

Friday Flyer - June 15, 2012

Hello Mentors and Teachers!

CENTER SPOTLIGHT: Florida Institute of Technology

<http://research.fit.edu/quarknet/index.htm>

Want to know more about how to integrate teachers and students into ongoing research? Contact Lazlo Baksay for more information.

Laszlo Baksay and Marcus Hohlmann of the High Energy Physics Group established the Florida Tech QuarkNet Center in 2001. Since 2005, they have participated in the student research program. Usually four teachers and four students participate, however this year they hosted eight teachers and six students. Five of the teachers and four of the students are new to QuarkNet. With so many new participants they have focused on the CMS e-lab but have also gotten involved with ongoing research at Florida Tech. Marcus Hohlman is working on a grant using GEM detector technology to help secure our borders. He is creating a four-panel "box" array that when complete will be large enough for trucks to drive through and high-energy particles will be detected. They also worked with Joseph Dwyer on his induced lightning project. Rockets trailing copper wire are launched into thunderclouds. The lightning bolts travel down the wire to detectors. The energy of these charged particles can be analyzed along with atmospheric conditions. During the school year, teachers use cosmic ray detectors to bring hands-on physics to their classrooms.

Being on the "Space Coast", the FIT teachers and students have access to Kennedy Space Center. In fact, two FIT professors are former astronauts. The QuarkNet participants have learned first hand about life in space and the experiments conducted by the astronauts.

FIT has a strong student research program. One of their 3rd year students (Andrew Smith) is creating flow charts to help "new to QuarkNet" students become familiar with the detectors. He is also creating troubleshooting guides for problems they have encountered in the past. When complete those guides will be posted to the e-Lab. Another student (Lexi Moran) is trying to predict the number of coincidences recorded based on the distance between counters.

News from QuarkNet Central

Summer meetings are underway! Contact your mentor if you have not heard from him or her regarding meeting logistics. This is also a great time to update your contact information with your mentor and/or staff teacher.

Physics Experiment Roundup

Particle physics in your pocket!

<http://cdsweb.cern.ch/journal/CERNBulletin/2012/24/News%20Articles/1454200?ln=en> QuarkNet, take out your smartphones! Two new particle physics applications for Android phones have been developed by a physicist from the University of Bern: Particle Properties ^{LL} and Particle Physics Booklet 2010 ^{LL}. ^{LL} From the CERN bulletin 24-25/2012

If you have something you wish to include in this weekly mailing interesting research or perhaps kudos for a student, teacher or mentor contact Kris Whelan.

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