

Contemporary Physics at West High School

WEST
HIGH SCHOOL™
SALT LAKE CITY, UTAH
— EST. 1890 —

At WHS: BL4S



Fall, 2019: Team "DESY Chain" at CERN and DESY



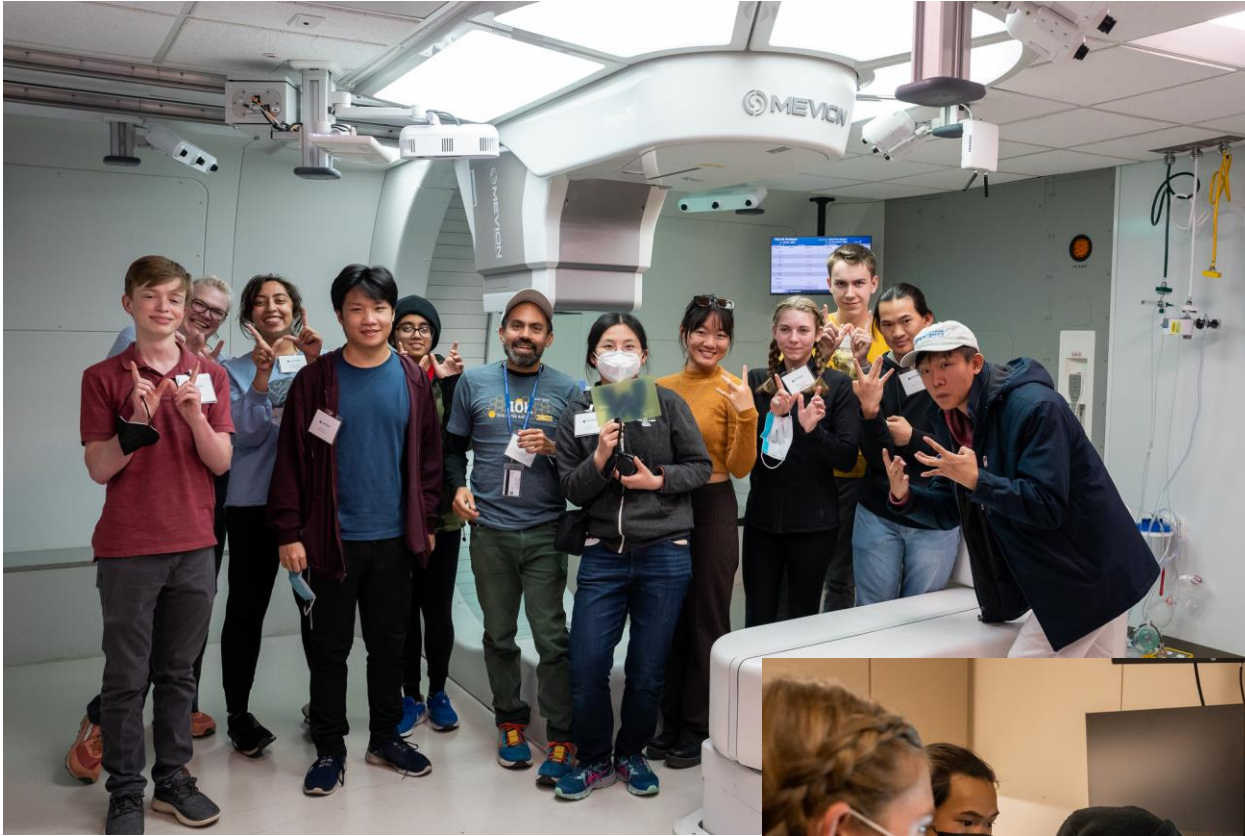


Panther Peak: 2022 BL4S Team

- “Particle Camp” Fall 2022
 - Introduction to Contemporary Physics
 - Cloud Chambers
 - Introduction to BL4S Competition for new teammates



Huntsman Cancer Institute



Fall, 2023

- HCI Proton Therapy Facility
- “real life” physics in our neighborhood
- Medical Physics Inspiration
- (potential) physicist mentors




Panther Peak: Research and Writing

Utilizing Proton-Sensitive Film to Visualize Bragg Peaks

Cole Chu, Natalie Germanov, Thatcher Goff, Marriane Liu, Sanskriti Negi,
Christopher Pankow, Hanxiao Shi, Fiona Zara, Tony Zhang




