

Washington Short Workshop Agenda

July 10-12 (Monday-Wednesday)

9am to 4pm each day

UW [Physics and Astronomy Building](#) (PAB) room B143

Mark Betnel mbetnel@seattleacademy.org

Christine Miller christine.miller@bush.edu

Day 1 (July 10)

Session 1 9am	<p><i>Initially only Christine was present</i></p> <p>(90 min) Welcome and Overview of Quarknet program</p> <ul style="list-style-type: none">• Discussion on coding in non-physics classes• How we use it• How teachers at her school could implement these activities• Other types of workshops from Quarknet <p>(10 min) BREAK at 10:30am</p> <p><i>Mark arrived, now have 2 participants</i></p> <p>(10 min) Welcome and Introduction to Quarknet (abbreviated)</p> <p>(30 min) Driver/navigator time</p> <ul style="list-style-type: none">• Intro to coding (they both did it, both are already experienced in coding)• Remember to MAKE A COPY of the notebooks• Position-Time graphs• Work through section 1 <p>(30 min) Driver/navigator time</p> <ul style="list-style-type: none">• Continue working through Position-Time graphs, section 2a• Continue to 2b if you have time and inclination <p>(20 min) Review Position-Time graphs, share out</p>
LUNCH 12 noon	Recommendations: walk along University Way between 41st and 45th for many options

	<p>Mediterranean: Cedars of Lebanon Vietnamese: Sizzle and Crunch</p> <p>plus Chipotle, fried chicken, boba</p>
<p>Session 2 1pm</p>	<p>(30 min) Particle Physics review (Tiffany)</p> <p>(1 hour) Continue driver/nav work with new activity</p> <ul style="list-style-type: none"> • Calculate the mass of a muon using CMS data <p>(10 min) BREAK at 2:30pm</p> <p>(1 hour) Continue driver/nav work from session 2</p> <p>(20 min) Logistics</p> <ul style="list-style-type: none"> • QuarkNet-funded teachers <ul style="list-style-type: none"> ○ For stipend: Anne Zakas needs your SSN. You can leave a secure voicemail at 574-631-2789. • group photo • Attendance • Items 1 & 2 on the 2023 workshop must-do items page <ul style="list-style-type: none"> ○ Registration ○ Create profile on Quarknet ○ Timesheet <p>Cosmic Ray E-lab -where the data from particle detectors is kept</p> <p>Quarknet Teacher survey</p> <ul style="list-style-type: none"> • If you haven't done the long Quarknet survey since 2019, here's the full survey (15-20 min) <p>Implementation plans and coding activities from 2022 camp (this workshop would usually end with an implementation plan)</p> <p>6:30 - 9 pm Optional event - A3D3 workshop poster session and reception, Oak Hall Denny room , https://indico.cern.ch/event/1282754/timetable/#20230710</p>

Day 2 (July 11)

<p>Session 1</p>	<p>(15 min) All Hands meeting</p> <ul style="list-style-type: none"> • Discussion of what we want to focus on today with Mark: using the E-lab, how to access, how students would use it, what posters look like, etc. <p>Cosmic Ray E-lab</p>
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	<p>(1.5 hr) Choice of activity</p> <ul style="list-style-type: none"> ● Take breaks as needed ● Allow participant to choose from activities: <ul style="list-style-type: none"> ○ Probability (math) ○ Star Catalogue (astronomy) ○ Sunspots (astronomy) ○ Velocity-Time Graphs ○ Projectile Motion ○ Conservation of Energy <p>A variety of activities all on GitHub</p> <p>11:00 am Alejandro Garcia <agarcia3@uw.edu>, CENPA tour</p> <ul style="list-style-type: none"> ● Leave by 10:45 to walk over ● Go directly to lunch after
<p>Session 2</p>	<p>(1 hr) 1:30 Speaker - Prof. Donna Messina <dmessina@uw.edu> "Summer Teacher Workshops: Physics by Inquiry"</p> <p>(1.5 hr) Choice of activity</p> <p>Discussion of physics by inquiry after the guest speaker, example of how it's done at Punahou</p> <ul style="list-style-type: none"> ● Punahou APC packets (answers are posted here throughout the year) ● Link to AP 1&2 second semester packet (mostly AP2) (answers are posted here throughout the year) ● Link to AP 1&2 first semester packet (mostly AP1) ● Physics (non AP) semester 1 ● Physics (non AP) semester 2 <p>What else is possible? How can these be incorporated into a class?</p> <ul style="list-style-type: none"> ● Quarknet Data Portfolio - a wide variety of activities created by Quarknet teachers ● Student Project Using Data <ul style="list-style-type: none"> ○ Sample dataset from previous (2010) Data Camp: Run1A ○ Milestone overview with information on how to use the data: Milestones <p>(15 min) All Hands Meeting</p> <ul style="list-style-type: none"> ● Daily feedback survey

Day 3 (July 12)

Session 1	<p>(2 hrs) 9am No participants, Leads working on CC2 plans until guest speaker arrives</p> <p>(30 min) 10:30am Speaker - Emeritus Professor R. Jeffrey Wilkes <wilkes@uw.edu> "Statistics in research and teaching"</p> <p>(15 min) 11am Follow up with Shih-Chieh to discuss Quarknet in Seattle</p> <p>(15 min) 11:15am Final logistics with participant</p> <ul style="list-style-type: none">• Daily feedback survey• Exit Survey <p>(30 min) 11:30am No participants, Leads have brief review of the workshop</p> <p>12pm Sign off</p>
Session 2	CANCELED