



COVID-19 Response

Overview

QuarkNet's Responses to COVID-19:

- **Masterclass adaptations**
- **Cosmic ray studies**
- **Teacher support**
- **Remote workshops; national & at centers**
- **QuarkNet Wednesday Webinars**
- **Summer Series for Teachers**
- **QuarkNet Educational Discussions**



COVID-19 Response

Masterclasses

2020 Masterclasses Canceled on March 18:

- **Ken & Shane organized three sessions: two BAMC; one BAMA (Big Analysis of Muons in CMS or ATLAS).**
- **Simplified measurement (muons only)**
- **Provided additional support for teachers & students.**
- **Webinars & videoconference for students on the event days**
- **CIMA performed well; feedback was excellent.**



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Cosmic Rays

- **Cosmic ray production continued uninterrupted through pandemic.**
- **Teachers had difficulty uploading data with limited access to detectors at schools; some were able to move detectors to homes.**
- **Mark set up a detector at his home to continue providing excellent data for e-Labs and cosmic ray workshops.**
- **Staff & teachers support students in conducting remote analyses.**



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Remote Workshops

National

- **Fellows Workshop**
- **STEP UP Workshop**
- **Cosmics Workshop**
- **Coding Camp**

Online for Centers

- **Topical templates**
- **Developed & implemented by fellows & staff at May virtual workshop**



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Teacher Support

- **List of resources for remote learning posted quickly, updated frequently**
- **Additional ideas for using Cosmic Ray e-Lab remotely with students**
- **Comments added to Data Activities Portfolio (DAP) with ideas for adapting activities to virtual learning**
- **Friday Flyer shift in focus**



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QuarkNet Wednesday Webinars

- **5** talks for students in May & June
- Scheduled for the school day
- **150** teacher & student Zoom attendees for the first talks; attendance declined as school years ended.
- Information & recordings of talks at [the QW2 page](#)



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Summer Session for Teachers

- **Six-session summer course: “The Standard Model and Beyond”**
- **Taught by Dr. Allison Reinsvold Hall (Fermilab)**
- **50 teachers registered**
- **2-hour class and 1-hour homework each week**
- **Feedback very positive**



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QuarkNet Educational Discussions (QED)

- **Wednesday evening meetings for teachers; held fortnightly starting in August**
- **Informal discussions of physics education in remote learning settings**
- **Sessions start with teachers proposing issues of interest, then move into breakout rooms for focused discussion**
- **Attendance varies; usually 10–20**