Physics Lab Template

Your Name, Partner Name

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Abstract

Abstract section where you discuss what you found, if you wish to type a math equation inside text, use dollar signs on either side of your equation: $g = 9.81m/s^2$

1 Theory

Theory section

1.1 Part 1

Some specific part of the theory behind the experiment

Might use equations to to describe something, like

$$\vec{L} = I\vec{\omega} \tag{1}$$

2 Experiment

Experiment section

3 Data Analysis

Might want a table to present data:

Trial	1	2
θ_1	1	2
θ_2	1	2

Table 1: caption about table 1

Of course, error propagation will be in here:

$$\sigma = \sqrt{\left(\frac{\partial}{\partial x}\right)^2 \sigma_x^2 + \left(\frac{\partial}{\partial y}\right)^2 \sigma_y^2 + \left(\frac{\partial}{\partial z}\right)^2 \sigma_z^2 ...} \tag{2}$$

Maybe some weighted mean:

$$w_i = \frac{1}{\sigma_i^2} \tag{3}$$

$$x_{mean} = \frac{\sum_{i=1}^{N} w_i x_i}{\sum_{i=1}^{N} w_i} \tag{4}$$

$$\sigma_{mean} = \frac{1}{\sqrt{\sum_{i=1}^{N} w_i}} \tag{5}$$

4 Conclusion

Summary

5 Remarks

remarks