

A thick black L-shaped frame surrounds the text. The top-left corner is a horizontal bar extending to the right, and the bottom-right corner is a vertical bar extending upwards. The rest of the frame is implied by the corners.

AFRICAN BRAZILIANS IN THE PHYSICAL SCIENCES

Katemari Rosa
katemari@gmail.com
Federal University of Bahia

TELLING OUR STORY

Why looking at Black people in Physics in Brazil



Introduction

- Researcher's background
- Black women in Physics in the United States
- Bringing the US experience to Brazil

PROJECT GOALS

And structure



The project

The main goal in this project is to identify and collect stories of Black people in STEM in Brazil, in addition to develop educational materials focusing on their experiences and contributions to science.

Specific goals:

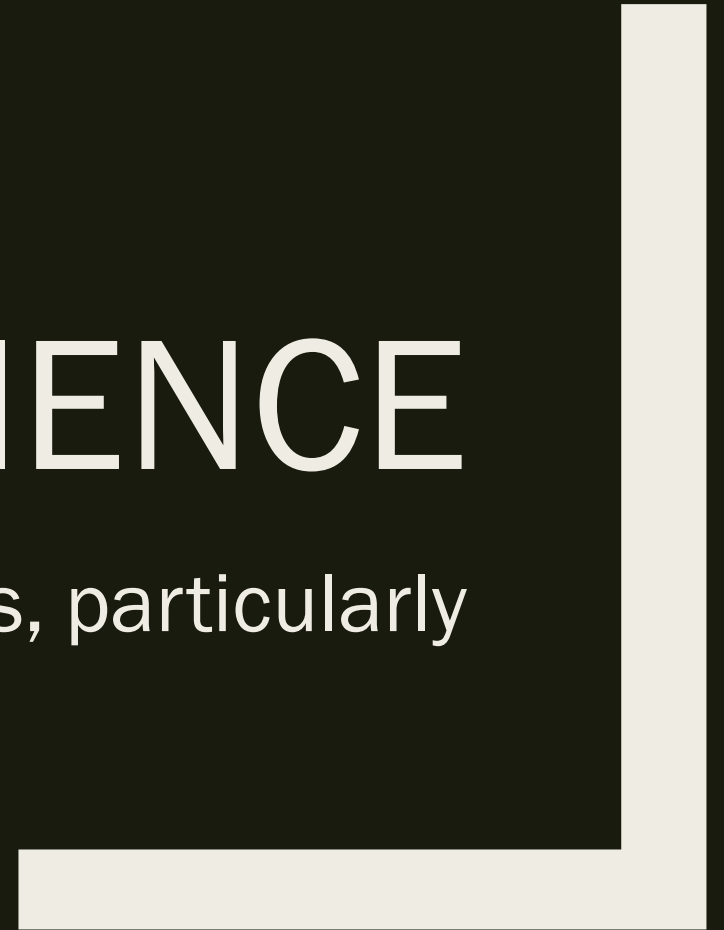
- Mapping Black scientists
- Building a database of Black scientists
- Beginning an oral history project
- Building an online platform
- Developing educational materials

Structure

- **Oral history project** - identifying participants, developing interview protocols, interviewing, transcribing, and documental research
- **Online platform** – archival for interview transcripts, educational materials, images of scientists, and other documents
- **Developing educational materials** – bringing the contributions of Black Brazilians in STEM

BRAZILIANS IN SCIENCE

Black Brazilians, particularly



Black people in the Brazilian society

Brazil is the country that received the majority of enslaved people from African countries and was the **last country to abolish slavery** in the Americas, in 1888. These facts have implications to the current make up of Brazilian society and the racial relations in our country. Brazil has a large population of **African descent, 53.6%** according to the last national census data released November 2015 (IBGE, 2015), and that can easily be seen when we walk into K-12 classrooms in public schools across the country. However, a quick look at universities and research institutes will show a different picture. In a country with 203 million inhabitants, only 7.9% of the population have concluded a **college degree level**. From those, **less than 30% are of African descent**.

Race relations in Brazil and Education

Similar to other countries of the African diaspora, Brazil faces **tense race relations**. In the past decades, there has been an increase in **legislation**, public policies and **academic research** to deal with race relations in the country.

