

## FRIDAY FLYER – JULY 20, 2012

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

### CENTER SPOTLIGHT: University of Cincinnati

<http://homepages.uc.edu/physics/research/particleExperiment.html>

Contact lead teacher, Jeff Rodriguez, about participating in an International Muon Day in the fall.

Brian Meadows and Mike Sokoloff have been the active mentors since the center began in 2002. To help mentors look for CP violation, QuarkNet student researchers have used ROOT and BaBar data to analyze various decay channels of possible mesons candidates. This year they are using LHCb data to analyze semileptonic B decay data. Each member of the team is assigned specific decay paths to analyze—making cuts, fitting lines, creating histograms, and preparing weekly updates. One student, exceptionally good at generating code, has crafted a [PowerPoint tutorial](#) for this program. Research report: <http://www.physics.uc.edu/~kashinkunti/quarknet/20July2012.pdf>

The typical summer teacher workshop focuses on teaching and learning with cosmic ray detectors and prep activities for the U.S. Masterclass. This summer, the center plateaued their four detectors and collected data with all detectors in the same room to calibrate them to each other. Careful calibration from this summer should enable the schools to compare values and monitor any changes due to student experiments. In addition, the center participates in the U.S. Masterclass. Cincinnati students videoconference with an international school. This past year Lisa Nissen and Jeff Rodriguez's students used Skype to collaborate on the masterclass events prior to the international videoconference. They kept in touch with other students and shared their results with other schools.

Jeff Rodriguez also helped organize International Muon Day last May. He created the Google Doc spreadsheet for participants to submit their data. Jeff hopes this is the start of a continuing international collaboration in the study of cosmic rays. Your students can be a part of it! Put your school on the next International Muon Day

Map: <http://www.learnaboutenergy.org/CosmicMap/CosmicMap.html>

## NEWS FROM QUARKNET CENTRAL

### Hats off to the QuarkNet mentors!

Over 100 physicists who work on any of 9-11 experiments at the energy, intensity and cosmic frontiers serve as QuarkNet mentors at 53 centers. In addition to their research, physicists teach classes, work with graduate students, attend conferences all over the world and participate in other outreach activities. Some oversee their physics departments as chair. So how much do mentors earn from participating in QuarkNet? Not a penny. These dedicated scientists volunteer because they know outreach is important. Next time you see your mentor(s), be sure to give them a great big “thank you” for all they do.

### Kudos for QuarkNet

Check out this article <<http://ucrtoday.ucr.edu/7736>> about the University of California at Riverside QuarkNet Center and their summer workshop.

## PHYSICS EXPERIMENT ROUNDUP:

### Spinning out of control!

<http://www.quantumdiaries.org/2012/07/16/spinning-out-of-control/>

“Right now most of the focus at ATLAS and CMS is on measuring the properties of the new boson we’ve found. The numbers of events are small, so studies are very difficult. One of the

most important properties that we need to study is the particle's spin, and luckily we can say something about that right now!" from Quantum Diaries, July 16, 2012.

**QUARKNET STAFF TEACHERS**

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