

## QuarkNet Oregon 2022

The Institute for Fundamental Science (IFS) at the University of Oregon hosted the 2022 QuarkNet workshop June 22 on the UO campus. This was our 21<sup>st</sup> summer workshop. A printed version of the workshop web page is given on the next page and the URL (including live links) is here:

[http://pages.uoregon.edu/rayfrey/QuarkNet/2022/QuarkNet\\_2022.html](http://pages.uoregon.edu/rayfrey/QuarkNet/2022/QuarkNet_2022.html)

The focus for the workshop this year was on recent updates and progress on scientific research in high-energy physics and astrophysics. These included updates by UO faculty on current research, including gravitational waves/LIGO, and Atlas at the LHC. In addition, Robert Schofield gave a tour of his “ant lab.” (Schofield splits his time between LIGO and the biophysics of ants and related animals.) The full list of participants is given in the web page. The faculty participation was Ray Frey (lead mentor and PI), Jim Brau, Spencer Chang, Laura Jeanty, Stephanie Majewski, and Robert Schofield. The faculty talks were very well received and, following usual practice, the presentation files are linked on the web page above, where they are available to teachers. Five high school science teachers joined us this year, plus retired teacher and QuarkNet observer Dave Trapp. In addition, two students from South Eugene High and two UO undergraduates attended the talks. Funds from the UO IFS were used to cover (minor) local expenses (catering, parking, etc).

The attendance sheet is also attached to this report.

## UO QuarkNet Workshop June 22, 2022

### 412 Willamette Hall, University of Oregon



#### Program, with links to talks

<b>9:30</b>	Ray Frey: I. Introductions II. Gravitational waves – a new window on the universe [ <a href="#">pdf slides</a> ]
<b>10:30</b>	Stephanie Majewski: CERN LHC Run 3 – Start-up! [ <a href="#">pdf slides</a> ]
<b>11:15</b>	Spencer Chang: The W mass – why the hubbub? [ <a href="#">pdf slides</a> ]
<b>12:00</b>	Lunch
<b>1:30</b>	Roundtable on teacher projects, advice, notes, etc
<b>2:15</b>	Laura Jeanty: Happy 10 <sup>th</sup> birthday Higgs! [ <a href="#">pdf slides</a> ]
<b>3:00</b>	Jim Brau: A new technology for HEP detectors [ <a href="#">pdf slides</a> ]
<b>3:45</b>	Robert Schofield: Latest from the Ant Lab [ <a href="#">article from The Conversation</a> ]

#### Contacts:

Ray Frey, rayfrey (at uoregon.edu), 541-346-5873  
 Anne McGinley, annem (at uoregon.edu), 541-346-4898

#### UO Faculty participants:

Ray Frey, Stephanie Majewski, Spencer Chang, Laura Jeanty, Jim Brau, Robert Schofield

#### High school science teacher participants:

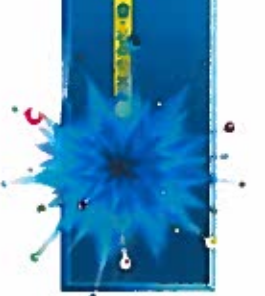
Allix Baker (Sheldon High School)  
 Holly Lynn (South Eugene HS)  
 Dave Trapp (QuarkNet)  
 Dani Tubman (South Eugene HS)  
 Asher Tubman (South Eugene HS)  
 Pamela Watts (South Albany HS)

#### Links:

[Oregon QuarkNet](#)  
[US QuarkNet](#)

#### Support:

- QuarkNet program: National Science Foundation and US Dept of Energy
- UO Institute for Fundamental Science



FY22 QuarkNet Teacher Attendance Sheet  
University of Oregon

	Wednesday June 22	Wednesday June 22	
Printed Name	Time In/ Time Out	Time In/ Time Out	Signature & Email
1. Allix Baker	9:30 9:30	12:30 4:00	Allix Baker all@u.oj.s.kone.edu
2. Holly Lynn	9:30	4:00	
3. Asher Tubman	9:30	4:00	
4. Dani Tubman	9:30	4:00	DTT
5. Pamela Watts	9:30	4:00	
6.			
7.			
8.			
9.			

Please print name in first column and mark the times and dates of attendance. Individuals should sign the form at the end of the week.  
I certify that the above QuarkNet teachers participated during the times and dates indicated above.

Mentor Signature Raymond E. J. Date 6/30/2022