One of these legislations is Law 10.639/2003 (BRASIL, 2003), that makes **mandatory K-12 teaching of African history, culture, and of the contributions of people of African descent in the Brazilian society**.

Race relations in Brazil – Science Ed

In addition, teacher education programs are required to **prepare pre-service (and in-service) teachers** to bring these discussions to the classroom. The problem is we do not have materials or the expertise to teach that. Educators were not trained to introduce these discussions before.

Now, after 13 years of Law 10.639/2003, many educational experiences have been reported, except **within the sciences!** As a field, we remain disconnected with debates around race and society in Brazil.

BLACKS IN NUMBERS

Let's see the data



The Brazilian National Council for Scientific and Technological Development (CNPq)

- CNPq is an organization of the **Brazilian federal government** under the Ministry of Science and Technology, dedicated to the promotion of scientific and technological research and to the formation of human resources for research in the country.
- CNPq maintains an online database of all research groups in the country and collects data from this platform through its census. Up to date, **ten censuses** have been made (1993, 1995, 1997 e 2000, 2002, 2004, 2006, 2008, 2010 e 2014).

Race in the scientific community

- Several data can be collected through the platform but it was **only in 2013 that race was added** as a requested item to fill in the forms. People have the same options we have when answering the general national census, which means the same IBGE categories are used, including an **“I don’t want to declare”** option.
- This change raised many critics within the community, as **many researchers believe the less we talk about race, the better** (Moutinho, 2013). Nevertheless, talking about race can help us identify and address our racial divide.

Recently released data

- Preliminary analysis of this data was presented in **November 2015**, during the Second Brazilian Conference of Women Physicists, and it confirms the underrepresentation of African Brazilians in the sciences.
- These data refers to CNPq grant receivers in a variety of programs. Let's look at some of the findings...

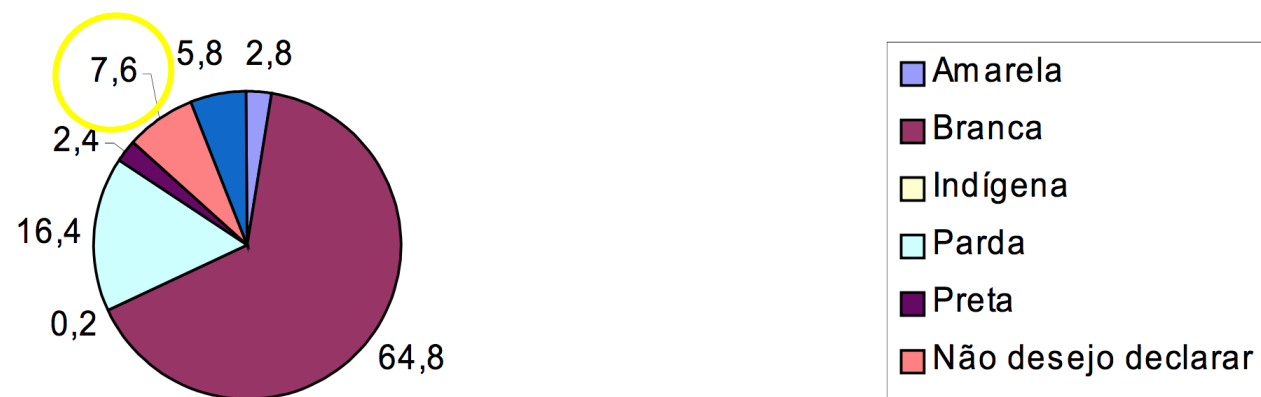
- About 58% of research grants go to White researchers and only 26% to Black researchers.
- The indigenous population make up for less than 1% of the researchers.
- While 3.5% of people did not inform their racial background, **11% decided not to declare** this information.

