Name(s)	Project Number
Cody C.M. Orvis	
	38806

Project Title

Gaussian Linear Accelerator

Abstract

Objectives/Goals

Demonstrate the relationship between the number of magnet stages in a Gaussian accelerator and the distance and speed a steel ball travels.

Methods/Materials

Build a Gaussian linear accelerator with one through four acceleration stages and test the distance the ball travels off of a given table height onto a box of sand below. The velocity can then be calculated.

Results

Measurements taken and plotted of number of magnet stages vs. distance and number of magnet stages vs. velocity.

Conclusions/Discussion

The relationship between magnet stages and the distance traveled and the velocity of the steel ball is linear.

Summary Statement

My project is about demonstrating the transfer of kinetic energy using neodymium magnets and steel balls.

Help Received

Skip Orvis, Mrs. Susan Singleton, Mr. Doug Modlin