3 April 2015

2015 Alabama Science and Engineering Fair (ASEF)
Special Awards in Optics and Photonics

The Huntsville Electro-Optical Society (HEOS) was able to award over $1200 in scholarships at the 2015 Alabama Science and Engineering Fair (ASEF) for Special Awards in optics and photonics related projects. The award funding was generously provided by SPIE, NASA, and HEOS. HEOS would like to thank all the volunteer judges for taking the time out of their schedules to participate in this event. The volunteer judges for this year were:

Tommy Cantey – Optical Sciences Corporation
Phil Stahl – NASA MSFC and SPIE President

These judges were responsible for evaluating the merit and application of photonics in the science fair entries. All winners received SPIE or HEOS certificates and award scholarships. HEOS is greatly appreciative of the opportunity to help inspire the nation's future scientists and engineers. HEOS is about community and our optics community only works with continued dedication and participation of our membership.

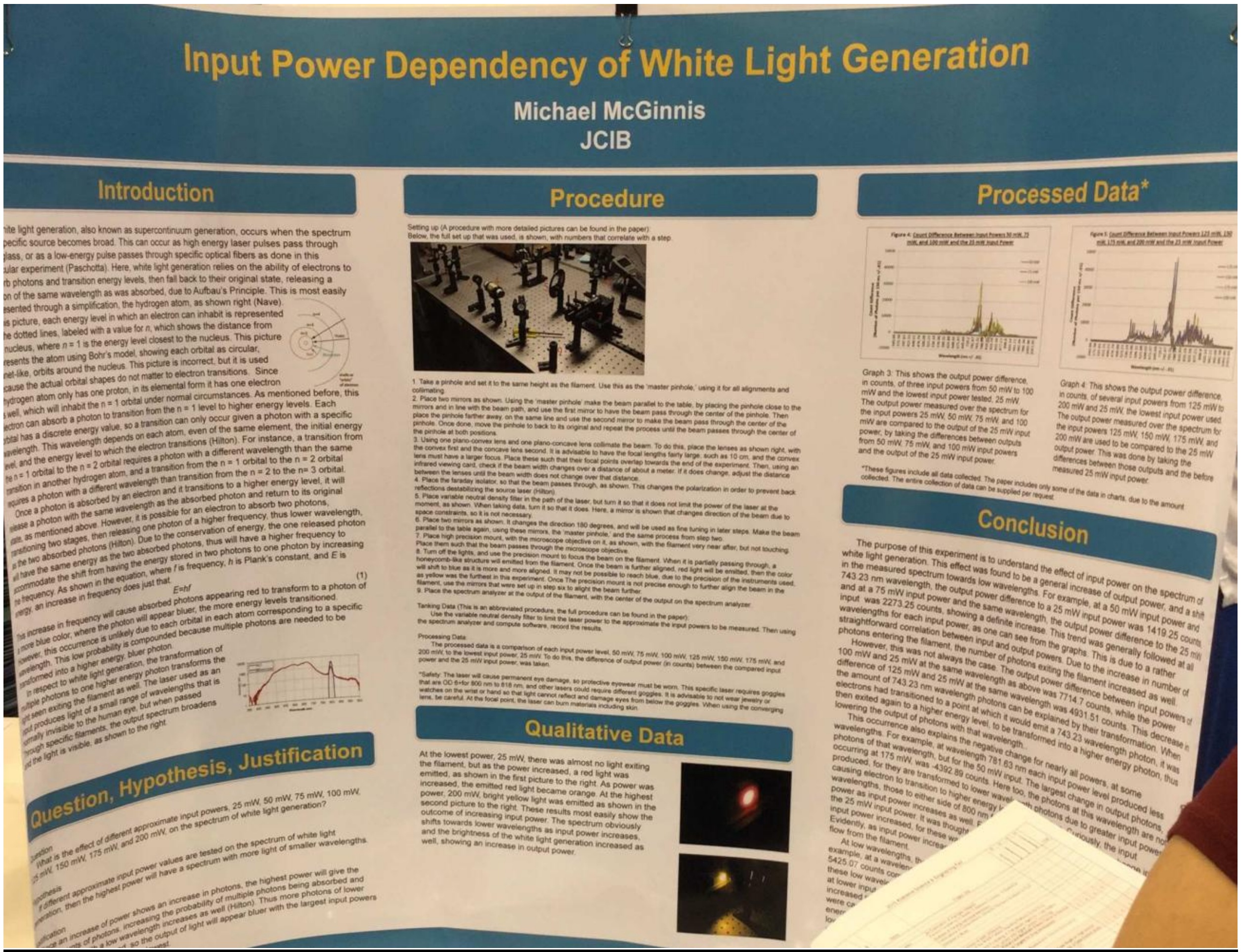
SPIE Awards

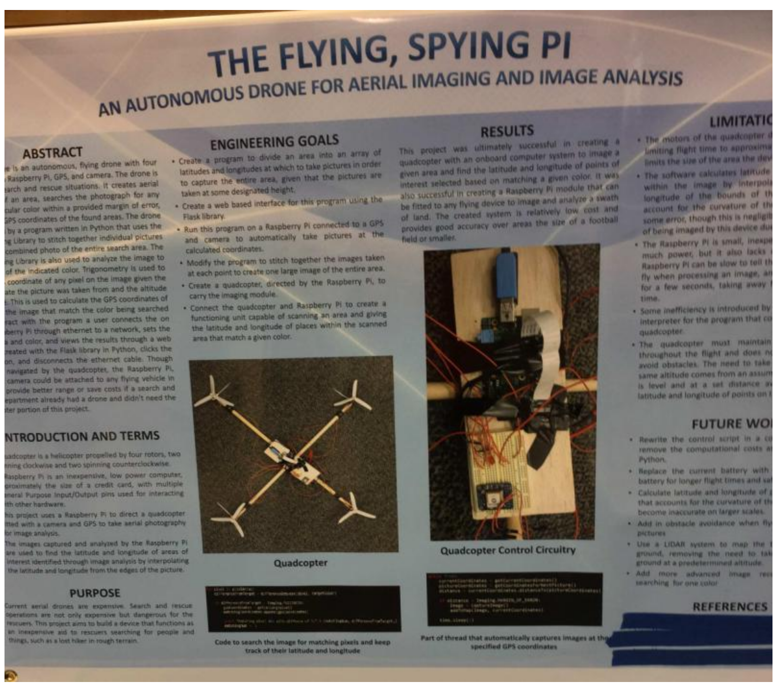
Senior Division Awards

First Prize ($250) – Michael McGinnis
"Input Power Dependency of White Light Generation"
11th grade, Jefferson County International Baccalaureate School,
Sponsor Debbie Anderson (PH-803)

Second Prize ($150) – Rohan Palanki
"Gold and Silver Nanoparticules for Skin Cancer Chemoprevention and Therapy"
12th grade, W. P. Davidson High School (ME-744)

Third Prize ($100) – Nath Tumlin "The Flying, Spying Pi"
12th grade, Alabama School of Fine Arts
Sponsor Carol Yarbrough (CS-603)


Input Power Dependency of White Light Generation
Michael McGinnis
JCIB
Introduction
Procedure
Processed Data*
Conclusion
Qualitative Data
Question, Hypothesis, Justification

