

# Investigating the Experiences of a Black Woman in Physics & Astronomy

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## Methodology

- Conducted semi-structured empathetic interviews
  - Used protocol questions focused on race/ethnicity & gender
- With women of color in physics & astronomy graduate program
- At a large research PWI



## Participant Profile

Linda, a Black woman pursuing her Ph.D. in physics & astronomy.

She graduated with a bachelor's degree in physics & astronomy from a small liberal arts PWI.

## Keywords

WOC: Women of color  
PWI: Predominantly white institution  
CRT: Critical Race Theory

## Research Questions

RQ. 1 How does the intersection of race/ethnicity & gender play a role in how students navigate physics?

RQ. 2 How does physics culture uphold barriers for WOC?

## Theoretical Framework

CRT as a lens to understand how race affects WOC's experiences in physics & astronomy

## Analytic Themes (AT)

### AT.1 Lack of support for WOC

“[faculty] just didn't seem to care about their... black and brown students.

The majority of [black and brown students I interacted with] could pinpoint a moment in time, specifically where...

a professor said:

*Hey, go try something else,*

or,

*Are you sure you want to do this?* ”

Lack of belonging

“How can you claim to observe the natural world without seeing who is missing from your classroom?”

### AT.2 More than just learning physics

Hyper-visibility & invisibility

“I guess I just won't wear a headscarf because I don't want to be more “othered” than I already am.”

Awareness of stereotypes

“If I ask a dumb... question, then they're going to continue to assume that Black people are dumb and based off of their interactions with me, I would say that that's already a subtle thought that they probably already had.”

Tolls on well-being

“... it is pretty exhausting to know that you're doing something that hasn't really been done by that many people and like there's definitely a sense of like loneliness in doing that.”

### AT.3 Persistence in physics

Support & validation

“I find [that it] is very helpful for me to see other people who look like me... it's like a breath of like fresh air being able to feel, like safe around them.”

“ I don't have to explain the multi[ple] layers that are present there. It's just kind of like, *Oh, you get it, awesome. That in and of itself is validating because you know that you are not the only one going through this you know difficult problem.* ”

White shields & allies

“One thing that actually very much helped me... was having like a white person also go with me... so I didn't have to exhaust myself.”

“[she] had some sort of privilege... so that [faculty members] weren't just like: *Oh, the black kid [i]s bothered again.* ”