Error calculation in Python

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Abstract

In this lab we recalculated last week's lab using python functions. I realized I had messed up my old lab terribly. Calculate error in first with: 1 Error in first: 841.82 +- 0.70866 Calculate error in second with: 2 Error in second: 326.0765 +- 5.4539

$$\delta F = |c|\delta A \tag{1}$$

$$\delta F = \sqrt{(m\frac{\delta A}{A})^2 + (n\frac{\delta B}{B})^2} \tag{2}$$

1 Introduction

Galaxies are very interesting. Measuring their properties is very important. We even have an equation (see equation 3)

$$V = \frac{8\pi a^{-5}}{3\lambda} \tag{3}$$

where a is the distance to the Sun, λ is something else.... Don't forget to explain what each variable means the first time that you introduce it.

This is also where you explain the aims of the experiment.

2 Method

Describe what you did (not the names of files and directories of course, but all the important steps that bring you to the results). Why did you do this? did you have to make some choices along the way — explain them. Did it not work well the first time, and you had to improve something? write about it

Include diagrams/photos of the experimental setup (see Figure 1), or screenshots highlighting important steps of the process.

3 Results and Analysis

In this section you will need to show your results. Use tables and figures (long tables can be put in an Appendix). Table 1 is an example.

Here explain how you determine uncertainties for different measured values.

If in the process of data analysis you found any noticeable systematic error(s), you have to explain them in this section of the report.

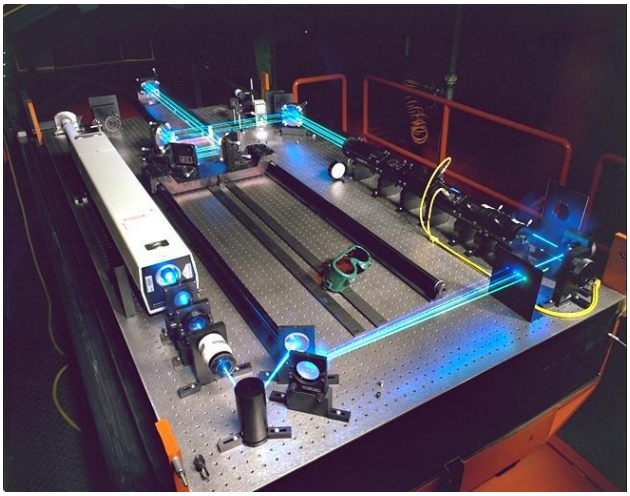

Figure 1: Every figure MUST have a caption.

Table 1: Every table needs a caption.

distance (m)	V (km s$^-$1)
0.0044151	0.0030871
0.0021633	0.0021343
0.0003600	0.0018642
0.0023831	0.0013287

4 Discussion and Conclusion

Here you briefly summarize your findings. Do your results match published values? If not, what could the source(s) of errors? How could the experiment be improved?

References

Author, A.N and Another, A. N., 2010, MNRAS, 431, 28.

Appendix: Velocity measurements

You can put here long tables

Table 2: Every table needs a caption.

distance (m)	V (km s^-1)
0.0044151	0.0030871
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