

Up To Date

NASA's Independent Verification & Validation Program
Educator Resource Center Newsletter
Fairmont, West Virginia

July 2013

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BSA National Jamboree

The Boy Scouts of America 2013 National Jamboree was held at the Summit Betchel Reserve in Mt. Hope West Virginia.

NASA staffed the interactive "Journey to Tomorrow" trailer exhibit at "The Summit," that included a moon rock and two tents in "The Cloud" which delivered hands-on activities. Scouts from around the United States (and even some from around the world) had fun viewing the sun with solar telescopes, making solar buttons, learning about the Curiosity rover on Mars, using infrared cameras, playing a NASA "Jeopardy style" trivia game, creating and testing airfoils, launching straw rockets, learning about NASA and NASCAR, and much more! An excess of 20,000 scouts and staff participated in the ONE NASA exhibits and/or hands-on activities. The IV&V's ERC assisted in coordinating NASA's efforts at this huge event.



*Welcome to NASA Tent 1
at Technology Quest's "The Cloud"*



*Josh Revels of IV&V explains the
Solar Dynamic Observatory mission.*



NASA Tent 2, manned by Langley folks, Wes Goodman, Larry Cooper, Glen Brehm, and Marisol Garcia, concentrated on aeronautics, NASCAR, and the concepts of lift and drag.



Scouts gather around the wind tunnel data monitor to check out the lift to drag ratio of the air foil they created.



Bailee Morris of NASA IV&V helps scouts create pictures of themselves inside a Spacesuit at the NASA photobooth.



Jeff Northey of NASA IV&V explains the basics of rocketry as scouts build and launch straw rockets.



Rosemary Thorpe of Goddard Space Flight Center, demonstrates use of the Dynamic Planet interactive exhibit to a scout.

Perseid Meteor Shower

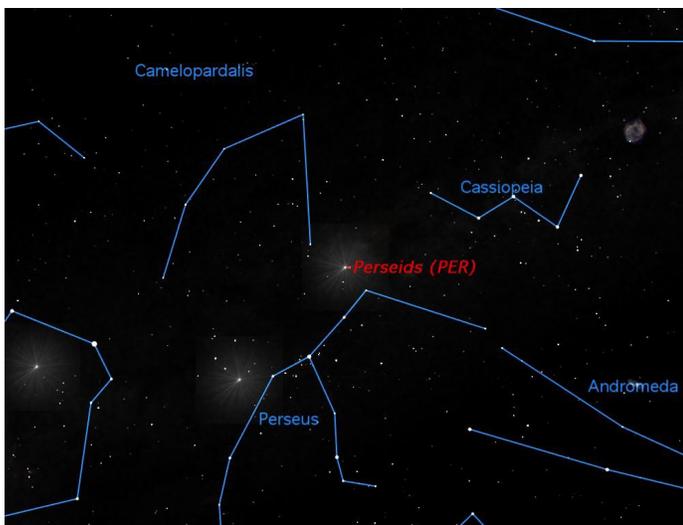
Gear up to see some great balls of fire flashing through the sky this month. "We have found that one meteor shower produces more fireballs than any other," Bill Cooke of NASA's Meteoroid Environment Office said in a statement. "It's the Perseid meteor shower, which peaks on August 12th and 13th." According to NASA research, the upcoming Perseid meteor shower produces more fireballs — bright meteors that streak across the sky — than any other annual shower, earning it the title of "fireball champion".

During the peak of the Perseids, stargazers under dark skies could see more than 100 meteors per hour, but some bright fireballs can also be spotted in urban, light polluted areas.

- See more at: <http://www.space.com/>

The peak of the Perseid meteor shower, usually the best in the year, occurs in the middle of the day on Monday August 12, so both the night before and the night after will both be good to observe meteors. Usually meteors are more frequent after local midnight, around 1 a.m. local daylight savings time. The crescent moon setting before 11 p.m. won't interfere with the meteors, which are best observed from a dark country location.

Credit: [Starry Night Software](#) -



Look just below Cassiopeia to see Perseus and the spot from which the Peresid meteors will seem to originate. Grab a blanket or lawn chair, find a place where trees do not block your view, the skies are as little light polluted as possible and enjoy the show.

August Opportunities

Calling all WV educators! Want some new ideas for this coming school year?

The NASA IV&V Program's Educator Resource Center is offering six **free** workshops in August that are open to all WV formal and informal educators. These workshops enable educators to use NASA education kits to actively engage students in STEM activities while meeting a variety of Common Core Standards and WV CSO's. The kits do so in a way that is fun for both educator and students. All workshops are at the ERC except Robots and Ratios which will be at Morgantown Learning Academy. Suggested grade levels are just that-suggested. Most workshops can be adjusted up or down by good educators. Sign up for one or more!