Distribuição das bolsas do CNPq em todas as modalidades no País segundo cor/raça - Janeiro 2015 - %

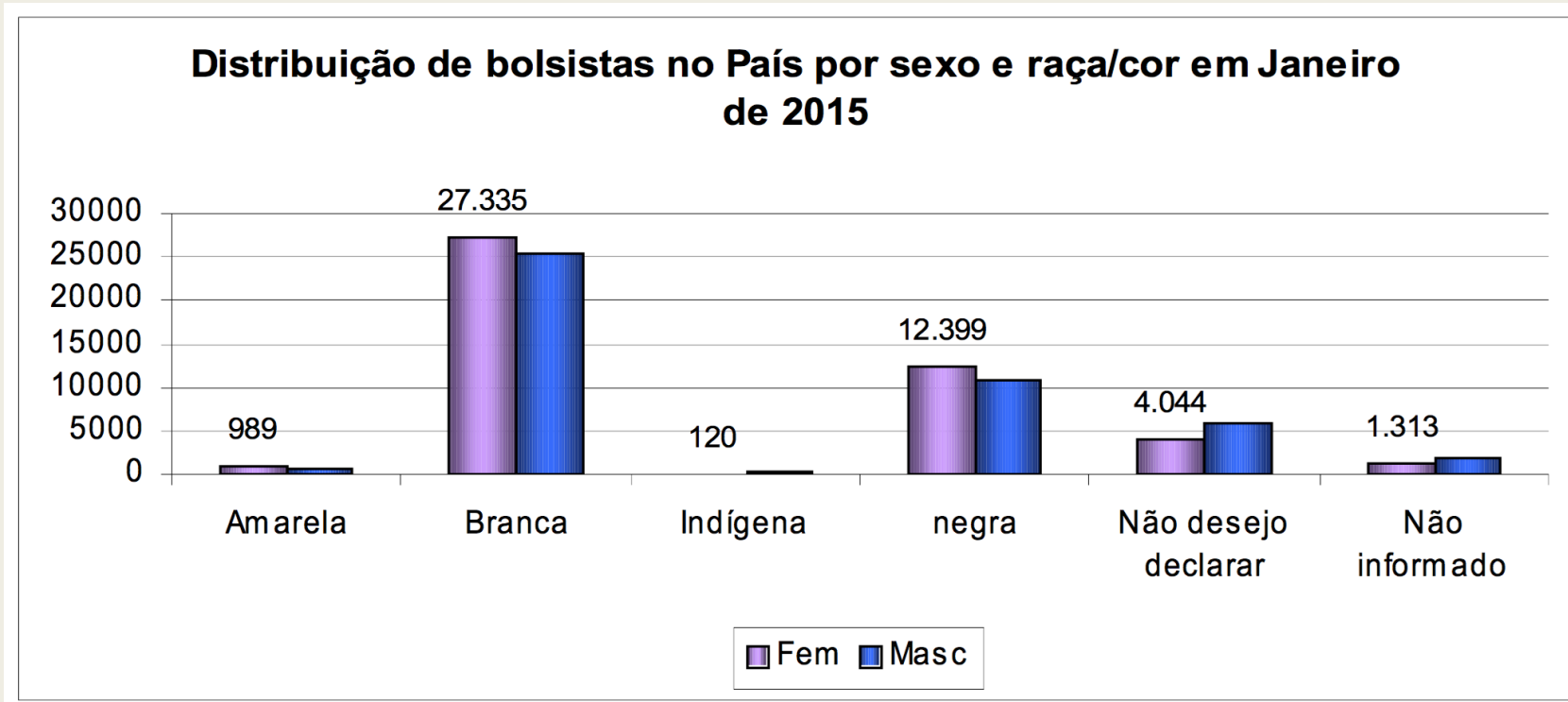


- When we look only to grant to develop studies overseas, White researchers are about 65% of the grantees, while Black researchers are about 19%.

