

Friday Flyer – December 14, 2012

Something to share—an interesting research project or kudos for a student, teacher or mentor? Contact Kris Whelan.

CENTER SPOTLIGHT: Lawrence Berkeley National Laboratory

Contact Tony Spadafora or Peter Nugent about bringing high school students into a QuarkNet workshop.

From June 25 to June 29, the LBNL Physics Division and the Berkeley Center for Cosmological Physics hosted its sixth five-day “Physics in and through Cosmology” workshop for QuarkNet teachers and high school students. Eleven teachers participated; five teachers had been active QuarkNet members for five years, and six were new. Also participating were 36 high school students and 3 UC Berkeley undergraduate students supported through the Cal Teach (teacher preparation) program. Adding to the excitement of the workshop was the timing, the week before the Higgs announcement. As one teacher put it, “This workshop was the perfect storm: just prior to the big Higgs announcement at LHC, meeting George Smoot, being with students and teacher colleagues as feverish as me about the ultimate question about the universe—how good does it get?!”

The daily format consisted of hands-on warm-up activities, followed by presentations. After the presentations, groups worked on hands-on experiments (e.g., use of parallax to determine distance), discussed the lecture, toured research facilities, and designed and carried out experiments with cosmic ray detectors. Students were divided into eight breakout groups of four to five students each, paired with one returning teacher and one or two new teachers. After lunch there was another presentation and group work. The first day focused on concepts and terms in particle physics and cosmology with “mini” lectures given by returning teachers and Caltech students. George Smoot, whose generous donation from his prize money supported the program, treated the participants to a talk. One student commented, “This was a fabulous experience and helped me determine my future a little more (maybe medical physics or computational physics).”

News from QuarkNet Central: AAPT 2013 Winter Conference, New Orleans, Louisiana, January 5-9, 2013: <http://tinyurl.com/bgmlf62>

Planning to attend? Join staff and other QuarkNet teachers for dinner. Complete our form with your availability. Can't make dinner? Are you attending and/or presenting? Need a friendly audience?

Physics Experiment Roundup: Higgs boson having an identity crisis

<http://www.newscientist.com/article/dn23003-higgs-boson-having-an-identity-crisis.html>

The latest news about the Higgs boson and measurements made by CMS and ATLAS

Resource of the Week – ATLAS Virtual Visits

<http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/>

Sign up for your own virtual LHC tour. ATLAS Virtual Visits can be scheduled year-round.

Just for Fun - Zombies invade the LHC in student-made horror film

<http://www.symmetrymagazine.org/article/december-2012/zombies-invade-the-lhc-in-student-made-horror-film>

“Decay, a low-budget horror film starring PhD students and postdocs at CERN, was released online last weekend.” Find out what happens when zombies and the LHC collide.

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