



**CALIFORNIA STATE SCIENCE FAIR  
2015 PROJECT SUMMARY**

<b>Name(s)</b> Marc J. Ramos	<b>Project Number</b>  35427
<b>Project Title</b> Magnet-Powered Artillery	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of this project is to test the distances a gauss rifle will launch a 1/2 inch steel ball through the air using magnets and other 1/2 inch steel balls.</p> <p><b>Methods/Materials</b> tape measure 2 wooden dowels 4 neodymium magnets 1/2 inch steel balls duct tape stool pencil protractor</p> <p><b>Results</b> Though each angle and magnet gave a specific distance traveled, I found that the longest distance the gauss rifle launched a 1/2 inch steel ball was 85 inches at 30 degrees with all four magnets.</p> <p><b>Conclusions/Discussion</b> According to the data collected, after many adjustments of angling the gauss rifle, I have concluded that to get the longest distance traveled, the gauss rifle must be angled at 30 degrees and use a power of four sets of magnets and steel balls.</p>	
<b>Summary Statement</b> Finding out the longest distance a steel ball can travel using a gauss rifle by adjusting angles and magnets.	
<b>Help Received</b> Parents helped with bordering the outline of display board.	