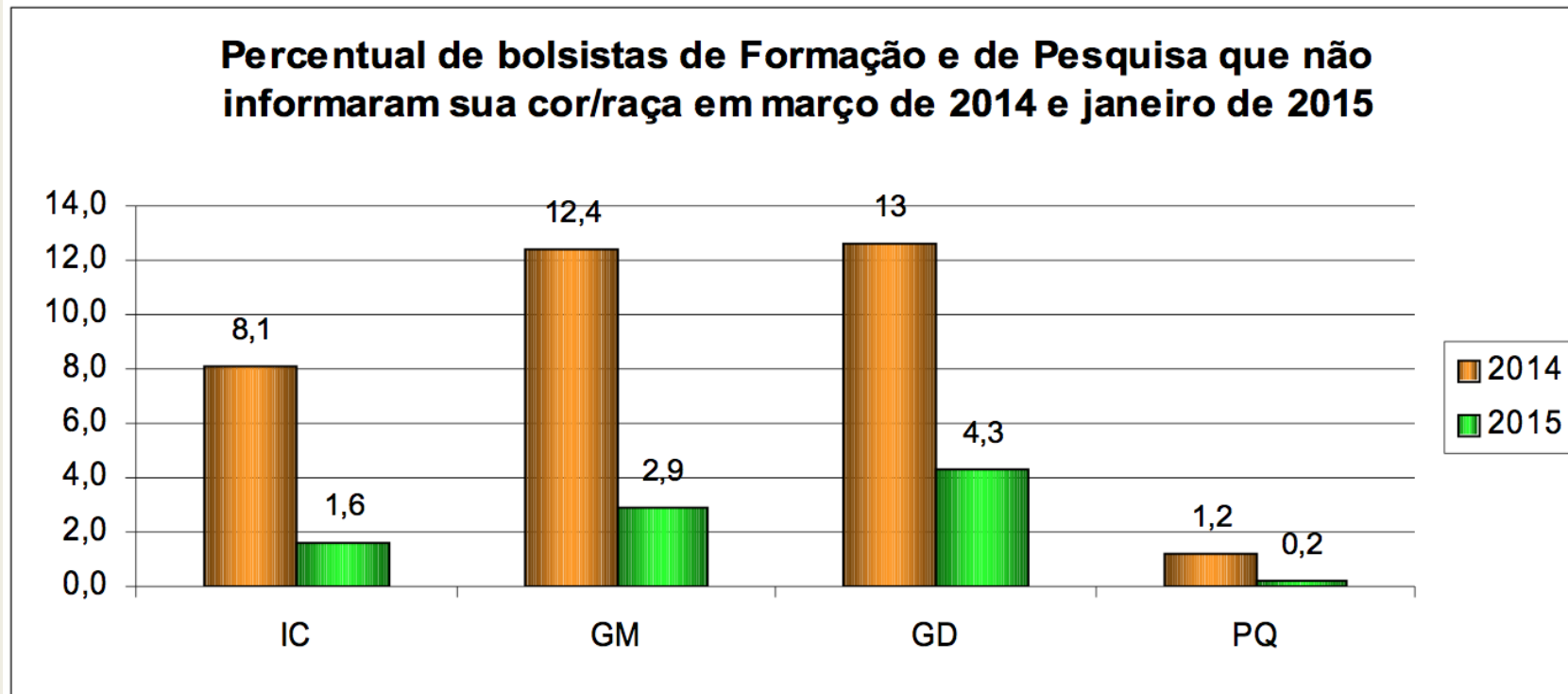
Distribuição das bolsas no exterior, em todas as modalidades, segundo raça/cor - dezembro de 2014 - %



