

PHY1002 Physics Laboratory (2022-2023 Term2)

Short Report

Name:

Student ID:

Group:

Date of experiment:

Experiment 8. Resonance Air Column

1. Make a graph of Air Column Length versus Inverse Frequency (L vs. $1/f$) in experiment 1. Note that the horizontal axis (x-axis) is the inverse of frequency. Analyze why the y-intercept isn't zero.
2. In experiment 1, calculate the wavelength from the distance between the nodes. From this wavelength and the frequency of the Signal Generator, calculate the speed of sound.
3. In experiment 2, What should the ratio of the open-tube frequency to the closed-tube frequency be? Why? Calculate this ratio from your experimental data and figure the cause of difference (or state that there's no difference).?

Appendix:

Attach the figure in tab Chart 2 in Capstone (You should write a clear and detailed caption for the figure), explain the relationship between the time in x-axis and frequency.

--- End of Laboratory Report ---

Notes:

- **Submit soft copies online.**
- **No further modification allowed after deadline.**
- **No figure is required if not specified.**