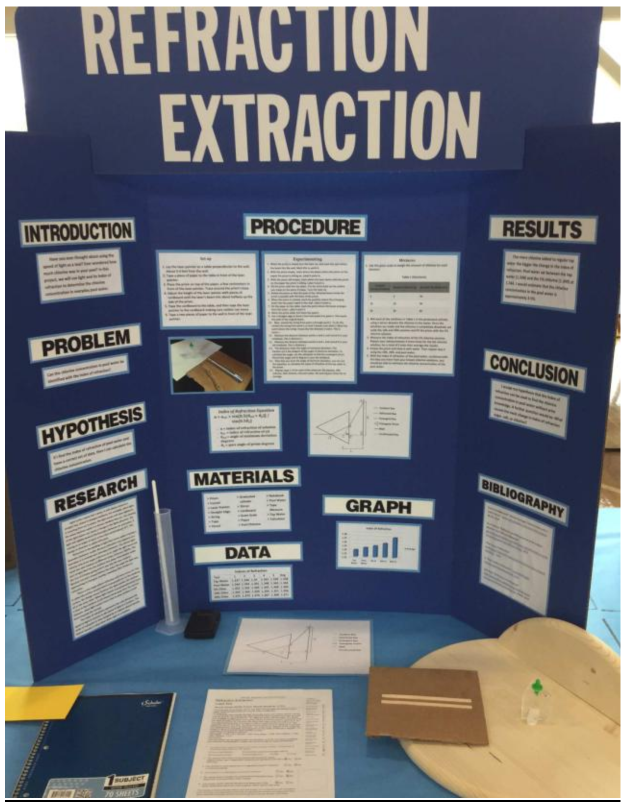

THE FLYING, SPYING PI
AN AUTONOMOUS DRONE FOR AERIAL IMAGING AND IMAGE ANALYSIS
ABSTRACT
ENGINEERING GOALS
RESULTS
INTRODUCTION AND TERMS
PURPOSE
FUTURE WO
REFERENCES
Quadcopter
Quadcopter Control Circuitry
Code to search the image for matching pixels and keep track of their latitude and longitude

SPIE Awards

<u>Junior Division Awards</u>

First Prize ($150) – Miles Thompson
“Which Disc is Groovier?”
6th grade, St. Joseph Regional
Catholic School,
Sponsor Rita Magrini (Z-385)

Second Prize ($100) – Caleb Kirk
“Refraction Extraction”
8th grade, Muscle Shoals Middle School,
Sponsor Christina Crunk (Z-379)



HEOS Awards

<u>**Senior Division Awards**</u>

Honorable Mention ($75) – Michael Elridge
“Measuring the Intensity of Cathode Ray Tudes with Various Materials as Anodes”
12th grade, Hewitt-Trussville High School, Sponsor Chris Walters (PH-805)

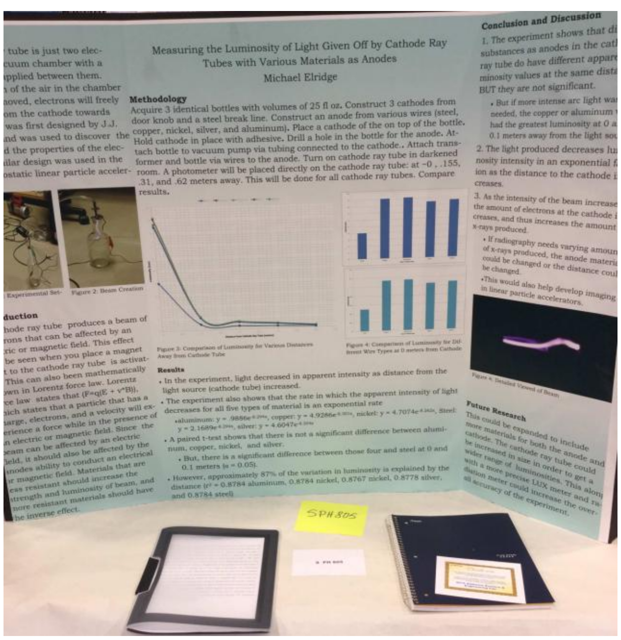
Honorable Mention ($75) – Rupa Palanki
“Design of Solar Energy System for Mobile Low-Power Applications”
10th grade, W.P. Davidson High School, Sponsor Barbara Hall (PH-802)

