**Question from pre-lab**

\[ \frac{v}{v_0} = \frac{1}{B_0} \]

\[ eV = \frac{1}{2} m v^2 \]

\[ \varepsilon_{\gamma} \left( \text{BR} \right) = 2 \varepsilon \]

\[ B = \frac{\lambda_0 N_{\text{Me}} \left( \frac{\gamma}{5} \right) \sqrt{\varepsilon}}{\text{a}} \]

\[ \varepsilon_0 = 1.26 \times 10^{-9} \text{C} \]

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- On regulated power supply
  - Voltage = 200 Volts

- Heater
  - Initial
    - \( V = 6.3 \text{ V} \)
    - \( A = 6.5 \text{ A} \)

- Coil
  - Initial
    - \( V = 6.2 \text{ V} \)
    - \( A = 6.8 \text{ A} \)

Followed procedure from manual:

- Used camera to take photo of light with scale
- Used cell phone to create a back light for picture.
- Took long exposure to get a clear picture.

**Distance from crum**

- To middle of sphere = 46.2 ± 0.5 cm
- To ruler = 56.3 ± 0.5 cm

John

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