



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Vu A. Hong	Project Number S1411
Project Title Electromagnetic Vector Fields on Plant Growth	
Abstract Objectives/Goals The project I chose this year is an integration of my science fair projects from the past two years. The problem I was faced with in the GSDSEF 2002 was the number of variables that came up such as my incapability at that time to keep the temperature constant for both the control and test pots. Using the difficulties from previous years, the problem I came up with was, #The Effect of Electromagnetic Vector Fields on Various Plants in a Fixed Environment.# I decided to grow radishes, corn, lima beans, and mung beans. Methods/Materials The first thing I had to do was come up with a fixed environment. I set the temperature control to a fairly warm 28˚c. If the temperature of the soil read above the set temperature, the control would send a feed back to the input of the PLC. The PLC programming would then output a signal to the solid state relay to turn off the power supply of that pot. Results In the end, the plants that were grown in the heater pot, not the electromagnetic pot grew higher consistently. Conclusions/Discussion The conclusion that I can make from this is that the radish seeds from my project two years ago only grew so high because of the warmer temperature. Another conclusion I can make is that since I programmed the electromagnetic coil to turn on and off every 2 seconds to create more stimulation; plants do not respond well to either electromagnetic shock or stimulation.	
Summary Statement The project is about plant growth in a controlled electromagnetic field.	
Help Received My previous teachers helped me recognize variables from previous projects that I would have to control for this year's project.	