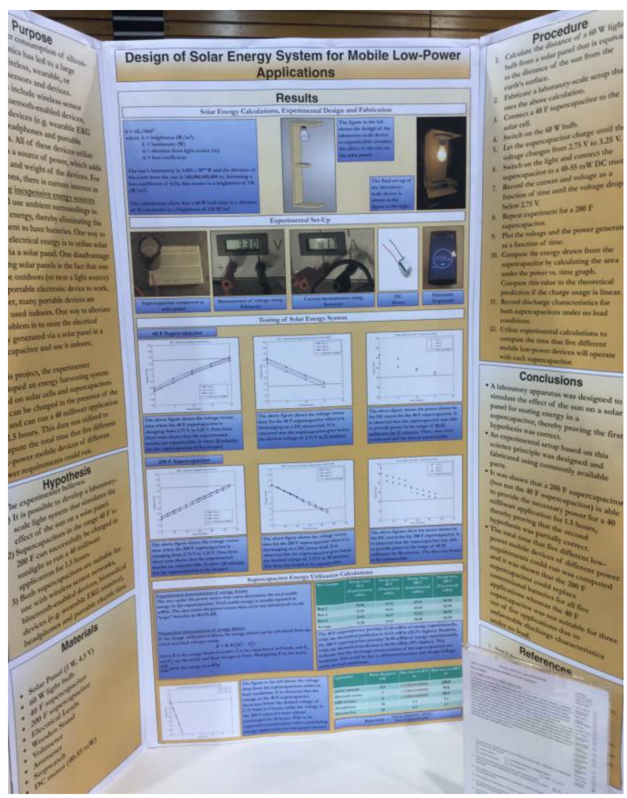
Honorable Mention ($75) – Elena Smith
“Low-Cost Laser Scatterometer for Home Air Quality Measurement”
9th grade, Pope John Paul II High School, Madison
Sponsor Brian Finzel (EM-680)

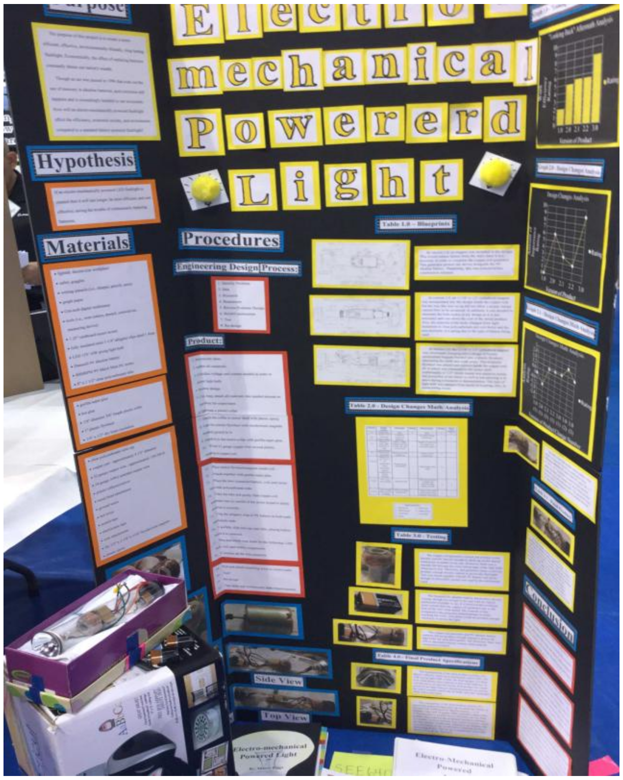
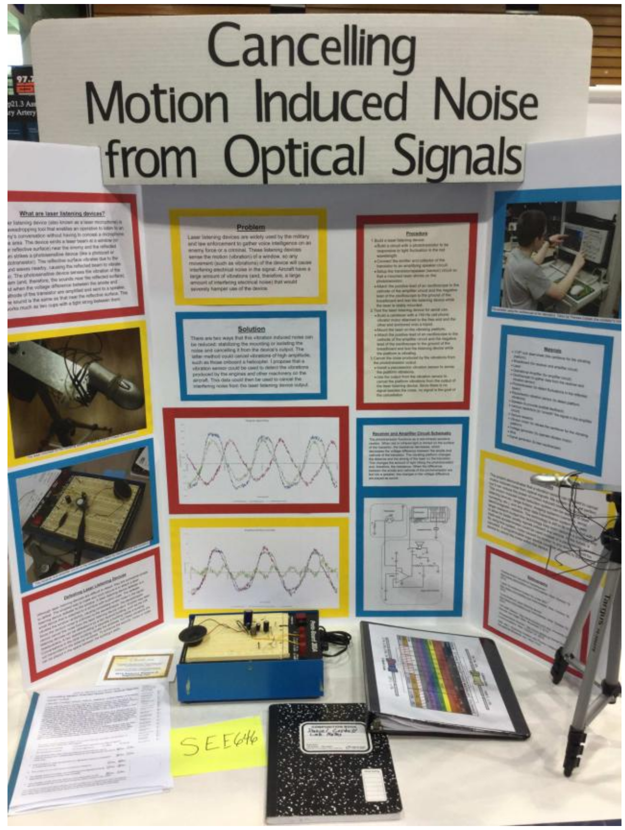
Honorable Mention ($75) – Daniel Corbett
“Cancelling Motion Induced Noise from Optical Signals”
10th grade, Lakeview Christian School, Sponsor Terry Corbett (EE-646)

