

QuarkNet Annual Report – 2012

Northern Illinois University

The QuarkNet center at NIU had several well-attended activities throughout the FY2012 funding period. Four teachers and nearly 30 students from five area high schools participated. The teachers and schools were: Margaret Stokes and Weston Brzykcy of Metea Valley HS (Aurora), Daria Pennington of Neuqua Valley HS (Naperville), and Elisa Gatz of Sterling HS (Sterling).

The main events after the summer institute of 2011 were:

1. *STEMfest 2011 at NIU* : This all-day public event on 22 Oct 2011 was held at the convocation arena and organized by the NIU STEM Outreach office. QuarkNet had one of more than 50 exhibition booths. On display were the QuarkNet CRMD, numerous detector elements, and posters of the ATLAS experiment. The event attracted more than 3,000 visitors.
2. *Spring 2012 Masterclass*: Four teachers and 25 students from the participating schools attended this all-day event, which was held in the Physics department on March 14, 2012. The schedule was set centrally by QN organizers. At NIU, Chakraborty and Gatz gave introductory talks, which were followed by tutorials and analysis of ATLAS data. The students made impressive progress and shared their findings with others across the country by video conference in the afternoon.
3. *Summer 2012 Institute*: Three teachers and 15 students from two schools – MVHS and NVHS - participated in the week-long institute starting June 18. All students came prepared having gained experience with the CRMD's at their schools. They were very bright and highly motivated. They split up in 3 groups of 5 each, set up for experiments that they had not done before, took data, analyzed them, and presented the results – all within a span of 3.5 days. This was quite a remarkable achievement. The week ended with a half-day trip to Fermilab, including tours of Dzero and the QN lab in the Wilson Hall.

Chakraborty visited MVHS in spring and gave an introductory HEP lecture to a large group of science students. Visits to more schools are planned in FY2013. It is hoped that one or more new schools will join the program next year.

For more information about the QuarkNet program at NIU, visit <http://nicadd.niu.edu/quarknet> .



Figure 1. Some of the participants at the 2012 QuarkNet masterclass at NIU.