2023 April 12

1. Motivation



Introduction to Secondary Beams
Beamline for Schools 2023

M. Van Dijk, D. Banerjee, J. Bernhard (BE-EA-LE)
Date: 22.02.2023

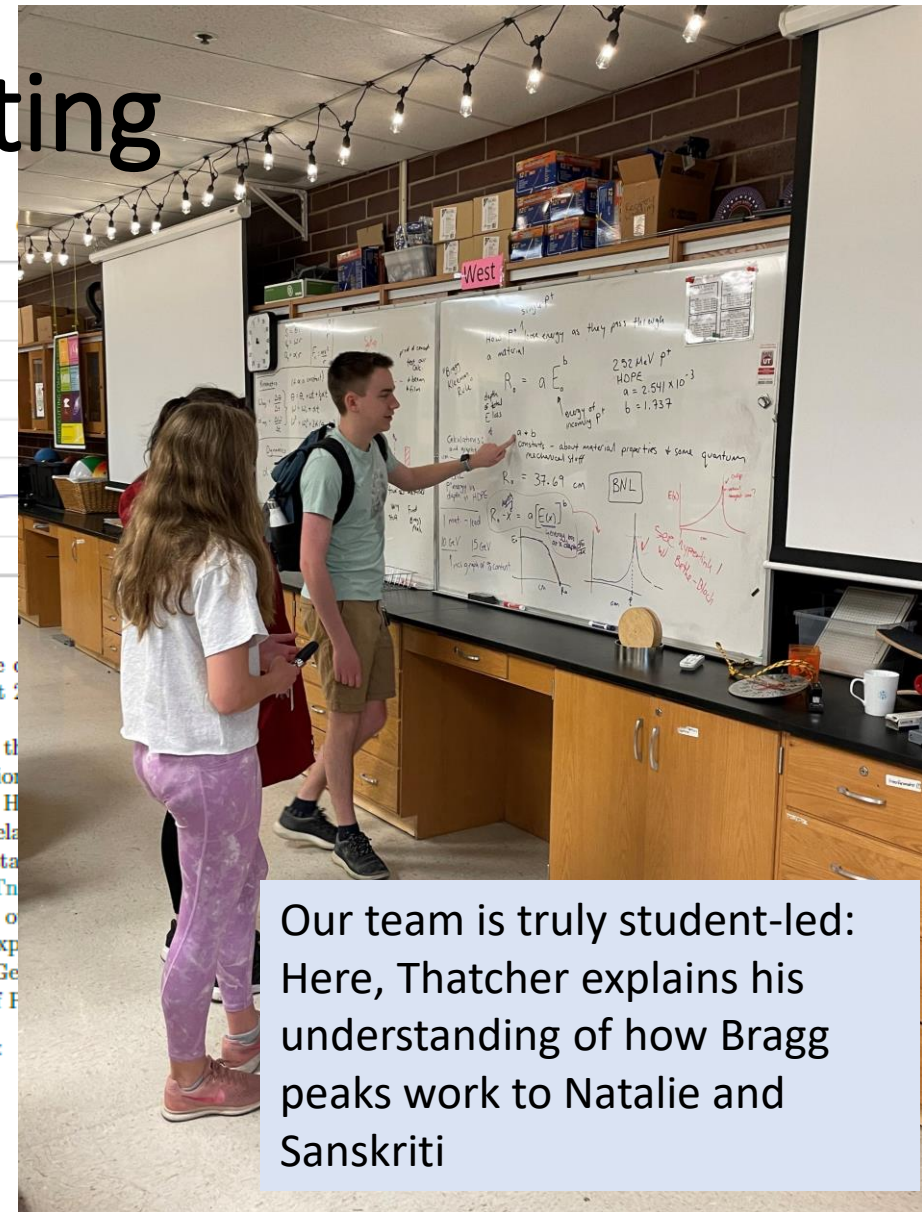
Therapy Department, we became using energy as they travel through world's population will be diagnosed to use proton therapy as a form of minimize collateral tissue damage, more prevalent cases. However, the thing to the patient due to a lack of sensitive materials to create visual- or, we can not only assuage cancer provide valuable insight into the be-

We found a close of MeV and 37.1 cm at 2 (tively).