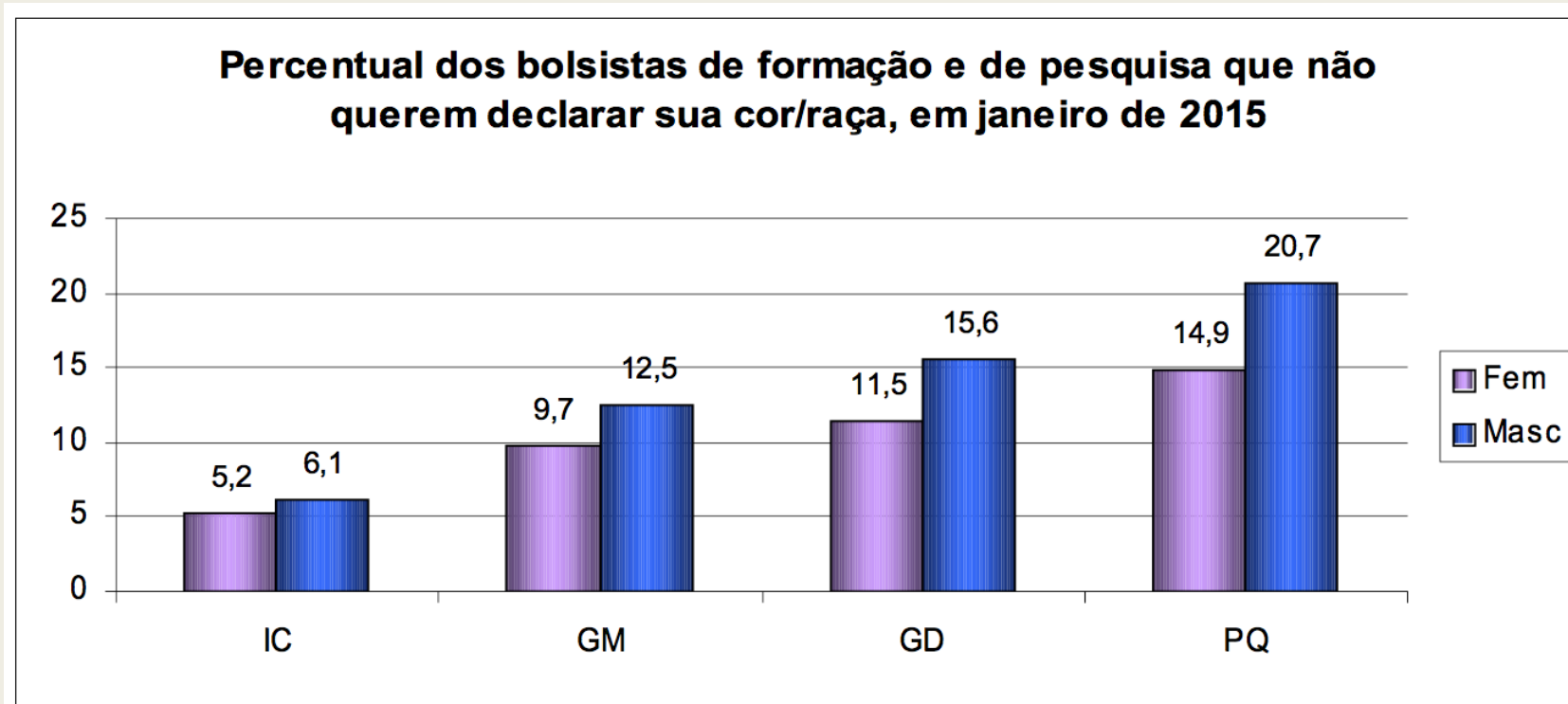
- An interesting finding shows that **men are more resistant to declare their race than women.**



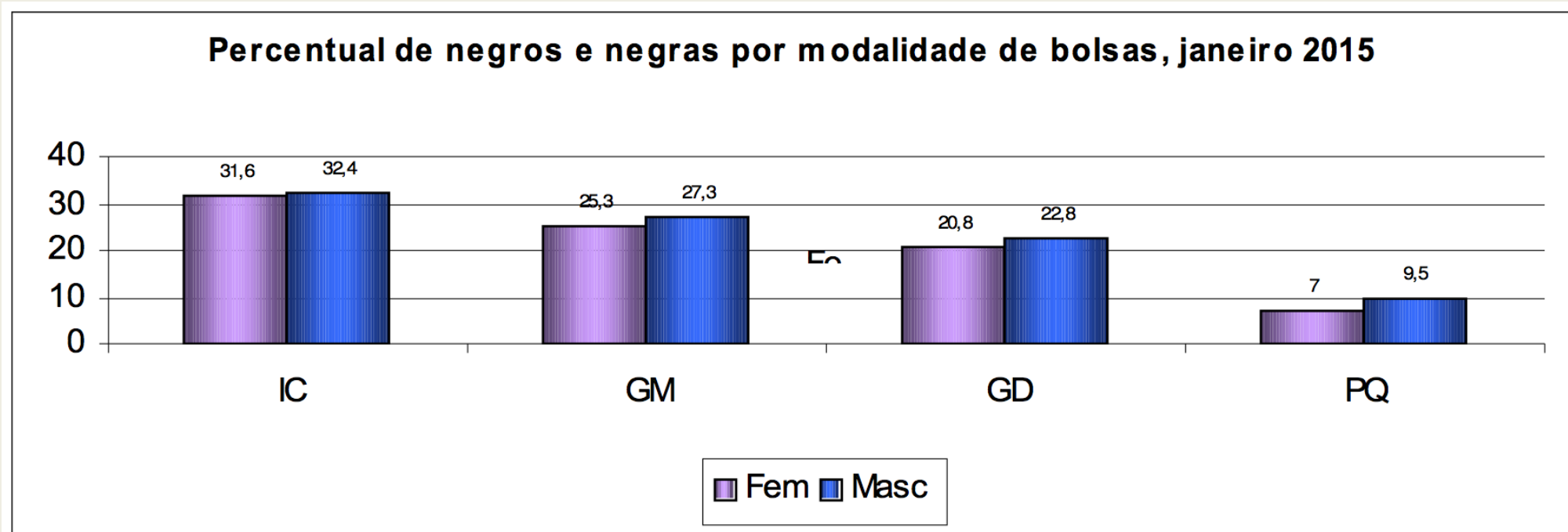
- This graph shows grantees who did not inform their race, a difference between 2014 and 2015. Which means the higher the grant level, the more researchers have an updated profile.



