

The Catholic University of America QuarkNet Center  
Annual Report  
2019

Mentors: Dr. Aaron Dominguez, Dr. Rachel Bartek, Dr. Angela McRae

Eight teachers participated in the QuarkNet Summer Institute this year at The Catholic University of America. The teachers came from a variety of backgrounds; public, private, and Catholic schools at grade levels ranging from 6<sup>th</sup> grade through secondary school, including AP Physics classes. The wide range of experience in the group led to very productive conversations about teaching and learning, as the participants shared their perspectives throughout the week. Five of the participants were returning CUA QuarkNet members, and three teachers were participating for the first time. Three high school students also attended the summer institute.

The week began with a CMS Data and Cosmic Ray Workshop facilitated by QuarkNet staff member Kenneth Cecire. Together, the group did activities to introduce CMS data and then helped to prototype the newest version of the CMS masterclass measurement in the first two days. On the third day, they collected data in the Basilica of the Shrine of the Immaculate Conception, located on the CUA campus, in order to continue the work begun in the previous year experimenting with cosmic ray architectural tomography.

The CUA QuarkNet mentors are available for in-classroom support throughout the academic year, and there are plans to invite the QuarkNet teachers to the 2020 American Physics Society Conference in Washington, D.C.



Teachers collaborating during the CUA 2019 QuarkNet Summer Institute



Using the cosmic ray detector in the National Basilica of the Shrine of the Immaculate Conception in Washington, DC