In these graphs, the Kleeman rule equation highest energy loss. However, not account for all relations of our understand

Win or not, every year the students and I find value in the endeavor of producing a proposal. We learn physics content, practice technical writing, make connections with the physics community, and work collaboratively.

Win or not, every year I am proud of the students' final product.



Our team is truly student-led: Here, Thatcher explains his understanding of how Bragg peaks work to Natalie and Sanskriti

$$\alpha = 6.505 \times 10^{-4} (1000)^{1.676} \approx 69.382 \text{ cm}$$

at a proton beam at 1 GeV will respectively have an approximate Bragg peak depth in stainless steel and lead of 74 cm and 69 cm, respectively

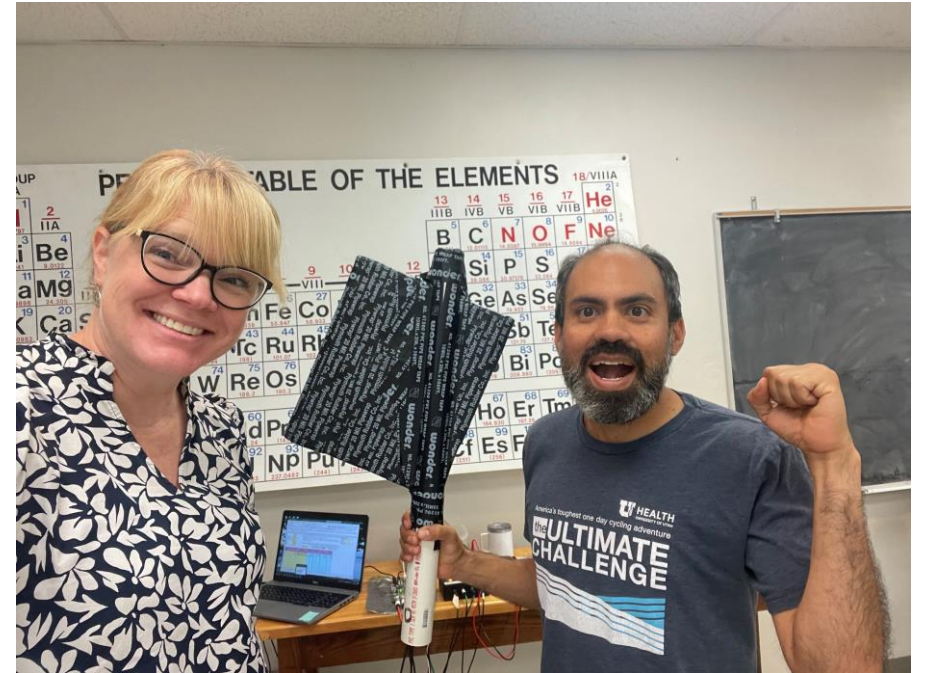


Professional Development: 2022 ITW



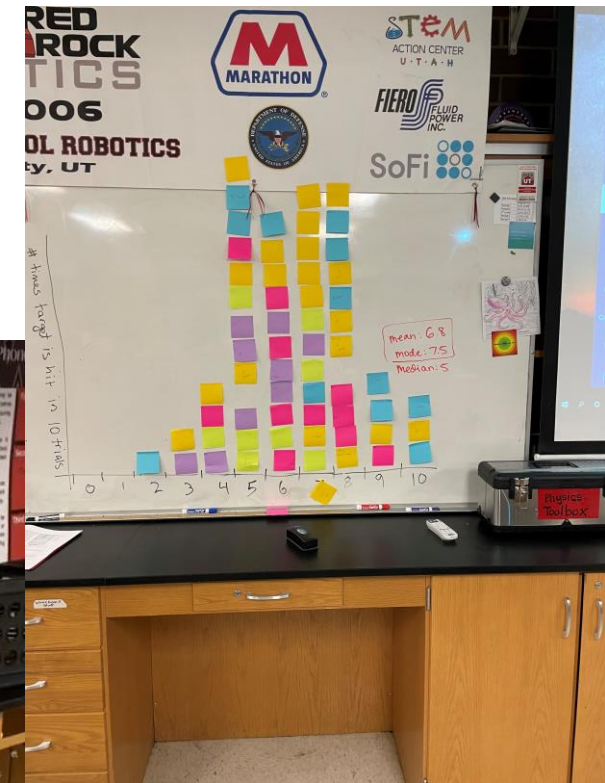
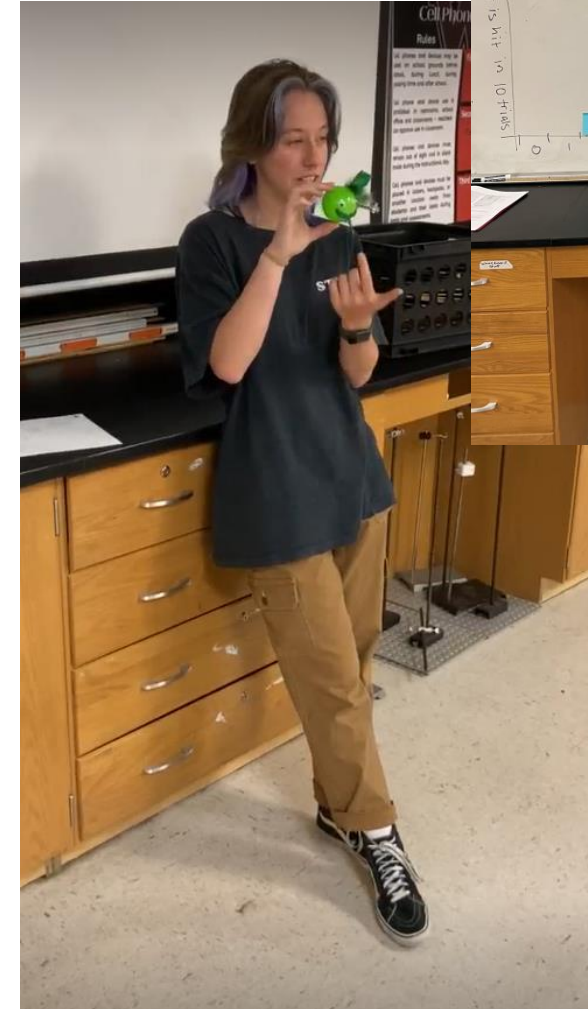
Professional Development: Quarknet

- Online resources
- Yearly loan of a Cosmic Ray Muon Detector
- Yearly in-person CRMD “camp”
- Professional connections:
Other teachers,
physics faculty at ISU