- However, **the higher the grant level**, the more researchers choose not to declare their race.



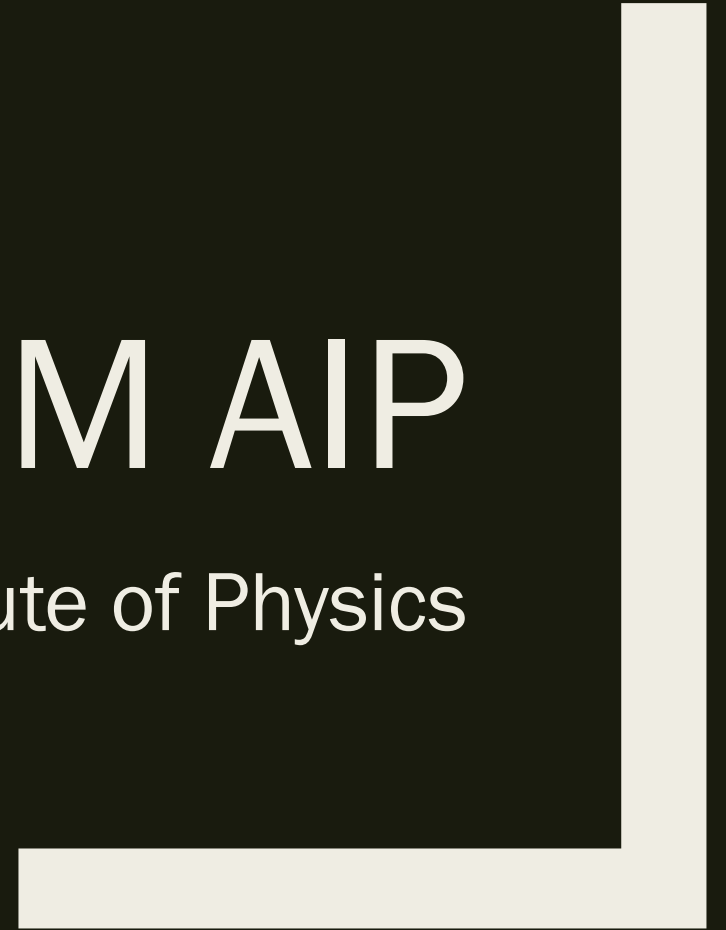
- In addition, looking only at Black grantees, the higher the grant level, the less researchers we have. The numbers reduce drastically, indicating how hard it is to achieve higher academic positions,



Therefore, pool of possible Black scientists for this project is very small.

LEARNING FROM AIP

The American Institute of Physics



Next steps

- This project is largely inspired by the AIP oral history project and its educational materials development
- With the growth of social media, it has been less hard to contact and identify people to join the project, but it is still a hard task. From my experience when identifying potential participants for my research on Black women physicists in the United States, I plan to create an online survey that can be shared over social networks, professional associations, research institutes, and universities departments. The survey will contain questions about educational background, current profession and employment, sex, and race affiliation.

Lesson plans

- Finally, and perhaps where AIP's experience has been more inspiring, comes the educational material development
- Creating lesson plans may not be the hardest, however, creating them using historical sources, as the transcripts might be a challenge. At the same time, these results will probably be the ones with greater impact for the public, as it can reach schools and classrooms directly. Working with pre-service and in-service physics teachers, I can work these lesson plans and educational materials with them, and assisting them to be confident in using these materials in class.

IN CONCLUSION

If you see something, say something



Finally...

- Socially and scientific relevance
- Not original, but innovative in the Brazilian context
- Much work to do and lots of help needed

Thank you!

katemari@ufba.br

@profkatemari