



# CALIFORNIA STATE SCIENCE FAIR 2014 PROJECT SUMMARY

<b>Name(s)</b> <b>Hani A. Jandali</b>	<b>Project Number</b> <b>S0914</b>
<b>Project Title</b> <b>Anti-Gravity Lifter</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My intention in performing this experiment was to see if it is relatively possible, and of course to examine and demonstrate the Biefeld-Brown Effect first hand. From this I wished to learn more about how the lifter works, the scientific aspects behind the project and how it falls in accordance with the laws of physics and electrical engineering, and its real world application, such as its potential replacement of the jet aircraft in flight industries.</p> <p><b>Methods/Materials</b> The materials used were rather simple for such a complex project. They were as follows; aluminum foil, balsa wood (1/16 inch thick), copper wiring (non-insulated 30 gauge wire), and cyanoacrylate glue. In terms of power source to levitate the lifter, I used a 12-volt car battery and a transformer to increase the voltage to that of tens of thousands. The first step I performed in this project was creating an equilateral triangle of balsa wood, which would act as the frame. Next, I un-insulated the copper wiring by running it over an open flame, then through coarse sand paper. Likewise, I then proceeded to create an aluminum foil skirt for the edges of the triangle, rounded on top to allow the electric current to flow through the lifter. Afterwards, I simply attached the wiring all together, from battery to transformer to lifter.</p> <p><b>Results</b> For the first lifter, with a width of 110 millimeters, a height of 75 millimeters, and a mass of 4.3 grams, 29 thousand volts was required to achieve lift. For the second lifter, with a width of 180 millimeters, a height of 75 millimeters, and a mass of 6.9 grams, 34 thousand volts was required to achieve lift. For the third lifter, with a width of 200 millimeters, a height of 75 millimeters, and a mass of 8.7 grams, 36 thousand volts was required to achieve lift. For the fourth lifter, with a width of 400 millimeters, a height of 90 millimeters, and a mass of 17.2 grams, 44 thousand volts was required to achieve lift.</p> <p><b>Conclusions/Discussion</b> It is evident when comparing the evidence to my initial hypothesis that my educated estimation was incorrect. Although I had believed that a mere 1500 volts would be required to lift the craft, all four scenarios tested disproved so, requiring tens of thousands of volts instead.</p>	
<b>Summary Statement</b> To levitate an "antigravity" lifter, as well as in turn demonstrate the Biefeld-Brown Effect.	
<b>Help Received</b> Father helped with the wiring of the electrical aspect of the project	