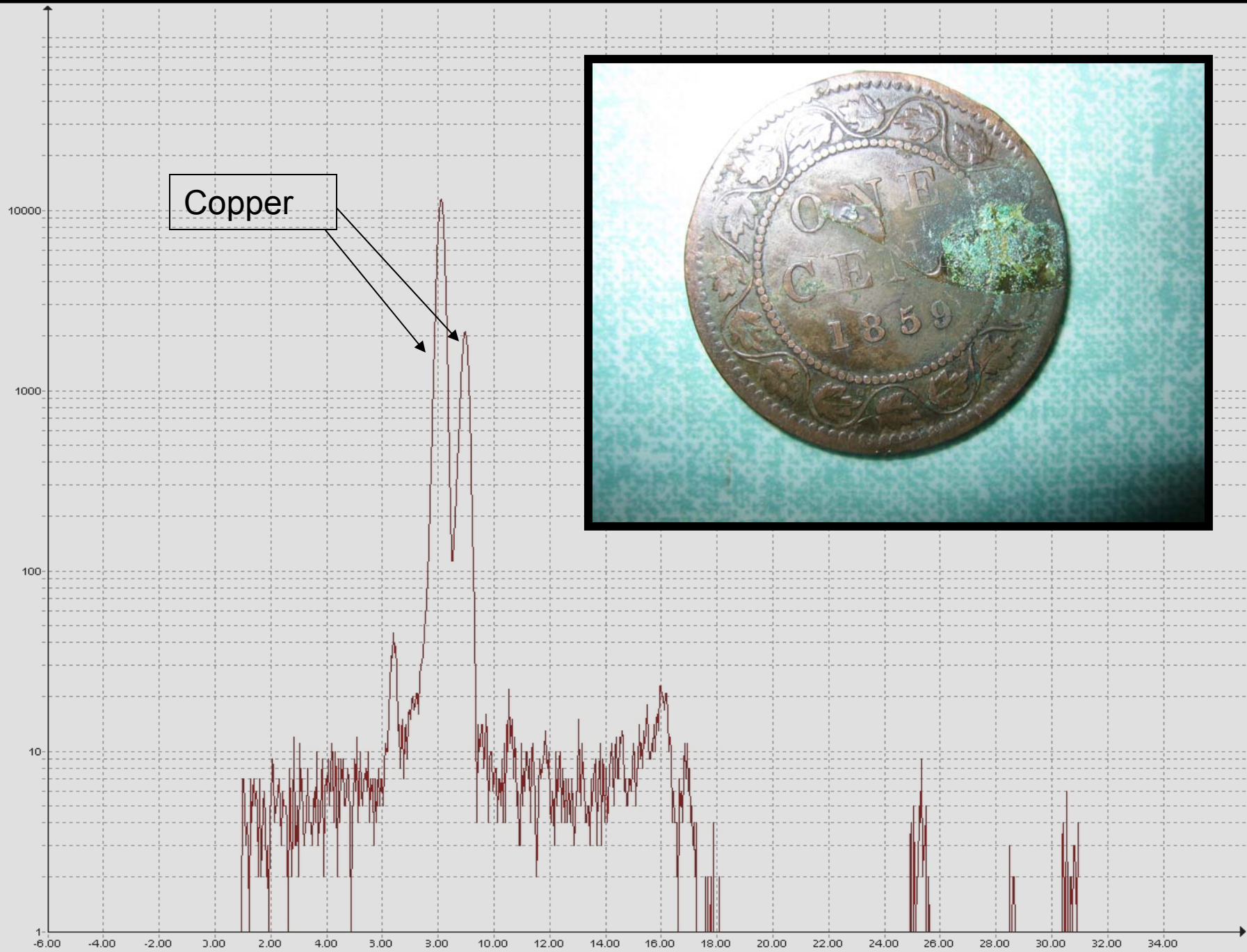




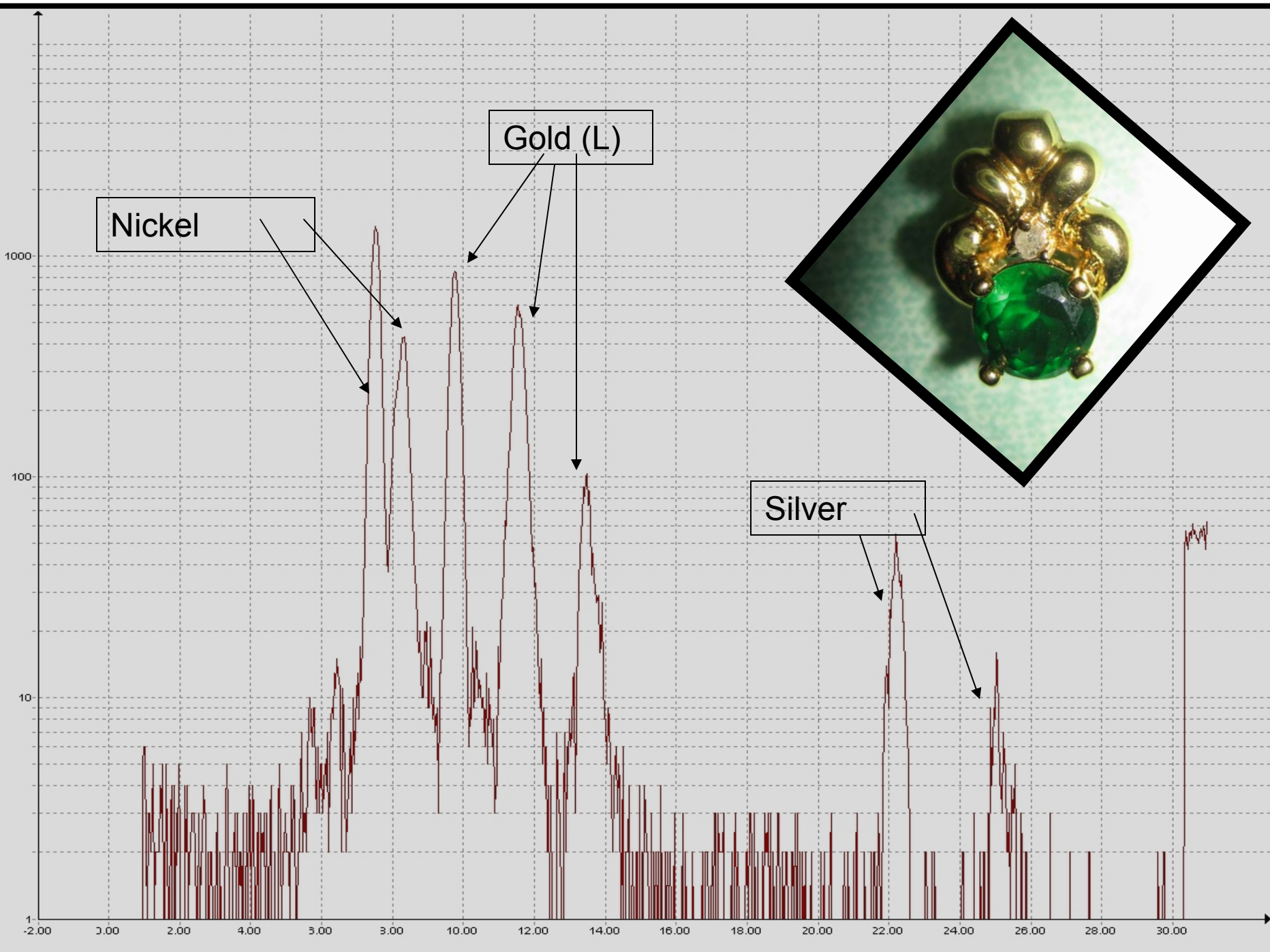
A photograph of a laboratory or classroom setting. On the right, a man with a beard and a name tag that reads "ED STECH" is gesturing with his hands as if explaining something. He is wearing a green and white plaid shirt and dark pants. On the left, three students are listening attentively. The first student is a young man in an orange t-shirt with a "SMAC" logo. Behind him are two young women, one in a white tank top and one in a white long-sleeved shirt. They are standing in front of a large piece of equipment, possibly a detector or a particle accelerator component, which has a dark screen. The background shows metal shelving units with various equipment and a red ladder.

