



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jacob A. Posner</b>	<b>Project Number</b> <b>J0324</b>
<b>Project Title</b> <b>What Is the Most Efficient Way to Power a Gyrostabilizer?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My objective was to see whether or not a turbine could be used to power a ship's stabilization system, because ships currently burn fossil fuels, creating pollution. <b>Methods/Materials</b> The first step of my method was to build a ship to test. This ship had a turbine connected to a gyroscope. After that, I used a spring scale to measure how much the ship resisted rolling when it was not using the gyroscope and when it was using the gyroscope. I tested the roll resistance 50 times in total: 25 using the gyroscope, and 25 times not using the gyroscope. <b>Results</b> The average roll resistance of the ship when the gyroscope was spinning was 20 percent larger than the average roll resistance of the ship when the gyroscope was not spinning. <b>Conclusions/Discussion</b> My results show that when the turbine was spinning, powering the gyroscope, the roll resistance was higher. That means that the gyrostabilizer was working. Since the gyrostabilizer system was not using any energy except that created by the turbine, it was more efficient than the current way ships create energy.	
<b>Summary Statement</b> My project tests whether or not there is a more efficient way to power a ship's gyrostabilizer system.	
<b>Help Received</b> Father helped with idea, friend lent water pump, and teacher lent spring scale.	