



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Sara N. Hubl	Project Number J1513
Project Title Are the Many Losses of Vessels in the Bermuda Triangle Caused by Extraterrestrial Sources or a Simpler Scientific Answer	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of my project was to determine if the injection of a large amount of tiny gas bubbles in to a tank of water would cause a weighted cylinder to sink. I believe that in the Bermuda Triangle, massive amounts of tiny gas bubbles are emitted from the ocean floor. As a result of this emission, the water becomes less dense therefore resulting in the vessel having a greater density than the water and potentially losing its buoyancy.</p> <p>Methods/Materials In my study, a weighted cylinder with a controllable floatation point was placed into a tank of water. Varying amounts of tiny gas bubbles were then introduced into the observation tank via the diffuser plate (a small rectangular chamber containing approximately eight-hundred eighty-eight small holes). Although this injection of gas caused some turbulence in the water there was also an undeniable change in the floatation level of the cylinder. This process was repeated several times each time with a specific volume of compressed air.</p> <p>Results Four out of five times with varying specific volumes of compressed air released into the observation tank resulted in the full submersion of the cylinder.</p> <p>Conclusions/Discussion After reviewing my study, I can conclude that the experimental results did support my hypothesis. The higher volumes of air did result in a more accurate and visible submersion. If there were further investigation into this project in the future, a cylinder with slits cut into the sides might pose for a more realistic vessel design. With the slits, if the cylinder was fully submersed it may continue to fully submerge until it reached the floor of the observation tank.</p>	
Summary Statement This project was performed to determine if tiny gas bubbles being released through the ocean floor, beneath the Bermuda Triangle, are the cause of many sunken vessels.	
Help Received Father supervised project and assembling equipment; Grandfather assisted in diffuser plate assembly	