

## **Enhancing Interest in STEM at NW Indiana Middle and High Schools through Balloon Launches and Tracking**

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Our vision with this project is to develop and implement a research project led by undergraduates from Valparaiso University (VU) that would involve the participation of local middle and high school students in innovative balloon payloads. Under the guidance of Dr. Gary Morris, two VU undergraduate students will develop their designs, then present and test their system at local schools to help instill excitement about STEM in curious young minds. All students (college, middle, and high school) gain knowledge, experience, and confidence in STEM-related areas. The primary goal of this project is to provide competency-building education and research opportunities that develop qualified undergraduate and graduate students who are prepared for employment in STEM disciplines at NASA, in industry, and in higher education. Assessments will be administered to participants in balloon workshops to determine their interest in STEM careers both prior to and following each event. This data will be analyzed by the participating VU students and presented in a final report.

### *Information about the Authors:*

Raymond Finzel is a senior computer science major with a desire to build software that aids the scientific community. Raymond is currently seeking employment in software engineering, but someday hopes to become an expert in the field of robotics. Mark Spsychala is a senior meteorology major who loves field work and hopes that the next generation of high school students will love it as much as he does. Mark will return to Valpo in the fall in order to complete his undergraduate coursework, replete with ozone monitoring and data analysis. Both Ray and Mark have been with the Tropospheric Ozone Pollution Project for two years and have received ozone data collection training through the University of Houston.

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