

“The SPS Peer Pressure Team: Enhancing Attitudes about Science with Bernoulli and Pascal”

Marsh W. White Award

Final Report

Society of Physics Students

Angelo State University Chapter (#0202)

San Angelo Texas

Date: June 1, 2004

Student SPS Members submitting this report:

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Andrea Robason, President                      date

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Daniel Backlund , Vice-President                      date

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Wade Mahon, Secretary Treasurer                      date

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Michael Hadley                      date

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Wesley Smithson                      date

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Dr. Toni D. Sauncy, SPS Faculty Advisor                      date

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*Angelo State University Society of Physics Students*

## **STATEMENT OF ACTIVITY AND BUDGET**

The Society of Physics Students has long-been active in on-campus activities at Angelo State University (ASU) and has been indirectly involved in the recruitment of students for the physics program. With the Marsh White Award, this outreach activity was supported financially. We performed demonstrations and assisted with laboratory exercises for three local (rural) high schools: Eldorado High School, Wall High School, Christoval High School.

We also visited El Dorado Middle School and Cornerstone Christian school. In addition, demonstration shows were performed for visiting high school students on campus as a recruiting tool. Also, the ASU SPS Peer Pressure Team entertained several groups of visiting elementary students in the Physics department, doing demonstrations that illustrate the principles of Bernoulli and Pascal. Students were shown several demos that they could try at home, and explain simple pressure related physics to their families and friends. Demonstrations performed included:

- The Cartesian diver: constructed with an empty two liter soda bottle with a ketchup packet inside.
- The Levitated Sphere: By using a blower and funnel to direct air flow, students will be allowed to explore Bernoulli’s principle.
- The Bernoulli Spritzer: Using two straws, students will be instructed on how to make a “human atomizer”.

- Hover Craft powered by the leaf blower and shop vacs, levitation of Peer Pressure Team members and eager students.
- Simple handouts with fun and educational information were distributed to students to generate interest and stimulate follow-up discussion.

While the peer pressure team did not make as many ‘road trips’ as was in the original plan, the overall effect of the team was positive, involving several additional SPS members and generating excitement and positive thinking about science among the K-12 students that were encountered. The demos are currently used regularly in all SPS recruitment activities, including on-going summer “previews” sponsored by the ASU Office of Student Life.

### **FINANCIAL STATEMENT**

Supplies for constructing Hover Craft and building demos Two small shop vacs, plywood, trim for the hovercraft, large thick plastic sheeting for the skirts, hardware, straws, hot plate for boiling water (can crushing demo)	\$182.50
T-shirts for team uniforms (5 team members @ 14.00/shirt)	\$70.00
Materials for distribution (pens, pencils, Frisbees)	\$22.50
Travel Expenses	\$25.00
<b>TOTAL BUDGET SPENT ON THE PROJECT</b>	<b>\$300.00</b>

In addition to the budget provided by the Marsh White Award, the project was supported by the ASU Department of physics through the purchase of a small vacuum pump used for our pressure demonstrations.