



NASA Kentucky Press Release

NASA Kentucky
University of Kentucky, College of Engineering
112 Robotics Building (RMB)
Lexington, KY 40506-0108

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Kentucky Students Successful in Recent Aerospace Competitions, UL Places Second in USLI

Kentucky's high-tech workforce development was spotlighted recently as the next generation of engineers, scientists, and technicians successfully competed in one state and two national aerospace competitions.

On May 7, NASA Kentucky, the University of Kentucky College of Engineering, and the Kentucky Institute for Aerospace Education (KIAE) conducted the Wing Design Competition for the state's high school students. 25 teams from 13 schools across Kentucky met at Lake Cumberland Regional Airport in Somerset for the culmination of what had been, for some, a year-long project to design and build model airplane wings, pass technical inspection, and prove their wing designs in flight during competition to meet speed and load-bearing challenges.

The Wing Design Competition is thought to be the only contest of its kind for high school students in the country. Kentucky has over 20 school districts participating in KIAE, marking approximately one-third of the nation's 60 high-school level aviation programs. UK College of Engineering students and faculty plan and administer the competition each year, setting rules and guidelines, performing technical inspections, and managing the competition flight line and scoring. Aviation professionals also judge each team's competition entry.

The following weekend, May 11, two teams of Kentucky students traveled to Virginia to participate in the national finals of Team America Rocketry Challenge (TARC) sponsored by the Aerospace Industries Association and National Association of Rocketry. One hundred middle and high school teams were invited to the finals after placing at the top of regional contests. Kentucky's Hart County 4-H Club Team finished seventh place out of 100 finalists and Butler County High School finished 33rd. The Hart County team was supported by the Western Kentucky University Department of Physics and Astronomy. TARC is the world's largest rocket contest, modeled around the aerospace industry's design, fabrication and testing processes with cash and scholarship prizes split among the top ten finishers. NASA may invite TARC's top teams to participate next year in its Student Launch Initiative.

Earlier in April, Kentucky was represented at the post-secondary level in NASA's University Student Launch Initiative (USLI) by teams of undergraduate and graduate students from Western Kentucky University and the University of Louisville. This NASA competition to design, build, and fly small-scale, high-powered rockets with scientific payloads represents an academic-year commitment and combines the engineering work of design and testing with educational requirements such as outreach to middle school students, all while following a documentation and review process similar to NASA's own launch project procedures. Each Kentucky team successfully launched its rocket April 21 near the NASA Marshall Space Flight Center in Huntsville, Alabama.

The University of Louisville team placed first in three of seven award categories: Best Vehicle Design for the most creative, innovative, and safety-conscious rocket, Best Website Design, and the Education Engagement Award after conducting educational programs for over 1,000 students during the school year. Mentored by UL Engineering professors Dr. Roger Bradshaw and Dr. Yongsheng Lian, the UL team developed a rocket that was nine feet tall, weighed 40 pounds, and flew to within 500 feet of the competition's one mile altitude challenge. It was announced May 20 that after all final reports were reviewed the UL team placed second overall, marking the highest-place finish for a Kentucky team in the USLI competition after UL previously won two award categories and fifth place overall as a first-year team in 2012. UL engineering student and team captain Nick Greco has been selected by NASA for an internship this summer.

"Leading the team at the University of Louisville has made me into a much better worker, manager, and student," Greco commented. "It is such a high caliber program for students to participate in. I am proud of where our team has come in the past two years; it has been my goal to leave them stronger than ever."

These flight competitions show that Kentucky students studying science, technology, engineering and math (STEM) are nationally competitive and that Kentucky universities are producing successful rocket scientists and aerospace engineers. The Wing Design Competition demonstrates that Kentucky students throughout the state can achieve success in aviation, even at the high school level.

NASA Kentucky is proud to have sponsored teams in both launch contests and to have supported the UK College of Engineering and KIAE in sponsorship of the Wing Design Competition. NASA Kentucky is a statewide higher education program sponsored by NASA to provide faculty and student opportunities, increase research capacity, and enhance workforce development in areas beneficial to the mission of the nation's space and aeronautics agency and to the Commonwealth.

"We couldn't be prouder of Kentucky's students in the 2013 KIAE Wing Design, TARC, and USLI competitions," said Dr. Suzanne Smith, Director of NASA Kentucky. "They chose to challenge themselves and learn difficult subjects of aircraft flight and rocket science, applying what they learned to build real systems that successfully flew. They are Kentucky's and NASA's future innovators, engineers, scientists, and entrepreneurs. I can't wait to see what they achieve next."

Opportunities like these, including student internships and team projects, are available through the NASA Kentucky programs. NASA Kentucky partners with more than a dozen Kentucky university, industry, and non-profit affiliates to support the work of faculty in aerospace programs and major research initiatives within the state.

More information on NASA Kentucky can be found on their website at <http://nasa.engr.uky.edu> and on their Twitter feed at <http://twitter.com/NASAKentucky>.

Media contact: Jacob Owen, NASA Kentucky Program Coordinator
Phone: 859-323-4542 Email: jacob.owen@uky.edu

Links:

University of Louisville USLI Team uoflusli.com

NASA Student Launch Projects

www.nasa.gov/offices/education/programs/descriptions/Student_Launch_Projects.html

NASA USLI 2013 Press Release:

http://www.nasa.gov/home/hqnews/2013/may/HQ_13-147_Student_Launch_Project.html

Kentucky Institute for Aerospace Education www.kiae.org

University of Kentucky College of Engineering www.engr.uky.edu

Team America Rocket Challenge (TARC) www.rocketcontest.org