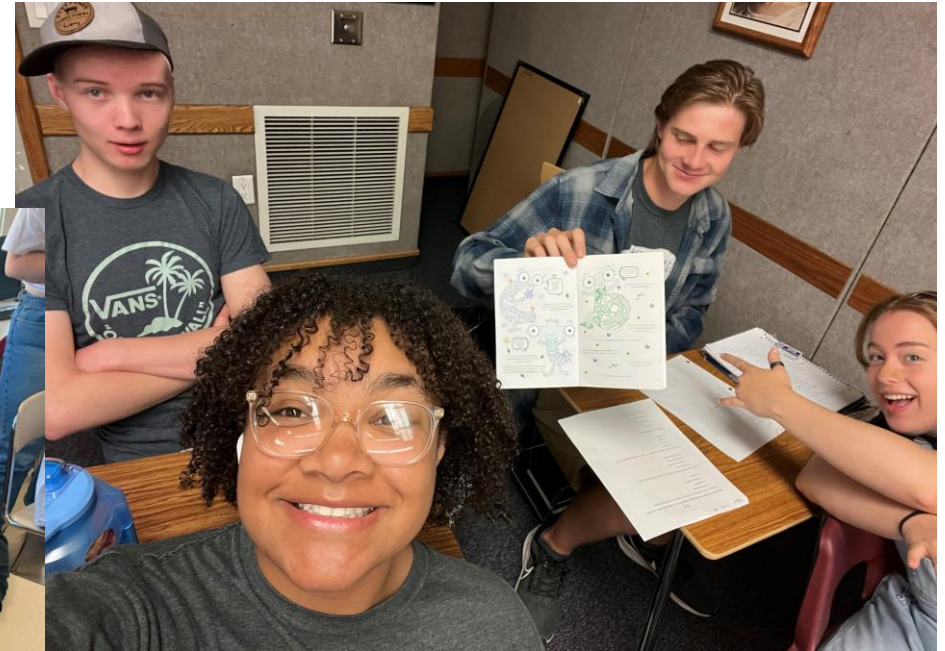
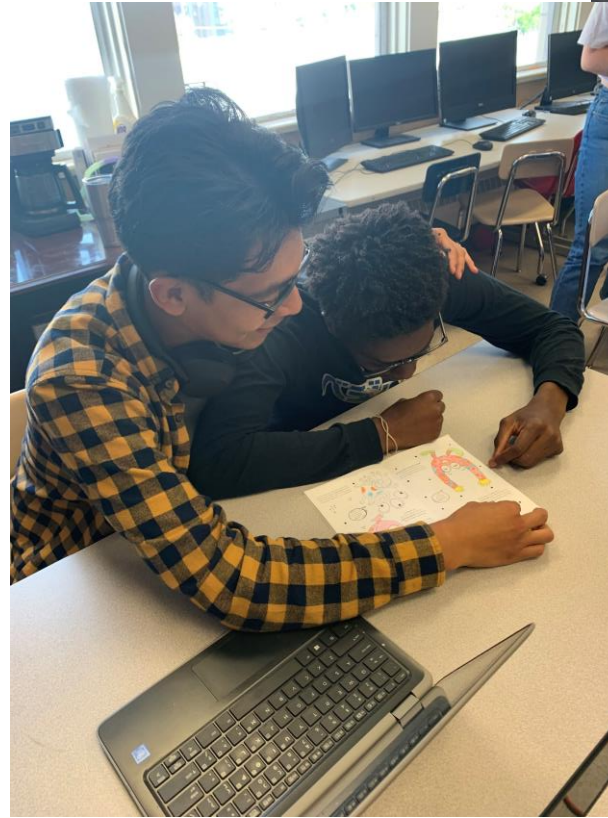
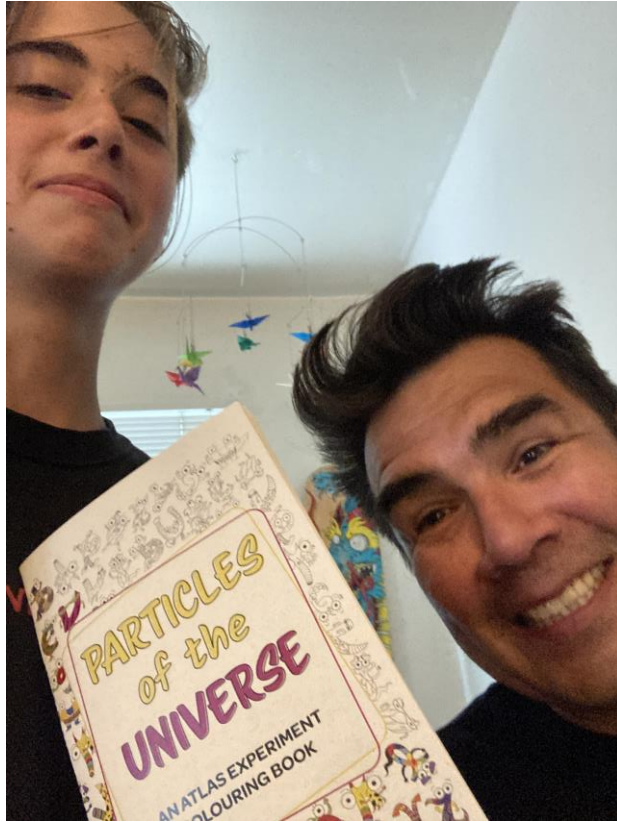


At WHS: General Physics

- High student interest
- Rolling with Rutherford
 - Lots of discussion about statistical methods (Statistics is a popular course at WHS)
- Fun projects – [ATLAS coloring books](#), [particle workshop](#)
- 2022 ATLAS Z Mass [Master Class](#)



At WHS: General Physics



WHS physics students had an opportunity to share their new understanding about the Standard Model with non-physics classmates, family members, and friends.