**PIXE**

**Proton Induced X-Ray  
Emissions**





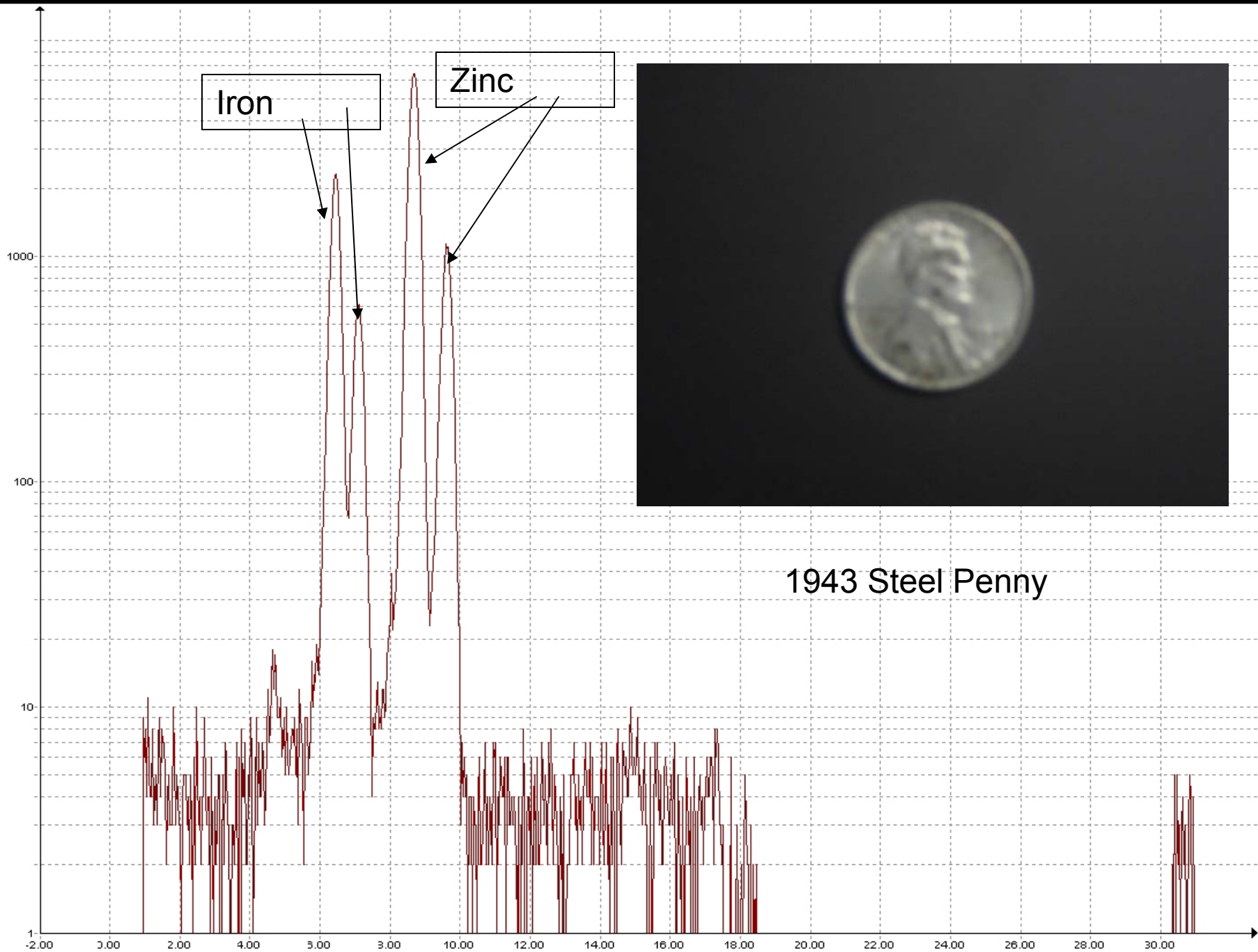


Nickel

Gold (L)

