



Northeastern University

Report for Experiment #N Lab Name

Name
Lab Partner: Name
TA: Name
Date

Abstract:

Summarize motivation and main results.

Introduction:

- 1. State motivation – why you did this work?
- 2. Describe physics phenomena and methods of study.
- 3. Cover all investigations, keep short.

Equations:

$$\vec{\nabla} \cdot \vec{E} = \frac{\rho}{\epsilon_0}$$

(1)

$$\vec{\nabla} \cdot \vec{B} = 0$$

(2)

$$\vec{\nabla} \times \vec{E} = -\frac{\partial \vec{B}}{\partial t}$$

(3)

$$\vec{\nabla} \times \vec{B} = \mu_0 \left(\vec{J} + \epsilon_0 \frac{\partial \vec{E}}{\partial t} \right)$$

(4)

Investigation n:

- 1. For each investigation: Discuss experimental set-up.
- 2. Explain experimental procedure.
- 3. Describe how the data was collected.
- 4. Include all data using graphs/tables, with titles.
 - (a) If needed, include truncated raw data into Appendix.

	$\div q$		
$\frac{d}{dx}$	$F = \kappa \frac{q_1 q_2}{r^2}$	\rightarrow	$E = \kappa \frac{q}{r^2}$
	\uparrow		\downarrow
	$U = \kappa \frac{q_1 q_2}{r}$	\leftarrow	$V = \kappa \frac{q}{r}$
	$\times q$		$\int dx$

Table n - Random Table (1)

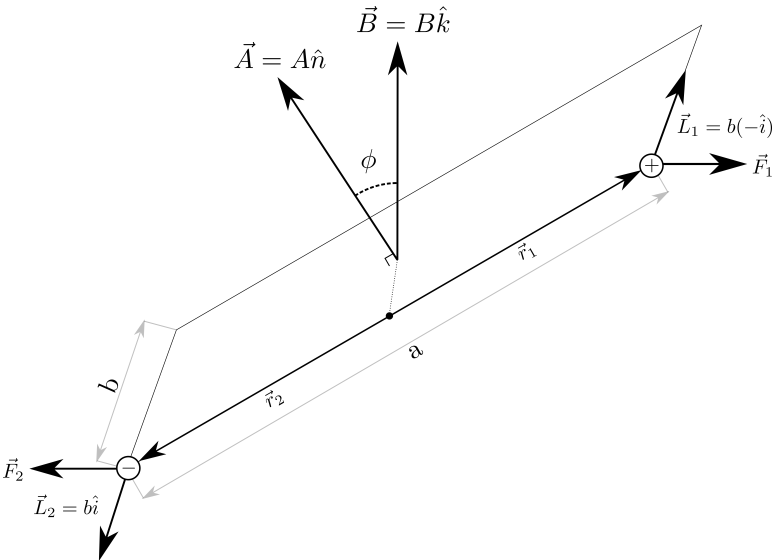


Figure n - Random Sample Figure

- (b) Reference Table as [Table n], reference Figure as [Figure n]
- 5. Summarize physics concepts under investigation.
 - (a) Cite equations as [1], [2], [3], [4] corresponding to tags in introduction.
- 6. Discuss relation between data and theory.
- 7. Describe techniques used to analyze data.
 - (a) Cite references as (1), (2), (3), (4), corresponding to number in References.
- 8. Discuss sources/values of uncertainties in your measurement.
- 9. Write down main results with uncertainties.
- 10. Compare measured quantities to expected values.
- 11. Discuss if they match or not your expectations.
- 12. List the unaccounted factors in your analysis.
- 13. Argue why and how external factors may affect the results.

Conclusion:

- 1. List physical concepts that have been investigated.
- 2. Summarize all main results that you obtained.
- 3. Discuss how external factors might have skewed the results.
- 4. Discuss possible improvements.
- 5. Keep to half a page.

Questions:

- 1. Answer all questions at the end of experiment in the IPL Manual.
- 2. Type all necessary algebra, not just the answer.
- 3. Honors sections must answer extra question.

References:

- 1. Table Generator \LaTeX
- 2. Northeastern IPL Straight Line Fit Calculator