

## Virginia QuarkNet Center 2020 Activity Report

November 23, 2020

The Virginia QuarkNet Center currently has around 10 active high school teachers from Richmond and northern Virginia. Josh Erlich from William & Mary and Phil Rubin from George Mason University are the mentors. Several teachers share leadership responsibilities, with Deborah Roudebush acting as the lead teacher. QuarkNet Fellow Mike Fetsko also assumes a large share of the organizational responsibilities. Some of our Center's usual activities were curtailed this year due to the COVID-19 pandemic and related school closings, and others were organized virtually via Zoom.

### Masterclass 2020

On February 6, 2020, Mike Fetsko organized a CMS J/Psi masterclass at Godwin HS, with participation of Shane Wood from QuarkNet and Dr. Summer Blot, a former student of Mike Fetsko and a current physicist on the IceCube experiment. Godwin HS videoconferenced with students from Vancouver, Barcelona, and Boston.

A CMS masterclass took place at George Mason University on March 21, 2020, with Phil Rubin mentoring.

A scheduled CMS Masterclass at William & Mary was cancelled due to university closure and restrictions on Henrico county high-school field trips.

### Workshops

The Virginia center generally has a 2-3 day summer workshop and two or three Saturday workshops. Over the past year, they met at the Bryan Innovation Lab of The Steward School on November 23, 2019; at Centreville High School in Northern Virginia on February 29, 2020; and virtually on August 3-5, 2020.

The workshop at The Steward School included a presentation by Josh Erlich, an exploration of new Data Portfolio activities led by Deborah Roudebush; and an update on STEP UP activities to encourage women to develop an interest in careers in Physics.

The workshop at Centreville High School included a videoconference with Ken Cecire to talk about updates to the CMS Masterclass; an orientation on the latest updates to the Data Activities Portfolio; and a talk by Phil Rubin on the latest particle physics results.

During the three-day summer 2020 workshop, Marc Sher from William & Mary gave two talks: one on future colliders, and another on Xenon 1T results. Ken Cecire hosted a Big Analysis of Muons in CMS (BAMC) Masterclass experience. Much of the rest of the workshop focused on STEP UP activities, led by Deborah Roudebush,

### Other Teacher Activities

Joe Fehr participated in the QuarkNet Educational Discussions (QED).



Masterclass at Godwin HS, February 6, 2020



Summer Virtual Workshop, August 5, 2020