Silver





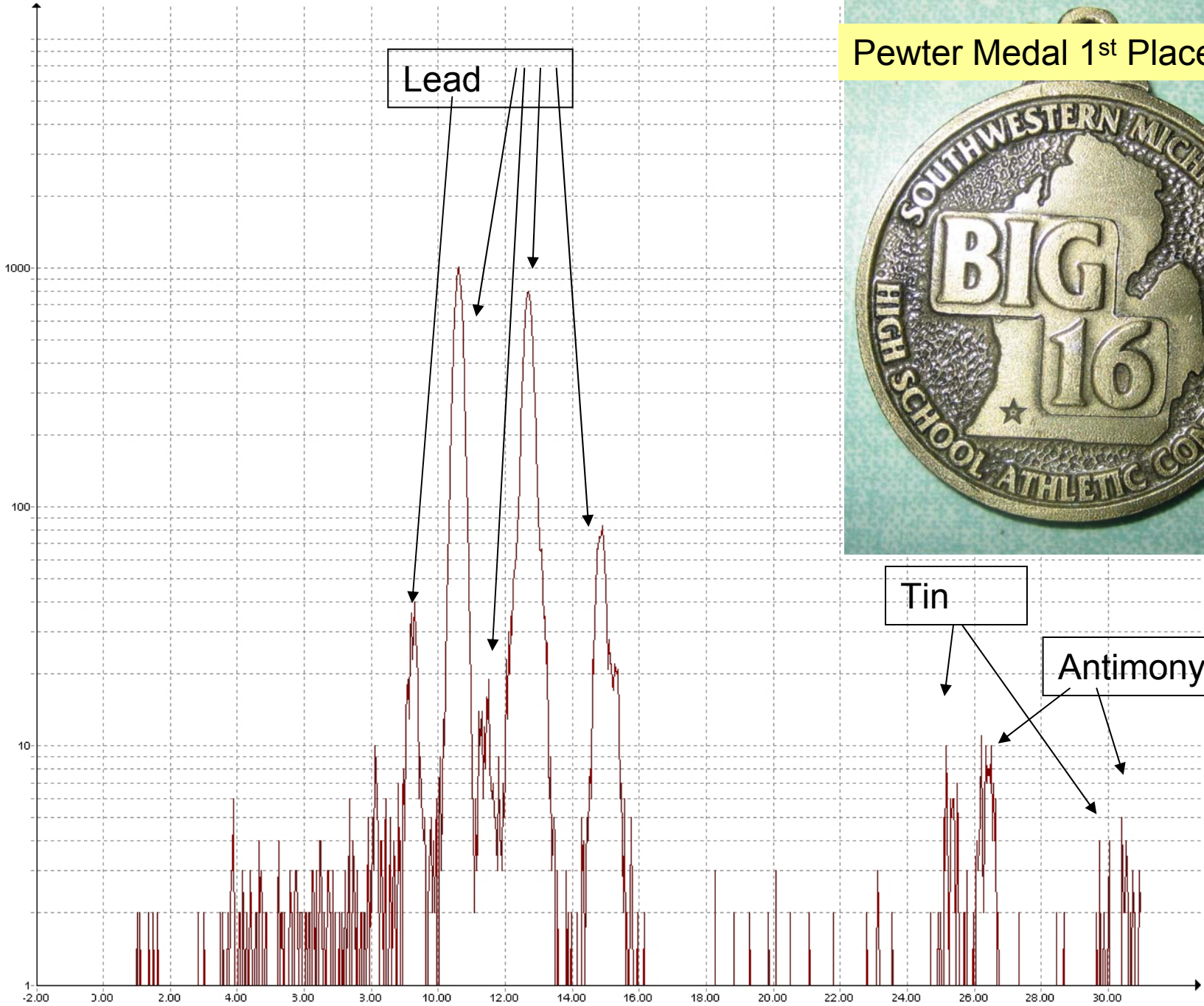
Iron

Zinc



1943 Steel Penny

Pewter Medal 1<sup>st</sup> Place!!!





GUESS ????

