Sound Lab

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March 7th

1 Introduction

It is too hard to measure the time that the sound travels with some simple devices. However, we can measure the velocity of the sound indirectly by using a known wavelength device, such as the tuning forks. Thus, we can know the wavelength of the sound wave. Then, from the formula:

$$v = f\lambda$$

We can get the velocity of the sound.

2 Data

	Frequency(Hz)	wavelength(m)	Length of resonance(m)
A	512	0.644	0.166
B	384	0.888	0.222
C	256	1.332	0.333

3 Analysis

By calculation, we got the velocity and the real length of resonance:

	Velocty(m/s)	Real Length(m)
A	338	0.165
B	330	0.215
C	327	0.320

$$l = \frac{\lambda}{4}$$