

Ballistic Pendulum Lab

Purpose: to verify the laws of conservation of momentum and energy

Procedure:

- 1) Open Interactive Physics 2000 from I:handout/strachan then use file/open to open ballisticpendulum.ip from the handout /Strachan folder on I drive
- 2) Run the simulation at a variety of speeds and record appropriate data to show that momentum is conserved before and immediately after the collision by stopping the experiment sometime before the collision and just after the collision.
- 3) Run the simulation at a variety of speeds and record appropriate data to show that total energy is conserved entirely after the collision.
- 4) Determine the heat energy produced during the collision using the law of conservation of energy from before to after collision with a projectile traveling at 30 m/s.

Conclusion: this should prove you know the laws of conservation of momentum and energy and when to use each one.

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