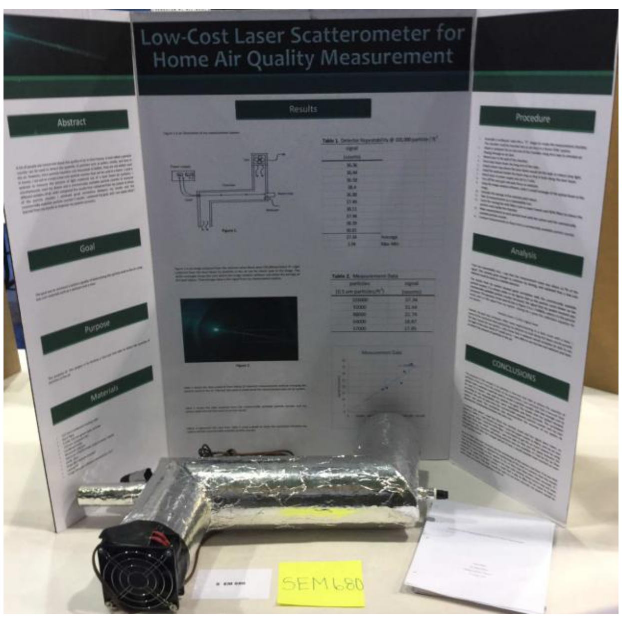
Honorable Mention ($75) – Sharee Riggs
“Electro-Mechanical Powered Light”
9th grade, Wetumpka High School, Sponsor Virginia Vilardi (EE-640)

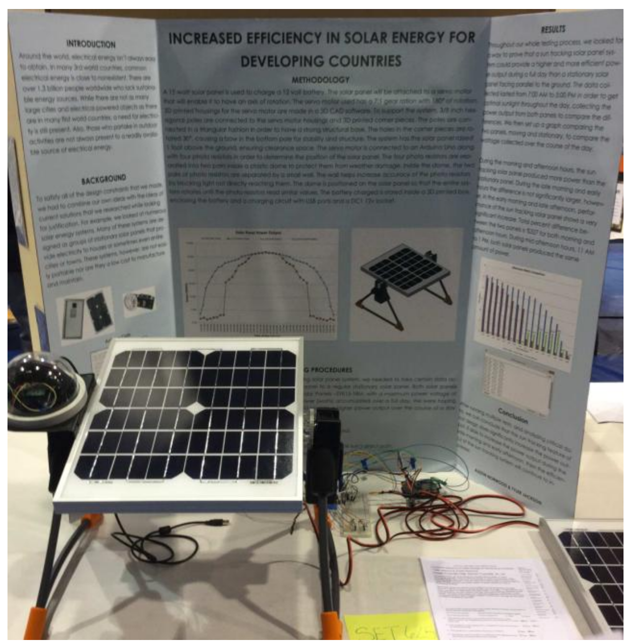
Honorable Mention ($75) – Austin Norwood and Matthew Jackson
“Increased Efficiency in Solar Energy for Developing Countries”
12th grade, Hewitt-Trussville High School, Sponsor Chris Bond (ET-625)











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