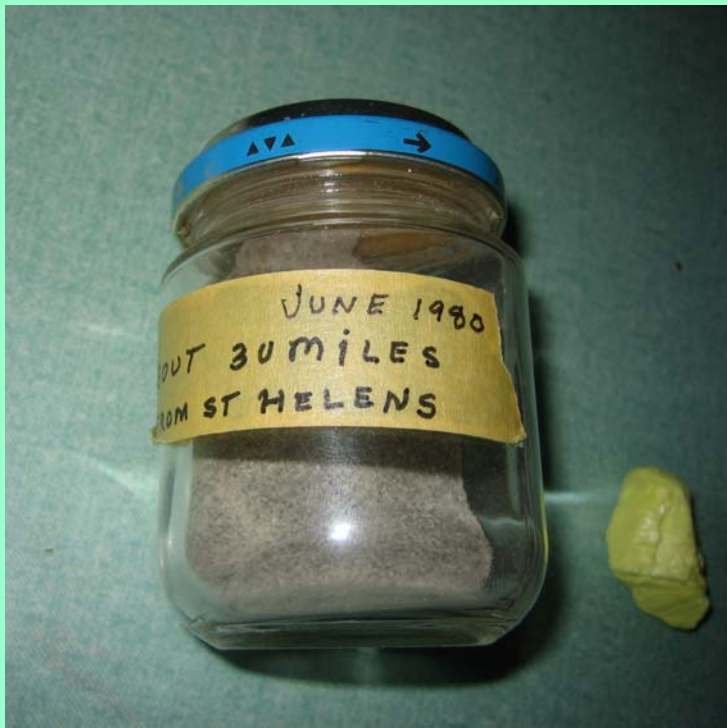
COPPER



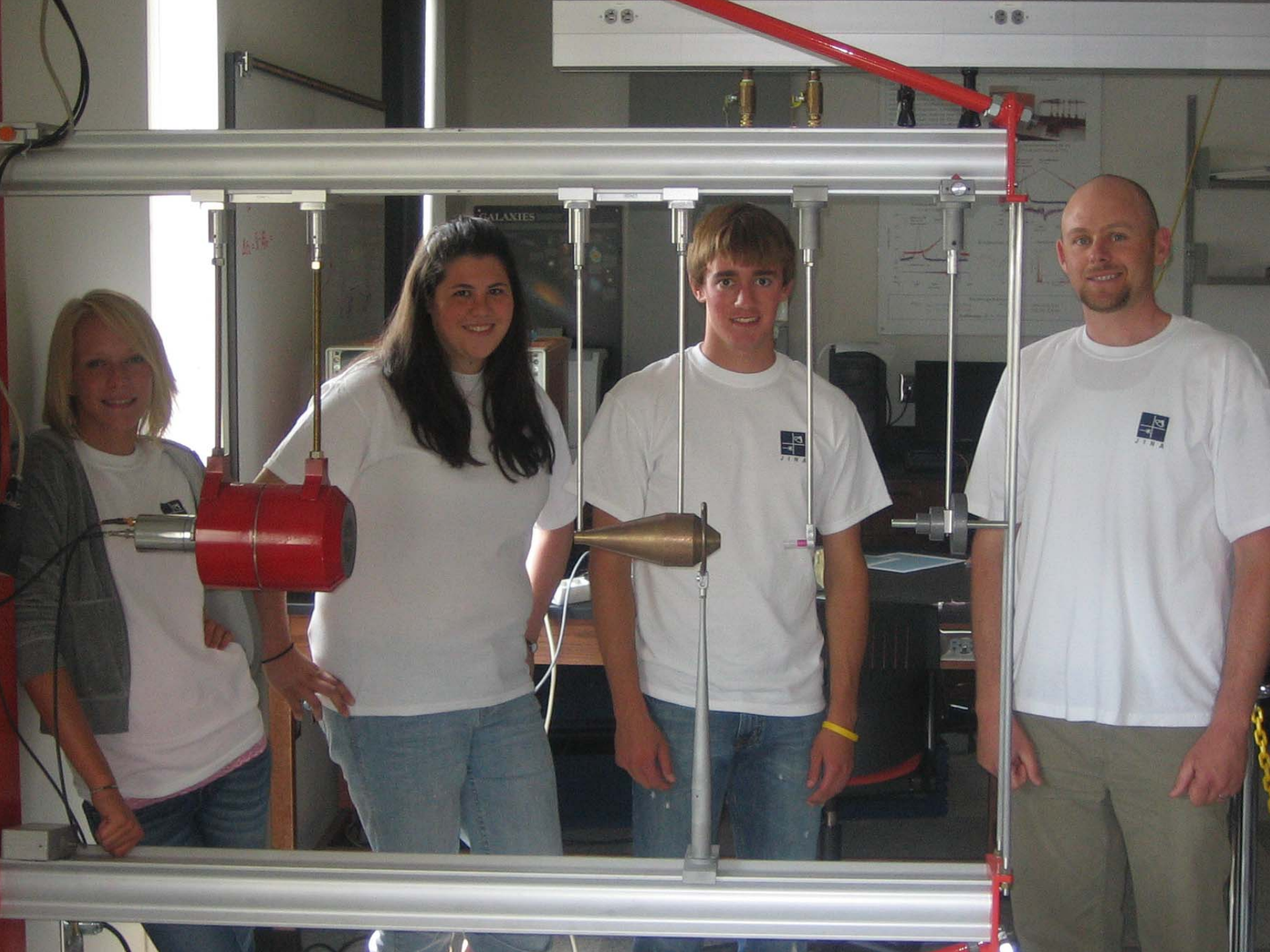
Sulfur !!!

