

# 01. Coin in a Balloon

## REVIEW

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# Reporter - Theory

## PROS

1. Theory in **general** about the sound and motion
2. Mathematical support for the phenomenon (even if it did not explained properly).

## CONS

1. The equations explaining why we can hear the buzzing sound existed, however they were not explained properly.
2. Did not include theory about sound vibrations, the motion of the coin, the centripetal force and friction, that cause the coin to stop
3. Not explained how the graphs with size & sound where calculated

# Reporter - Experiments & Results

## PROS

- Utilized different kind of balloons
- The results presented in graphs

## CONS

1. Diagrams and figures were poorly explained
2. No clear experimental procedure and set up
3. Experimented only with 3 coins
4. No constants (environmental sound, did not mention neither the application/device they utilized to measure the sound the nor the position of the measurement organ, exact applied force and speed)
5. No visual aid
6. No possible errors
7. No cleared graphs

# Opponent

## PROS

1. Clarifying questions were focused on many missed information by the opponent (resonance frequency, applied force, placement of the measurement organ)
2. Pointed the lack of theory explanation and proper experimental procedure

## CONS

1. Lack of a presentation
2. Bad time management

# Points discussed

## REPORTER

Effect of temperature that affects the result, since as the temperature begins to decrease, the air particles inside the balloon have less energy than they do when the balloon is at room temperature. As a result, the sound propagating through the surface of the balloon is of a lower tone.

**We agree with the reporter**

## OPPONENT

**Does not affect the result, without mentioning further information**

# Points discussed

## REPORTER

Mass affects the motion of the coin

## OPPONENT

After the experiment, the data provided that mass is not a parameter that affects the result.

I agree with the reporter, since it might not not affect the spinning, but affects how fast it will fell in the center of the ballon

# Missed Points

- Not discussed about external temperature

# Conclusions

- PROS



# SUGGESTIONS

**Reporter:**

**Look at the literature**

**Opponent:**

Thank you for  
your attention