On April 6, H. Philip Stahl and Ron Eng represented SPIE at the 2012 Alabama Science and Engineering Fair.

On behalf of SPIE we recognized 5 senior division projects.

1 Lakshmi Raju; Development of a Low Cost Irared Spectrophotometer and a Matlab Program to Detect Terrestrial and Extraterrestrial Water Vapor; Alabama School of Fine Arts; $150

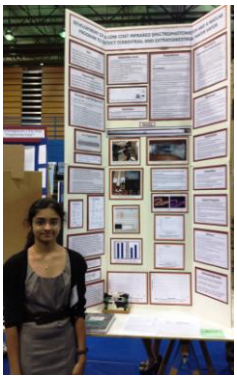
2 Joseph Lee; Amateur Laser Physics: Engineering Affordable Gas Lasers to Discover What Affects Output Power; St. Peter's Academy; $125

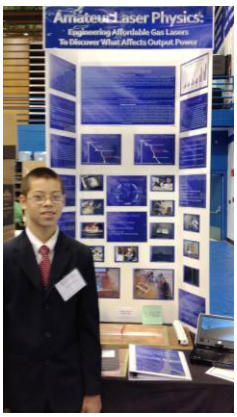
3 Jasmin Revanna; How Can Concave Mirrors Intensify Light Rays; Alabama School of Fine Arts; $75

HM Kevin Hubbard; Effect of Focused Light on the Energy Output of a Solar Panel; Jefferson County International Baccalaureate; $50

HM Timothy Don; Integrating Nintendo Wii Game Controllers and Java to Calculate Body Mass Index; Pope John Paul II Catholic High School; $50

HM Haley Thompson; Calculating Effectiveness of CFL Light Bulbs; Holy Spirit Catholic High School; $50





SPIE Senior Division 1st Recognition of $150 went to Lakshmi Raju, 11th grader of Alabama School of Fine Arts for her project "Development of a Low Cost Infrared Spectrophotometer and a Matlab Program to Detect Terrestrial and Extraterrestrial Water Vapor". Lakshmi built a while light gas cell with two narrow band filters to monitor the absorption between two spectral lines to indicate the amount of water vapor in the air. She correlated her data with humidity measurements. This is the second year that SPIE has recognized Lakshmi research. Lakshmi and her project are an ISEF Finalist.

SPIE Senior Division 2nd Recoginition of $125 went to Joseph Patrick Lee, 9th grader at St. Peter's Academy for his project "Amateur Laser Principles: Engineering Gas Lasers to discover what affects Laser Performance". Joseph manufactured a flowing gas nitrogen TEA laser. He split a sheet of aluminum to form the parallel electrodes and a PVC pipe for the laser tube. He cut the PVC pipe into two pieces and epoxied them around the aluminum electrodes. This is the 3rd year that SPIE has recognized a project by Joseph. SPIE also recognized Joseph at the Regional Fair. Joseph and his project are an ISEF Finalist.

SPIE Senior Division 3rd Recognition of $75 went to Jasmin Revanna, 9th grader of Alabama School of Fine Arts for her project "How Can Concave Mirrors Intensify Light Rays"

SPIE Senior Division Honorable Mention Recognition of $50 went to Kevin Hubbard, 9th grader of Jefferson County International Baccalaureate for his project "Effect of Focused Light on the Energy Output of a Solar Panel".

SPIE Senior Division Honorable Mention Recognition of $50 to Timothy Don 9th grader of Pope John Paul II Catholic for his project "Integrating Nintendo Wii Game Controllers and Java to Calculate Body Mass Index".

SPIE Senior Division Honorable Mention Recognition of $50 to Haley Thompson, 9th grader of Holy Spirit Catholic for her project "Calculating the Effectiveness of CFL Light Bulbs".

In general, we recognized all of the 'optics' related projects in the Senior Division. The first two were exceptional. The others were average.

On behalf of The Huntsville Electo-Optical Society and NASA Optics, we recognized 4 junior division projects:

1 Andres Montoya; The Finer Points of Lasers: Sugar Content; Columbia Elementary; $125

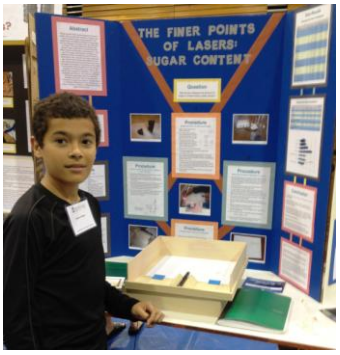
2 John Tamas; GLOW BABY GLOW; St John the Baptist Catholic School; $100

3 Harrison Turner; Juiced Up Wi-Fi; Clark-Shaw Magnet Middle School; $75

HM Cole Crippen; Sending WiFi Signals Further; Westminster Christian Academy; $50

HM Arpan Patel; Light Energy and Frequency; Columbia Elementary; $50

All of the projects were very close together in quality. Andres was probably the most energetic and entertaining.



HEOS Junior Division 1st Recognition of $125 went to Andres Montoya, 6th grader of Columbia Elementary School for his project "The finer points of Lasers: Sugar Content". Andres build a hollow prism refractometer for measuring minimum deflection angle of sugar water as a function of sugar content. HEOS also gave Andres its 1st Recognition at the Regional Fair.

HEOS Junior Division 2nd Recognition of $100 went to Jack Tamas, 7th grader of St. John's Catholic School for his project "Glow Baby Glow". Jack built a photometer which monitored the light output of glow sticks as a function of time and temperature. HEOS also gave Jack its 2nd Recognition at the Regional Fair.

Additionally, Dr. H. Philip Stahl persuaded the Alabama Science and Engineering Fair to create School Championship Trophies for the Senior and Junior Divisions. We award trophies for 1st, 2nd and 3rd place. HEOS provided $100 to the Champion School's Teacher. The Senior Division Champion was Murphy High School from Mobile AL. The Junior Division Champion was Phillips Preparatory School from Mobile AL.

I must say that this recognition was very well received. When the winning schools were announced at the end of the program, each schools delegation erupted from their seats and literally stormed the stage to accept their trophy.