GROSS !!!



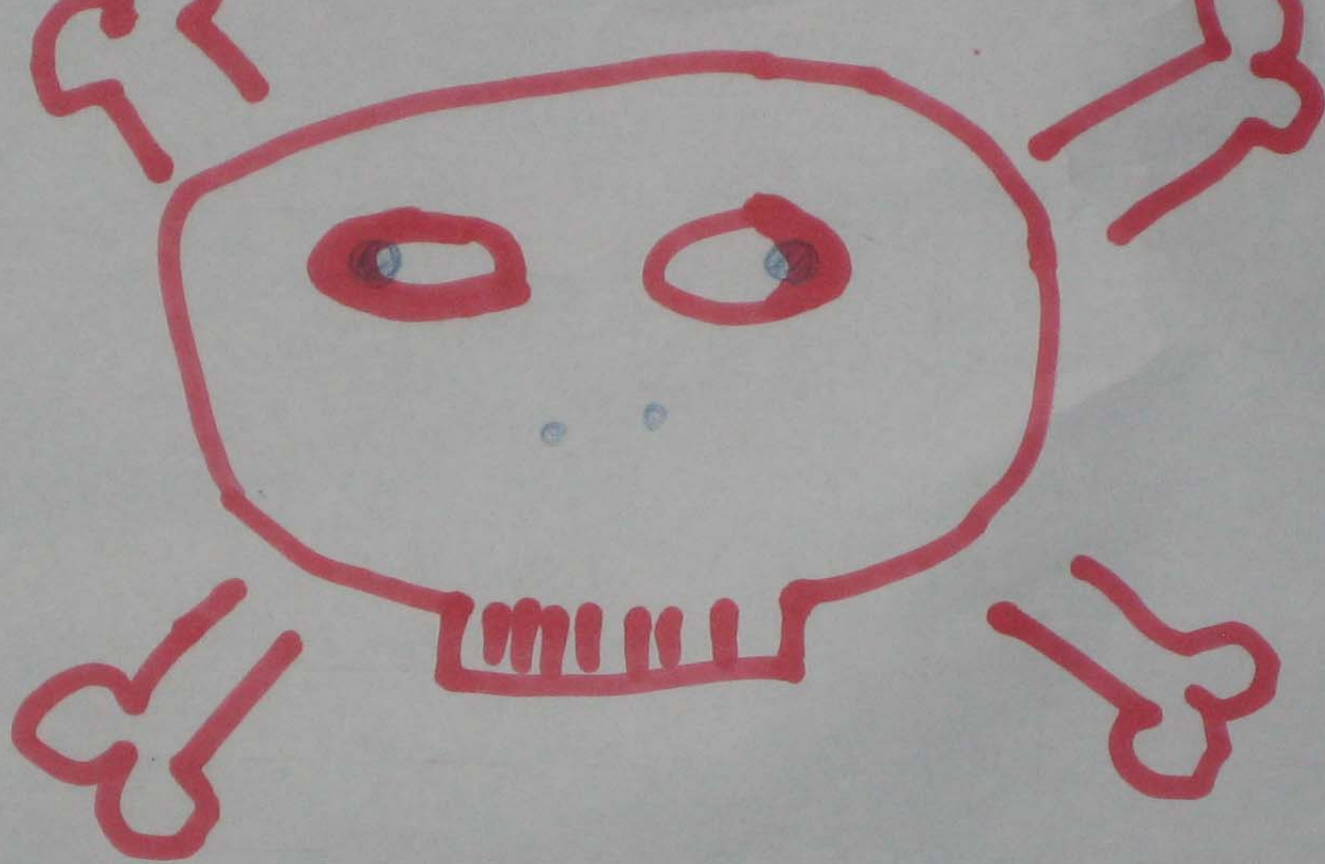






GALAXIES





DO NOT GO IN