



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Jordan M. Hisel	Project Number J1609
Project Title It's an Alpha! It's a Beta! It's a Gamma! No, It's Cosmic Ray!	
Abstract Objectives/Goals The objective is to find whether cosmic rays are affected by magnets. Methods/Materials I built a cloud chamber using a jar, felt, dry ice, a pie tin, and 91% rubbing alcohol. A compass was used to determine the North and South magnetic poles, so I could line the magnet up with North. A large magnet and a ruler were also used during the experiment, so I could see the exact distance the magnet was from the cloud chamber. Results With no magnet, I counted an average of 16.6 cosmic rays. With the magnet zero centimeters away, I got an average of 8.6; with 1 centimeter, I found 9.2; two centimeters, I found 13.2; and with three centimeters, I found an average of 16.2 cosmic rays. Conclusions/Discussion My experiment shows that magnets have an altering affect on cosmic rays. My hypothesis is as follows: if a magnet decreases the number of cosmic ray events in a cloud chamber, then the closer I move the magnet, the fewer cosmic rays I should be able to detect. The data supports my hypothesis by showing that as I moved the magnet further away from the jar, I was able to count more visible cosmic rays within the cloud chamber.	
Summary Statement My project shows how cosmic rays are detected and whether they are affected by magnets.	
Help Received Dad helped make the cloud chamber and make the graphs; Mrs. Usher reviewed the report.	