Tuesday August 13

Basic Rocketry 9:00am -12:00pm Make 4 different kinds of rockets to study the engineering design process, enhance math skills, and learn Newton's Laws K-12

Planetary Geology 1:00pm-4:00pm Uses fun activities to compare the geology of different bodies in the Solar System K-8

Wednesday August 14

NASA, Remote Sensing, and Dinosaurs, Echo the Bat

9:00am-12:00pm Learn the latest info about dinos and bats with many accompanying activities to teach cross-curricular units K-8

Robotic Explorations / LEGO WeDo's Robotics

1:00pm-4:30pm Teach simple machines, easy programming, skills, robotic concepts, and more K-6

Saturday August 24

Robots and Ratios 9:00 am-3:00pm Use proportional mathematics to program LEGO NXT robots, use a variety of sensors to control the robot and learn how to start a robotics team for your school or organization 4-12

Wednesday August 28

Viewing the Universe with Telescopes / EM Spectrum

9:30am-4:00pm Become certified to borrow the ERC's 14 telescopes as you learn the basics of operating a telescope, activities to teach basic astronomy, and in addition become certified to borrow the "Making the Invisible Visible" electromagnetic spectrum kit. 5-12

To sign up for any of these workshops complete the form at

[CLICK HERE](#)

To request a specific workshop to be held your location or at the ERC please call Pam Casto at 304-367-8436 or email her at

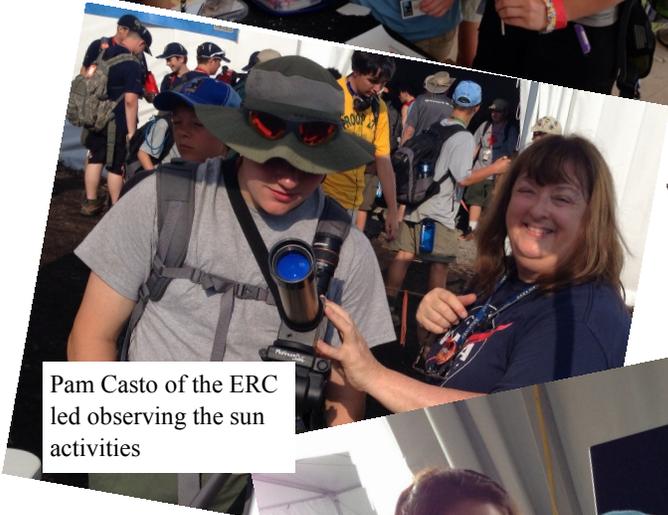
pamela.casto@ivv.nasa.gov

Jamboree Photos continued

Jaime Ford of the ERC led air foil design



Sector 33 provided aeronautic fun.



Pam Casto of the ERC led observing the sun activities

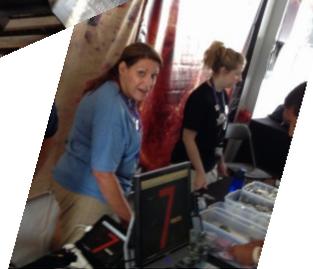


Larry Cooper of Langley related NASA and NASCAR.

Jennifer Neptune of IV&V aided scouts in making solar buttons and creating photos



Donna Ozburn of IV&V helped scouts learn about the Curiosity rover and Mars



Dennis Stocker of NASA Glenn operated Quizdom, a fun filled NASA trivia game

Sign Up for STEM Competitions

FLL: Registration is open for the December State FLL competition to be held at Fairmont State University, Dec. 7, 2013. This competition is designed for ages 9-14.

Registration remains open until all competition sets are given out at <http://www.firstlegoleague.org>

TARC: Teams are composed of middle school through high school students and registration is open at

<http://rocketcontest.org/>

RWDC: High school teams for this challenging engineering design competition can register at

<http://www.realworlddesignchallenge.org/>

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Links to Student Competitions

First Lego League Robotics:

<http://www.firstlegoleague.org/>

WV FLL on Facebook

<http://www.facebook.com/#!/pages/West-Virginia-FLL/303845906388811>

Real World Design Challenge:

<http://www.realworlddesignchallenge.org/>

Team America Rocketry Challenge:

<http://rocketcontest.org/>

Green Aviation Contests:

<http://aero.larc.nasa.gov/competitions.htm>

Upcoming Events:

Aug. 13 Basic Rocketry, Planetary Geology at the ERC

Aug. 14 Dinosaurs and Bats, WeDo Robotics at the ERC

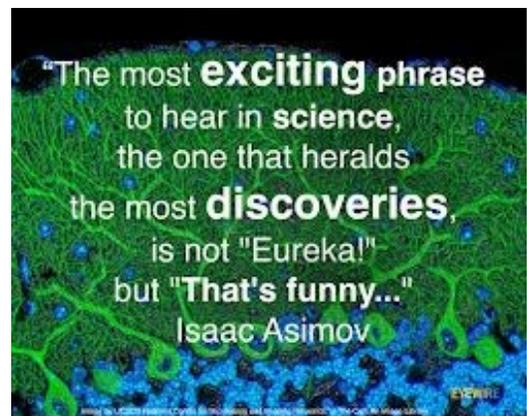
Aug. 24 Robots and Ratios (NXT robots) at Morgantown Learning Academy

Aug. 28 Telescopes and EM Spectrum at ERC

Aug. 30 Student Planetary Geology (class filled)



Quote of the Month:



Where in WV is the ERC?

July Workshops in Red

July Equipment Loans in Blue

To schedule a workshop:

Contact the ERC by calling 304-367-8436 or emailing:

pamela.casto@ivv.nasa.gov

To schedule equipment for loan: First check the equipment loan calendar on the ERC website to see if the equipment is available for the dates desired. Then email Nicole Culp who will schedule the dates.

nicole.culp@ivv.nasa.gov

Check us out on Facebook:

[NASA IV&V Facility Educator Resource Center](#)

And Twitter: [@NASAIVV_ERC](#)

