

Andrea Tuggle

Lab 7

19. Biot-Savart Law

05/02/2019

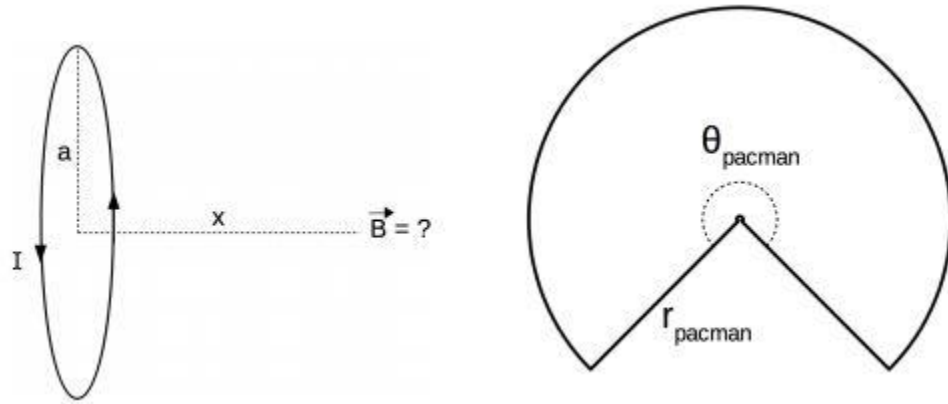
Physics II

Dr. Harrison

1. OBJECTIVE

In this lab we are building a conical shape model to represent the magnetic field produced by a circular loop of current. By creating this model, we will be demonstrating Biot-Savart's Law.

2. DATA



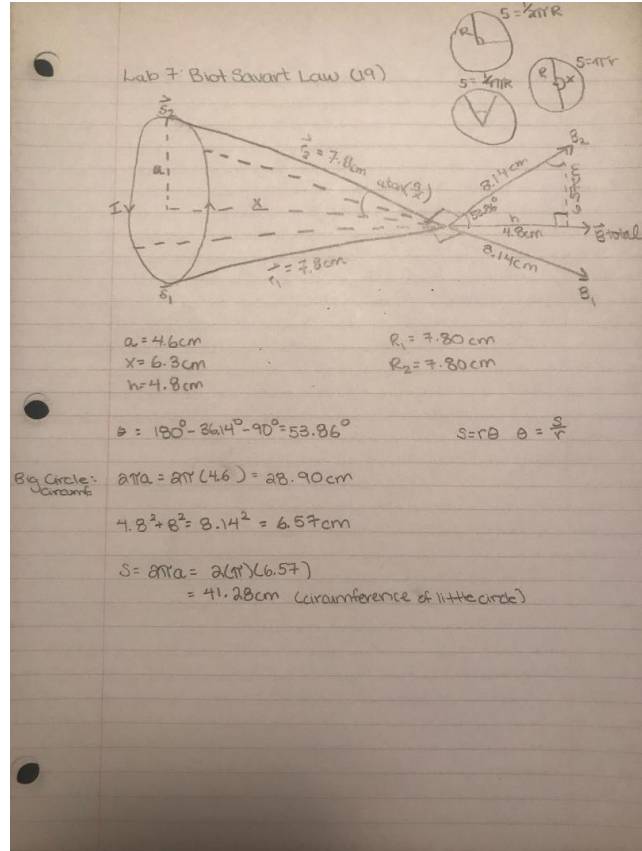
Formula: Biot-Savart Law, $dB = \frac{\mu_0}{4\pi} \frac{Id\vec{s} \times \vec{r}}{r^2}$

$a = 4.6 \text{ cm}$

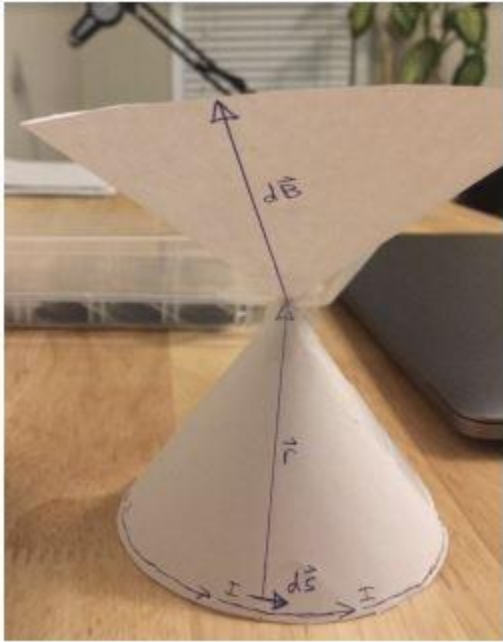
$x = 6.3 \text{ cm}$

$h = 4.8 \text{ cm}$

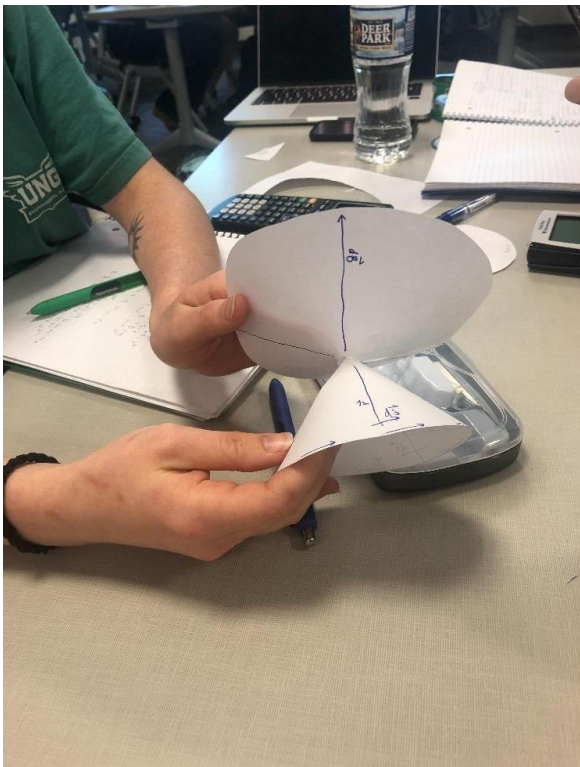
3. CALCULATIONS



4. RESULTS



(cone prototype from lab)



(cone recreated during lab)

